Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2231: Ricci E, Parazzini F, Mirone V, Imbimbo C, Palmieri A, Bortolotti A, Di Cintio E, Landoni M, Lavezzari M. Current drug use as risk factor for erectile dysfunction: results from an Italian epidemiological study. Int J Impot Res. 2003 Jun;15(3):221-4.		Italy	English	outpatient based cross sectional study	>18	pseptic ulcer	interview by general practitioner	drugs for acid related disorders	A02	drugs for acid related disorders	A02			2010	incidence of erectile dysfunction	RR not increased		no					2-	
1463: Jensen RT, Collen MJ, McArthur KE, Howard JM, Maton PN, Cherner JA, Gardner JD. Comparison of the effectiveness of ranitidine and cimetidine in inhibiting acid secretion in patients with gastric hypersecretory states. Am J Med. 1984 Nov 19;77(5B):90-105.	1984	USA	English	retrospective	all ages	gastric hypersecretion	sexual function	drugs for acid related disorders	A02	cimetidine, ranitidine	A02BA01		continuous	22	erectile function, impairment; gynecomastia	60% of patients in cimetidine, disappearance when changing to ranitidine							3	
1464: Jensen RT, Collen MJ, Pandol SJ, Allende HD, Raufman JP, Bissonnette BM, Duncan WC, Durgin PL, Gillin JC, Gardner JD. Cimetidine-induced impotence and breast changes in patients with gastric hypersecretory states. N Engl J Med. 1983 Apr 14;308(15):883-7.	1983	USA	English	retrospective	51 mean	gastric hypersecretion	sexual function, gynecomastia	drugs for acid related disorders	A02	cimetidine	A02BA01	n.g. in the text	2y	22	erectile function, impairment, breast enlargement, disappearance after 4-8w	11 of 22 patients		no					3	described in numerous case reports and letters
1366: Lardinois CK, Mazzaferri EL. Cimetidine blocks testosterone synthesis. Arch Intern Med. 1985 May;145(5):920-2.	1985	USA	English	retrospective	66	gastric hypersecretion	sexual function	drugs for acid related disorders	A02	cimetidine	A02BA01	n.g.	continuous	1	erectile function, impairment; breast enlargement,	recovery after discontinuation; relapse after reexposition							3	
1607: Bera F, Jonville-Bera AP, Doustin P, Autret E. Impotence and gynecomastia secondary to hyperprolactinemia induced by ranitidine. Therapie. 1994 Jul-Aug;49(4):361-2.	1994	France	French	case report	46	hiatic hernia	erectile function	drugs for acid related disorders	A02	ranitidine	A02BA02	450mg/d	2y	1	erectile function, impairment	improvement after cessation of drug							3	
1462: Biagi P, Milani G. Dysfunction of the hypothalamo-hypophyseal-gonadal axis induced by histamine H2 antagonists. Review of the literature and personal observations. Minerva Med. 1985 Mar 24;76(12):579-86.	1982	Italy	Italian	review	all ages	gastric hypersecretion	sexual function	drugs for acid related disorders	A02	cimetidine, ranitidine	A02BA01		continuous	n.g.	erectile function, impairment	enhanced in cimetidine							4	
1356: Dutertre JP, Soutif D, Jonville AP, Cadenne M, Valat JP, Autret E. Sexual disturbances during omeprazole therapy. Lancet. 1991 Oct 19;338(8773):1022.	1991	UK	English	retrospective	77	oesophagitis	erectile function	drugs for acid related disorders	A02	omeprazole	A02BC01	20mg/d	6w	1	erection, painful	development without an increase in libido							3	
2210: Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. Sexual function in men older than 50 years of age: results from the health professionals follow-up study. Ann Intern Med. 2003;139(3):161-8	2003	USA	English	population based cross sectional study	53-90	diabetes mellitus	sexual function questionnaire	drugs used in diabetes	A10	various	A10			31742	prevalence of erectile dysfunction as compared to non-diabetic men	OR 1.5 (95% CI1.2–1.9)		no					2++	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2208: Rosen RC, Fisher WA, Eardley I, Niederberger C, Nadel A, Sand M; Men's Attitudes to Life Events and Sexuality (MALES) Study. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. Curr Med Res Opin. 2004 May;20(5):607-17.	2004	USA	English	population based cross sectional study	20-75	diabetes mellitus	sexual function questionnaire	drugs used in diabetes	A10	various	A10			27839	prevalence of erectile dysfunction	4% reporting no erectile dysfunction, 14% reporting erectile dysfunction		no					2-	
2206: Grover SA, Lowensteyn I, Kaouache M, Marchand S, Coupal L, DeCarolis E, Zoccoli J, Defoy I. The prevalence of erectile dysfunction in the primary care setting: importance of risk factors for diabetes and vascular disease. Arch Intern Med. 2006 Jan 23;166(2):213-9.	2006	Canada	English	primary care outpatient based cross sectional study	40-88	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			3921	prevalence of erectile dysfunction as compared to non-diabetic men	OR 1.45 (95% CI 1.16-1.81)		no					2-	
2223: Saigal CS, Wessells H, Pace J, Schonlau M, Wilt TJ; Urologic Diseases in America Project. Predictors and prevalence of erectile dysfunction in a racially diverse population. Arch Intern Med. 2006 Jan 23;166(2):207-12.	2006	USA	English	population based cross sectional study	>20	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			3566	prevalence of erectile dysfunction with comorbidities	diabetes mellitus (OR, 2.69), obesity (OR, 1.60), hypertension (OR, 1.56)		no					2++	
2220: Safarinejad MR. Prevalence and risk factors for erectile dysfunction in a population-based study in Iran. Int J Impot Res. 2003 Aug;15(4):246-52.	2003	Iran	English	population based cross sectional study	20-70	diabetes mellitus	sexual function questionnaire	drugs used in diabetes	A10	various	A10			2674	prevalence of erectile dysfunction as compared to non-diabetic men	OR 3.72, (95% CI 2.51-5.71)		no					2-	
2215: Martin-Morales A, Sanchez-Cruz JJ, Saenz de Tejada I, Rodriguez-Vela L, Jimenez-Cruz JF, Burgos-Rodriguez R.J Prevalence and independent risk factors for erectile dysfunction in Spain: results of the Epidemiologia de la Disfuncion Erectil Masculina Study. Urol. 2001 Aug;166(2):569-74;	2001	Spain	English	population based cross sectional study	25-70	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			2476	prevalence of erectile dysfunction as compared to non-diabetic men	OR 4.08 (95% CI 2.57–6.49)		no					2++	
2231: Ricci E, Parazzini F, Mirone V, Imbimbo C, Palmieri A, Bortolotti A, Di Cintio E, Landoni M, Lavezzari M. Current drug use as risk factor for erectile dysfunction: results from an Italian epidemiological study. Int J Impot Res. 2003 Jun;15(3):221-4.	2003	Italy	English	outpatient based cross sectional study	>18	diabetes mellitus	interview by general practitioner	drugs used in diabetes	A10	various	A10			2010	prevalence of erectile dysfunction as compared to non-diabetic men	RR not increased		no					2-	
2216: Akkus E, Kadioglu A, Esen A, Doran S, Ergen A, Anafarta K, Hattat H; Turkish Erectile Dysfunction Prevalence Study Group. Prevalence and correlates of erectile dysfunction in Turkey: a population-based study. Eur Urol. 2002 Mar;41(3):298-304.	2002	Turkey	English	population based cross sectional study	>40	diabetes mellitus	single question for erectile function	drugs used in diabetes	A10	various	A10			1982	prevalence of erectile dysfunction as compared to non-diabetic men	OR 2.53 (95% CI 1.77-3.61)		no					2++	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2211: Rosen R, Altwein J, Boyle P, Kirby RS, Lukacs B, Meuleman E, O'Leary MP, Puppo P, Robertson C, Giuliano F. Lower urinary tract symptoms and male sexual dysfunction: the multinational survey of the aging male (MSAM-7). Eur Urol. 2003 Dec;44(6):637-49.	2003	USA	English	population based cross sectional study	50-80	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			1730	prevalence of erectile dysfunction as compared to non-diabetic men	OR 2.36 (95% CI 2.02–2.76)		no					2+	
2219: Shiri R, Koskimaki J, Hakama M, Hakkinen J, Tammela TL, Huhtala H, Auvinen A. Effect of chronic diseases on incidence of erectile dysfunction. Urology. 2003 Dec;62(6):1097-102	2003	Finland	English	population based cross sectional study	40-69	diabetes mellitus	two questions from the NIH consensus definition	drugs used in diabetes	A10	various	A10			1683	prevalence of erectile dysfunction as compared to non-diabetic men	RR 2.4 (95% CI 0.9–5.8)		no					2+	
2200: Tan JK, Hong CY, Png DJ, Liew LC, Wong ML. Erectile dysfunction in Singapore: prevalence and its associated factors—a population-based study. Singapore Med J. 2003 Jan;44(1):20-6.	2003	Singapore	English	population based cross sectional study	30-79	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			729	prevalence of erectile dysfunction as compared to non-diabetic men	OR 1.21 (95% CI 0.73-2.02)		no					2+	
2201: Roth A, Kalter-Leibovici O, Kerbis Y, Tenenbaum-Koren E, Chen J, Sobol T, Raz I. Prevalence and risk factors for erectile dysfunction in men with diabetes, hypertension, or both diseases: a community survey among 1,412 Israeli men. Clin Cardiol. 2003 Jan;26(1):25-30.	2003	Israel	English	outpatient based cross sectional study	58 mean	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			518	prevalence of erectile dysfunction as compared to non-diabetic men	OR 1.04 (95% CI 0.64-1.7)		no					2+	
2232: Cuellar de Leon AJ, Ruiz Garcia V, Campos Gonzalez JC, Perez Hoyos S, Brotons Multo F. Prevalence erectile dysfunction in patients with hypertension. Med Clin (Barc). 2002 Oct 26;119(14):521-6.	2002	Spain	Spanish	outpatient based cross sectional study	63 mean	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			512	prevalence of erectile dysfunction as compared to non-diabetic men	OR 2.06 (95% CI 1.247-3.406)		no					2-	
2227: Siu SC, Lo SK, Wong KW, Ip KM, Wong YS. Prevalence of and risk factors for erectile dysfunction in Hong Kong diabetic patients. Diabet Med. 2001 Sep;18(9):732-8.	2001	China	English	prospective, patient	20-80	diabetes mellitus	NIH consensus definition	drugs used in diabetes	A10	various	A10			500	prevalence of erectile dysfunction as compared to non-diabetic men	56% in men with >5y diabetes, 72% in men with >20y diabetes		no					3	
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	diabetes mellitus	single question from the NIH consensus definition	drugs used in diabetes	A10	various	A10			428	prevalence of erectile dysfunction as compared to non-diabetic men	RR 2.49 (95% CI 1.01–6.14)		no					2+	
2229: Moreira ED Jr, Abdo CH, Torres EB, Lobo CF, Fittipaldi JA. Prevalence and correlates of erectile dysfunction: results of the Brazilian study of sexual behavior. Urology. 2001 Oct;58(4):583-8.	2001	Brazil	English	population based cohort study	40-70	diabetes mellitus	single question from the NIH consensus definition	drugs used in diabetes	A10	various	A10			428	incidence of erectile dysfunction within 2 years	RR 2.87 (95% CI 1.21–6.80)		no					2+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2236: Roumeguere T, Wespes E, Carpentier Y, Hoffmann P, Schulman CC. Erectile dysfunction is associated with a high prevalence of hyperlipidemia and coronary heart disease risk. Eur Urol. 2003 Sep;44(3):355-9.	2003	Belgium	English	outpatient based cross sectional study	35-75	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			315	prevalence of diabetes mellitus in men with erectile dysfunction	20% of patients, 9% of controls, p<0.05		no					2-	
2205: Shiri R, Ansari M, Falah Hassani K. Association between comorbidity and erectile dysfunction in patients with diabetes. Int J Impot Res. 2006 Jul-Aug;18(4):348-53	2006	Finland	English	prospective, patients	>20	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			312	incidence of erectile dysfunction	10% higher risk with each year duration of diabetes, higher in combination with depression and cardiac disease		no					2-	
2228: Mak R, De Backer G, Kornitzer M, De Meyer JM. Prevalence and correlates of erectile dysfunction in a population-based study in Belgium. Eur Urol. 2002 Feb;41(2):132-8.	2002	Belgium	English	population based cross sectional study	40-69	diabetes mellitus	IIEF	drugs used in diabetes	A10	various	A10			248	prevalence of erectile dysfunction as compared to non-diabetic men	OR 6.97 (95% CI 0.95-51.3)		no					2-	
2204: Johannes CB, Araujo AB, Feldman HA, Derby CA, Kleinman KP, McKinlay JB. Incidence of erectile dysfunction in men 40 to 69 years old: longitudinal results from the Massachusetts male aging study. J Urol. 2000 Feb;163(2):460-3	2000	USA	English	population based cross sectional study	52 mean	diabetes mellitus	sexual function questionnaire	drugs used in diabetes	A10	various	A10			194	incidence of erectile dysfunction within 8 years	OR 18.83 (95% CI 1.23-2.73)		no					2++	
2207: Nicolosi A, Moreira ED Jr, Shirai M, Bin Mohd Tambi MI, Glasser DB. Epidemiology of erectile dysfunction in four countries: cross-national study of the prevalence and correlates of erectile dysfunction. Urology. 2003 Jan;61(1):201-6.	2003	Italy	English	population based cross sectional study	40-70	diabetes mellitus	single question	drugs used in diabetes	A10	various	A10			88	prevalence of erectile dysfunction as compared to non-diabetic men	OR 1.05 (95% CI 1.01.1.10)		no						
1336: Pope HG Jr, Katz DL. Affective and psychotic symptoms associated with anabolic steroid use. Am J Psychiatry. 1988 Apr;145(4):487-90.	1988		English	retrospective	young	body builders	Hamilton rating scale	anabolic agents for systemic use	A14	anabolic steroids	A14A	n.g.	n.g.	41	affective syndrome	22/41 full syndrome							3	
1352: Gill GV. Anabolic steroid induced hypogonadism treated with human chorionic gonadotropin. Postgrad Med J. 1998 Jan;74(867):45-6.	1998	UK	English	case report	young	body builder	erectile function	anabolic agents for systemic use	A14	anabolic steroids	A14A			1	erectile function, impairment	treatment with hCG							3	
2208: Rosen RC, Fisher WA, Eardley I, Niederberger C, Nadel A, Sand M; Men's Attitudes to Life Events and Sexuality (MALES) Study. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. Curr Med Res Opin. 2004 May;20(5):607-17.	2004	USA	English	population based cross sectional study	20-75	cardiac disease	sexual function questionnaire	cardiac therapy	C01	cardiac therapy	C01			27839	prevalence of erectile dysfunction as compared to men without cardiac diseases	7% reporting no erectile dysfunction, 17% reporting erectile dysfunction		no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2218: Blumentals WA, Gomez-Caminero A, Joo S, Vannappagari V. Should erectile dysfunction be considered as a marker for acute myocardial infarction? Results from a retrospective cohort study. Int J Impot Res. 2004 Aug;16(4):350-3.	2004	USA	English	retrospective cohort study	old	cardiac disease	sexual function questionnaire	cardiac therapy	C01	cardiac therapy	C01			12825; 12825	prevalence of myocardial infarction	OR 1.99 (95% CI=1.17, 3.38)		no					2++	
2206: Grover SA, Lowensteyn I, Kaouache M, Marchand S, Coupal L, DeCarolis E, Zoccoli J, Defoy I. The prevalence of erectile dysfunction in the primary care setting: importance of risk factors for diabetes and vascular disease. Arch Intern Med. 2006 Jan 23;166(2):213-9.	2006	Canada	English	primary care outpatient based cross sectional study	40-88	cardiac disease	IIEF	cardiac therapy	C01	cardiac therapy	C01			3921	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 3.13 (95% CI 2.35-4.16)		no					2-	
2215: Martin-Morales A, Sanchez-Cruz JJ, Saenz de Tejada I, Rodriguez-Vela L, Jimenez-Cruz JF, Burgos-Rodriguez R.J Prevalence and independent risk factors for erectile dysfunction in Spain: results of the Epidemiologia de la Disfuncion Erectil Masculina Study. Urol. 2001 Aug;166(2):569-74;	2001	Spain	English	population based cross sectional study	25-70	cardiac disease	IIEF	cardiac therapy	C01	cardiac therapy	C01			2476	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 1.79 (95% CI 1.18–2.71)		no					2++	
2211: Rosen R, Altwein J, Boyle P, Kirby RS, Lukacs B, Meuleman E, O'Leary MP, Puppo P, Robertson C, Giuliano F. Lower urinary tract symptoms and male sexual dysfunction: the multinational survey of the aging male (MSAM-7). Eur Urol. 2003 Dec;44(6):637-49.	2003	USA	English	population based cross sectional study	50-80	cardiac disease	IIEF	cardiac therapy	C01	cardiac therapy	C01			2204	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 1.61 (95% CI 1.41–1.84)		no					2+	
2216: Akkus E, Kadioglu A, Esen A, Doran S, Ergen A, Anafarta K, Hattat H; Turkish Erectile Dysfunction Prevalence Study Group. Prevalence and correlates of erectile dysfunction in Turkey: a population-based study. Eur Urol. 2002 Mar;41(3):298-304.	2002	Turkey	English	population based cross sectional study	>40	cardiac disease	single question for erectile function	cardiac therapy	C01	cardiac therapy	C01			1982	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 1.62 (95% CI 1.10-2.38)		no					2++	
2219: Shiri R, Koskimaki J, Hakama M, Hakkinen J, Tammela TL, Huhtala H, Auvinen A. Effect of chronic diseases on incidence of erectile dysfunction. Urology. 2003 Dec;62(6):1097-102	2003	Finland	English	population based cross sectional study	40-69	cardiac disease	two questions from the NIH consensus definition	cardiac therapy	C01	cardiac therapy	C01			1683	prevalence of erectile dysfunction as compared to men without cardiac diseases	RR 1.3 (95% CI 0.8–2.1)		no					2+	
2200: Tan JK, Hong CY, Png DJ, Liew LC, Wong ML. Erectile dysfunction in Singapore: prevalence and its associated factors—a population-based study. Singapore Med J. 2003 Jan;44(1):20-6.	2003	Singapore	English	population based cross sectional study	30-79	cardiac disease	IIEF	cardiac therapy	C01	cardiac therapy	C01			729	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 2.84 (95% CI 0.92-8.74)		no					2+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	cardiac disease	single question from the NIH consensus definition	cardiac therapy	C01	cardiac therapy	C01			428	prevalence of erectile dysfunction as compared to men without cardiac diseases	RR 1.48 (95% CI 0.58–3.77)		no					2+	
2229: Moreira ED Jr, Abdo CH, Torres EB, Lobo CF, Fittipaldi JA. Prevalence and correlates of erectile dysfunction: results of the Brazilian study of sexual behavior. Urology. 2001 Oct;58(4):583-8.	2001	Brazil	English	population based cohort study	40-70	cardiac disease	single question from the NIH consensus definition	cardiac therapy	C01	cardiac therapy	C01			428	incidence of erectile dysfunction within 2 years	RR 1.98 (95% CI 0.84–4.64)		no					2+	
2236: Roumeguere T, Wespes E, Carpentier Y, Hoffmann P, Schulman CC. Erectile dysfunction is associated with a high prevalence of hyperlipidemia and coronary heart disease risk. Eur Urol. 2003 Sep;44(3):355-9.	2003	Belgium	English	outpatient based cross sectional study	35-75	erectile dysfunction	IIEF	cardiac therapy	C01	cardiac therapy	C01			315	prevalence of cardiac diseases in men with erectile dysfunction	13% of patients, 2% of controls, p<0.05		no					2-	
2239: Stroberg P, Frick E, Hedelin H. Is erectile dysfunction really a clinically useful predictor of cardiovascular disease? Scand J Urol Nephrol. 2005;39(1):62-5.	2005	Sweden	English	case-control study	middle-aged	myocardial infarction	sexual function questionnaire	cardiac therapy	C01	cardiac therapy	C01			100; 129	prevalence of erectile dysfunction	34% of men with myocardial infarction; 18% of men without cardiovascular disease		no					2+	
2228: Mak R, De Backer G, Kornitzer M, De Meyer JM. Prevalence and correlates of erectile dysfunction in a population-based study in Belgium. Eur Urol. 2002 Feb;41(2):132-8.	2002	Belgium	English	population based cross sectional study	40-69	cardiac disease	IIEF	cardiac therapy	C01	cardiac therapy	C01			204	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 0.72 (95% CI 0.24-2.18)		no					2-	
2204: Johannes CB, Araujo AB, Feldman HA, Derby CA, Kleinman KP, McKinlay JB. Incidence of erectile dysfunction in men 40 to 69 years old: longitudinal results from the Massachusetts male aging study. J Urol. 2000 Feb;163(2):460-3	2000	USA	English	population based cross sectional study	52 mean	cardiac disease	sexual function questionnaire	cardiac therapy	C01	cardiac therapy	C01			194	incidence of erectile dysfunction within 8 years of treatment	OR 1.96 (95% CI 1.32-2.91)		no					2++	
2207: Nicolosi A, Moreira ED Jr, Shirai M, Bin Mohd Tambi MI, Glasser DB. Epidemiology of erectile dysfunction in four countries: cross-national study of the prevalence and correlates of erectile dysfunction. Urology. 2003 Jan;61(1):201-6.	2003	Italy	English	population based cross sectional study	40-70	cardiac disease	single question	cardiac therapy	C01	cardiac therapy	C01			178	prevalence of erectile dysfunction as compared to men without cardiac diseases	OR 1.05 (95% CI 1.01-1.09) per 1-yr duration		no						
2209: Elliott SP, Gulati M, Pasta DJ, Spitalny GM, Kane CJ, Yee R, Lue TF. Obstructive lower urinary tract symptoms correlate with erectile dysfunction. Urology. 2004 Jun;63(6):1148-52.	2004	USA	English	outpatient based cross sectional study	68.2 mean	LUTS	IIEF	cardiac therapy	C01	cardiac therapy	C01			41	prevalence of erectile dysfunction	correlation with IIEF -0.12		no					3	
2217: Shabsigh R, Perelman MA, Lockhart DC, Lue TF, Broderick GA. Health issues of men: prevalence and correlates of erectile dysfunction. J Urol. 2005 Aug;174(2):662-7.	2005	USA	English	population based cross sectional study	20-75	poor health	IIEF	cardiac therapy	C01	cardiac therapy	C01			28691	prevalence of erectile dysfunction	OR 2.0 (95% CI 1.8–2.5)		no						

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2238: Geirsson G, Thornorgeirsson G, Guethmundsson O, Einarsson G. [Risk factors and prevalence of erectile dysfunction amongst Icelandic men aged 45-75] Laeknabladid. 2006 Jul-Aug;92(7-8):533-7.	2006	Iceland	Icelandian	population based cross sectional study	45-75	poor health	IIEF	cardiac therapy	C01	cardiac therapy	C01			4000	prevalence of erectile dysfunction	Risk factors: age, smoking, diabetes, high cholesterol, hypertension, depression and anxiety disorders		no					2+	
2234: Madersbacher S, Temml C, Racz U, Mock K, Ponholzer A, Maier U, Haidinger G. Prevalence and risk factors for erectile dysfunction in Austria--analysis of a health screening project. Wien Klin Wochenschr. 2003 Dec 15;115(23):822-30.	2003	Austria	English	outpatient based cross sectional study	30-69	poor health	IIEF	cardiac therapy	C01	cardiac therapy	C01			832	prevalence of erectile dysfunction	12.5% at 30-39y; 15.3% at 40-49y; 27.4% at 50-59y; 45.2% at 60-69y		no					3	
2235: Travison TG, Shabsigh R, Araujo AB, Kupelian V, O'Donnell AB, McKinlay JB. The natural progression and remission of erectile dysfunction: results from the Massachusetts Male Aging Study. J Urol. 2007 Jan;177(1):241-6;	2007	USA	English	population based cohort study	40-70	poor health	sexual function questionnaire	cardiac therapy	C01	cardiac therapy	C01			401	progression of severety of erectile dysfunction	significantly increasing risk with poorer health status		no					2++	
1385: Neri A, Zukerman Z, Aygen M, Lidor Y, Kaufman H. The effect of long-term administration of digoxin on plasma androgens and sexual dysfunction. J Sex Marital Ther. 1987 Spring;13(1):58-63.	1987		English	retrospective	25-40	cardiovascular disease, rheumatic	sexual function scale; hormones	cardiac therapy	C01	digoxin	C01AA05	n.g.	continuous	n.g.	sexual function, depressed; testosterone level decreased	significant in digoxin treated group		no	digoxin	no digoxin			2-	
1381: Gupta S, Salimpour P, Saenz de Tejada I, Daley J, Gholami S, Daller M, Krane RJ, Traish AM, Goldstein I. A possible mechanism for alteration of human erectile function by digoxin: inhibition of corpus cavernosum sodium/potassium adenosine triphosphatase activity. J Urol. 1998 May;159(5):1529-36.	1998	USA	English	prospective	young	healthy	erectile function	cardiac therapy	C01	digoxin	C01AA05	10nM to 10mM per intracavernous injection	4w	6	erectile rigidity during visual stimulation, decrease	no influence on libido and testosterone						2-	
581: Korst HA, Brandes JW, Littmann KP. Disturbances of potency and spermiogenesis due to propafenon. Dtsch Med Wochenschr. 1980 Aug 22;105(34):1187-9.	1980	Germany	German	case report	43	cardiac disease	erectile function	cardiac therapy	C01	propaphenon	C01BC03			1	erectile function, impairment	complete						3	
1382: de Meyer JM, Oosterlinck W. Pharmacodynamics of intracavernously injected drugs and cavernous wall resistance. Eur Urol. 1997;32(2):184-9.	1997	Belgium	English	prospective	old	erectile dysfunction	digoxin serum levels	cardiac therapy	C01	norepinephrine	C01CA03	n.g.	1x	32	plasma peak of digoxin	40times higher than after injection of vasodilators						3	
1594: Christ GJ, Maayani S, Valcic M, Melman A. Pharmacological studies of human erectile tissue: characteristics of spontaneous contractions and alterations in alpha-adrenoceptor responsiveness with age and disease in isolated tissues. Br J Pharmacol. 1990 Oct;101(2):375-81.	1990	USA	English	experimental	young	cavernous tissue in vitro	smooth muscle contractility	cardiac therapy	C01	phenylephrine	C01CA06	n.g.	n.g.	38	cavernous tissue, contractility	antagonists inhibit contractions						3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2220: Safarinejad MR. Prevalence and risk factors for erectile dysfunction in a population-based study in Iran. Int J Impot Res. 2003 Aug;15(4):246-52.	2003	Iran	English	population based cross sectional study	20-70	coronary artery disease	sexual function questionnaire	cardiac therapy	C01	vasodilators used in cardiac therapy	C01D			2674	prevalence of erectile dysfunction	OR 1.61 (95% CI 1.21-2.85)		no					2-	
2232: Cuellar de Leon AJ, Ruiz Garcia V, Campos Gonzalez JC, Perez Hoyos S, Brotons Multo F. Prevalence erectile dysfunction in patients with hypertension. Med Clin (Barc). 2002 Oct 26;119(14):521-6.	2002	Spain	Spanish	outpatient based cross sectional study	63 mean	coronary artery disease	IIEF	cardiac therapy	C01	vasodilators used in cardiac therapy	C01D			512	prevalence of erectile dysfunction	RR 3.15 (95% CI 1.429-6.947)		no					2-	
1637: Cavallini G. Minoxidil versus nitroglycerin: a prospective double-blind controlled trial in transcutaneous erection facilitation for organic impotence. J Urol. 1991 Jul;146(1):50-3.	1991	Italy	English	prospective, randomized	young	erectile dysfunction in different diseases	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02		locally applied	33	erectile function, improvement	minoxidil better effective than nitroglycerin	On minoxidil 2 patients with burning pain, on nitroglycerin 8 patients burning pain, 4 headache, 2 hypotension.	no					3	
1632: Renganathan R, Suranjan B, Kurien T. Comparison of transdermal nitroglycerin and intracavernous injection of papaverine in the treatment of erectile dysfunction in patients with spinal cord lesions. Spinal Cord. 1997 Feb;35(2):99-103.	1997	India	English	prospective, cross-over	young	erectile dysfunction in spinal cord lesion	penile volume	cardiac therapy	C01	nitroglycerine	C01DA02	n.g.	locally applied	28	erectile function, improvement	less effective than papaverine	mild headache in six (21%) patients	cross-over	nitroglycerine	papaverine			1-	
1639: Claes H, Baert L. Transcutaneous nitroglycerin therapy in the treatment of impotence. Urol Int. 1989;44(5):309-12.	1989	Belgium	English	prospective	old	erectile dysfunction	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02		locally applied	26	erectile function, improvement	moderate effectiveness	12 patients mild headache, more severe in the youngest patients.	no					3	
1638: Owen JA, Saunders F, Harris C, Fenemore J, Reid K, Surridge D, Condra M, Morales A. Topical nitroglycerin: a potential treatment for impotence. J Urol. 1989 Mar;141(3):546-8.	1989	Canada	English	prospective	old	erectile dysfunction	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02	2%	locally applied	26	erectile function, improvement	increase of penile blood flow	headache frequent, but declining in longer use. Spousal headache possible.	no					3	
1633: Christ GJ, Kim DC, Taub HC, Gondre CM, Melman A. Characterization of nitroglycerine-induced relaxation in human corpus cavernosum smooth muscle: implications to erectile physiology and dysfunction. Can J Physiol Pharmacol. 1995 Dec;73(12):1714-26.	1995	USA	English	experimental	old	erectile dysfunction	relaxation of corporal tissue strips	cardiac therapy	C01	nitroglycerine	C01DA02		in vitro	26	cavernous tissue, relaxation	diminished effectiveness in tissue from patients with erectile dysfunction		yes	nitroglycerin	placebo			1-	
1631: Gramkow J, Lendorf A, Zhu J, Meyhoff HH. Transcutaneous nitroglycerine in the treatment of erectile dysfunction: a placebo controlled clinical trial. Int J Impot Res. 1999 Feb;11(1):35-9.	1999	Denmark	English	prospective, cross-over		erectile dysfunction	erectile function assessed by Rigiscan	cardiac therapy	C01	nitroglycerine	C01DA02	pseudoephrine 60 mg, terbutaline sulfate 5 mg, sodium bicarbonate 648 mg as placebo	locally applied	18	erectile function, improvement	no influence	none	cross-over	nitroglycerine	placebo			2-	
1635: Sonksen J, Biering-Sorensen F. Transcutaneous nitroglycerin in the treatment of erectile dysfunction in spinal cord injured. Paraplegia. 1992 Aug;30(8):554-7.	1992	Denmark	English	retrospective	young	erectile dysfunction in spinal cord lesion	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02	n.g.	locally applied	17	erectile function, improvement	positive in 12 men	6/12 headache	no					3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1438: Barbanti G, Beneforti P, Lapini A, Turini D. Relaxation of isolated corpus cavernosum induced by smooth-muscle relaxant drugs. A comparative study. Urol Res. 1988;16(4):299-302.	1988	Italy	English	experimental	42-68	cavernous tissue in vitro	muscle relaxation	cardiac therapy	C01	nitroglycerine	C01DA02	5x10-4g	in vitro	16	cavernous tissue, relaxation	poor							2+	
1636: Meyhoff HH, Rosenkilde P, Bodker A. Non-invasive management of impotence with transcutaneous nitroglycerin. Br J Urol. 1992 Jan;69(1):88-90.	1992	Denmark	English	prospective	young	erectile dysfunction in spinal cord lesion	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02	n.g.	locally applied	10	erectile function, improvement	positive in all patients	headache common	no					3	
1634: Nunez BD, Anderson DC Jr. Nitroglycerin ointment in the treatment of impotence. J Urol. 1993 Oct;150(4):1241-3.	1993	USA	English	case report	young	erectile dysfunciton	erectile function	cardiac therapy	C01	nitroglycerine	C01DA02	n.g.	locally applied	3	erectile function, improvement	successful treatment	n.g.	no					3	
1600: Truss MC, Becker AJ, Djamilian MH, Stief CG, Jonas U. Role of the nitric oxide donor linsidomine chlorhydrate (SIN-1) in the diagnosis and treatment of erectile dysfunction. Urology. 1994 Oct;44(4):553-6.	1994	Germany	English	prospective	old	erectile dysfunction	erectile function	cardiac therapy	C01	linsidomine	C01DX18	1mg	single dose intracavernous	113	erectile rigidity, improvement	69% of patients	no significant side effects	no					3	
1603: Stief CG, Holmquist F, Djamilian M, Krah H, Andersson KE, Jonas U. Preliminary results with the nitric oxide donor linsidomine chlorhydrate in the treatment of human erectile dysfunction. J Urol. 1992 Nov;148(5):1437-40.	1992	Germany	English	prospective	old	erectile dysfunction	erectile function	cardiac therapy	C01	linsidomine	C01DX18	1mg	single dose	63	erectile rigidity, improvement	100% comparable to papaverine-phentolamine	decreased risk of inducing prolonged erections	no					3	
1602: Porst H. Prostaglandin E1 and the nitric oxide donor linsidomine for erectile failure: a diagnostic comparative study of 40 patients. J Urol. 1993 May;149(5 Pt 2):1280-3.	1993	Germany	English	prospective	old	erectile dysfunction	erectile function	cardiac therapy	C01	linsidomine	C01DX18	1mg	decrease of overall functions	40	erectile rigidity, improvement	92% of linsidomine group, 100% of alprostadile group	symptoms of arterial insufficiency after injection	yes	linsidomine	alprostadil			2-	
1599: Lemaire A, Buvat J. Erectile response to intracavernous injection of linsidomine in 38 impotent patients. Comparison with prostaglandin E1. Prog Urol. 1998 Jun;8(3):388-91.	1998	France	French	prospective	old	erectile dysfunction	erection	cardiac therapy	C01	linsidomine	C01DX18		decrease of overall functions	38	erectile function under observation	alprostadil better than linsidomine	n.g.	no					2-	
1601: Wegner HE, Knispel HH, Klan R, Meier T, Miller K. Prostaglandin E1 versus linsidomine chlorhydrate in erectile dysfunction. Urol Int. 1994;53(4):214-6.	1994	Germany	English	prospective, crossover	old	erectile dysfunction	erectile function	cardiac therapy	C01	linsidomine	C01DX18	1mg	single dose	20	erectile rigidity, improvement	alprostadil better than linsidomine	no significant side effects	yes	linsidomine	alprostadil			1+	
2226: Sun P, Swindle R. Are men with erectile dysfunction more likely to have hypertension than men without erectile dysfunction? A naturalistic national cohort study. J Urol. 2005 Jul;174(1):244-8.	2005	USA	English	retrospective cohort study	18-84	hypertension	American national care claim database	antihypertensives	C02	antihypertensives	C02			285436	prevalence of hypertension in men with erectile dysfunction as compared to men without erectile dysfunction	OR 1.38 (p 0.0001)		no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2208: Rosen RC, Fisher WA, Eardley I, Niederberger C, Nadel A, Sand M; Men's Attitudes to Life Events and Sexuality (MALES) Study. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. Curr Med Res Opin. 2004 May;20(5):607-17.	2004	USA	English	population based cross sectional study	20-75	hypertension	sexual function questionnaire	antihypertensives	C02	antihypertensives	C02			27839	prevalence of erectile dysfunction as compared to normotensive men	19% reporting no erectile dysfunction, 36% reporting erectile dysfunction		no					2-	
2211: Rosen R, Altwein J, Boyle P, Kirby RS, Lukacs B, Meuleman E, O'Leary MP, Puppo P, Robertson C, Giuliano F. Lower urinary tract symptoms and male sexual dysfunction: the multinational survey of the aging male (MSAM-7). Eur Urol. 2003 Dec;44(6):637-49.	2003	USA	English	population based cross sectional study	50-80	hypertension	IIEF	antihypertensives	C02	antihypertensives	C02			4318	prevalence of erectile dysfunction as compared to normotensive men	OR 1.49 (95% CI 1.35–1.66)		no					2+	
1457: Medical Research Council Working Party on mild to moderate hypertension: Adverse reaction to bendrofulazide and propranolog for the treatment of mild hypertension. Lancet 12.9.1981, pp. 539-543	1981	UK	English	prospective	35-64	hypertension	sexual function questionnaires	antihypertensives	C02	antihypertensives	C02	n.g.	24m	2452 patient-years	erectile function, impairment	19.6% of bedrofluamide group, in 5.5% of propranolol group, in 0.9% of placebo group		yes	bedrofluazide	propranolol	placebo		1-	"Reported incidence figures for suspected adverse reactions are probably lower than the true incidence, since not all reactions will have been mentioned by patients. Side effects as e.g. impotence lead less often to withdrawal of drugs than that they are recorded."
2216: Akkus E, Kadioglu A, Esen A, Doran S, Ergen A, Anafarta K, Hattat H; Turkish Erectile Dysfunction Prevalence Study Group. Prevalence and correlates of erectile dysfunction in Turkey: a population-based study. Eur Urol. 2002 Mar;41(3):298-304.	2002	Turkey	English	population based cross sectional study	>40	hypertension	single question for erectile function	antihypertensives	C02	antihypertensives	C02			1982	prevalence of erectile dysfunction as compared to normotensive men	OR 2.81 (95% CI 2.16-3.66)		no					2++	
2219: Shiri R, Koskimaki J, Hakama M, Hakkinen J, Tammela TL, Huhtala H, Auvinen A. Effect of chronic diseases on incidence of erectile dysfunction. Urology. 2003 Dec;62(6):1097-102	2003	Finland	English	population based cross sectional study	40-69	hypertension	two questions from the NIH consensus definition	antihypertensives	C02	antihypertensives	C02			1683	prevalence of erectile dysfunction as compared to normotensive men	RR 1.1 (95% CI 0.8–1.6)		no					2+	
1456: Bauer GE, Baker J, Hunyour SN, Maarshall P: Side-effects of antihypertensive treatment: a placebo controlled study. Clin Sci Mol Med 1978;55: 341s-344s	1978	Australia	English	prospective	30-69	hypertension	sexual function questionnaires	antihypertensives	C02	antihypertensives	C02	n.g.	24m	1017	erectile function, alteration	19% in active treatment, 14% in placebo group, 20% in „no tablets" group		yes	antihypertensives	placebo	nothing	n.g.	1-	"Failure to sustain erection and failure to ejaculate: both symptoms are age-related in patients taking active drugs or placebo."
2200: Tan JK, Hong CY, Png DJ, Liew LC, Wong ML. Erectile dysfunction in Singapore: prevalence and its associated factors—a population-based study. Singapore Med J. 2003 Jan;44(1):20-6.	2003	Singapore	English	population based cross sectional study	30-79	hypertension	IIEF	antihypertensives	C02	antihypertensives	C02			729	prevalence of erectile dysfunction as compared to normotensive men	OR 2.06 (95% CI 0.96-4.43)		no					2+	
1450: Grimm RH, Grandits GA, Prineas RJ et al. Long-term effects on sexual function of five antihypertensive drugs and nutritional hygienic treatment in hypertensive men an women. Hypertension 1997;29: 8-14	1997	USA	English	prospective	45-69	hypertension	sexual function questionnaires	antihypertensives	C02	antihypertensives	C02	n.g.	12m	557	sexual dysfunction	Ace: no alteration, Amlo: no alteration, Chlo: E.d. more frequent		yes	acebutol	amlopidine	chlorthalidon	n.g.	1-	"Scientific evidence that links antihypertensive drugs to sexual dysfunction in placebo-controlled trials is limited."

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	hypertension	single question from the NIH consensus definition	antihypertensives	C02	antihypertensives	C02			428	prevalence of erectile dysfunction as compared to normotensive men	RR 1.89 (95% CI 1.07–3.37)		no					2+	
1562: Muller SC, el-Damanhoury H, Ruth J, Lue TF. Hypertension and impotence. Eur Urol. 1991;19(1):29-34.	1991	Germany	English	retrospective	old	hypertension	erection, papaverine response	antihypertensives	C02	antihypertensives	C02	n.g.	continuous	427	erectile function in response to papaverin, improvement	better in ß-blockers than in thiazides							2-	
2236: Roumeguere T, Wespes E, Carpentier Y, Hoffmann P, Schulman CC. Erectile dysfunction is associated with a high prevalence of hyperlipidemia and coronary heart disease risk. Eur Urol. 2003 Sep;44(3):355-9.	2003	Belgium	English	outpatient based cross sectional study	35-75	hypertension	IIEF	antihypertensives	C02	antihypertensives	C02			315	prevalence of hypertension in men with erectile dysfunction	23.2% of patients, 11% of controls, p<0.05		no					2-	
2204: Johannes CB, Araujo AB, Feldman HA, Derby CA, Kleinman KP, McKinlay JB. Incidence of erectile dysfunction in men 40 to 69 years old: longitudinal results from the Massachusetts male aging study. J Urol. 2000 Feb;163(2):460-3	2000	USA	English	population based cross sectional study	52 mean	hypertension	sexual function questionnaire	antihypertensives	C02	antihypertensives	C02			194	incidence of erectile dysfunction within 8 years in treated hypertension	OR 1.52 (95% CI 1.11-2.07)		no					2++	
2209: Elliott SP, Gulati M, Pasta DJ, Spitalny GM, Kane CJ, Yee R, Lue TF. Obstructive lower urinary tract symptoms correlate with erectile dysfunction. Urology. 2004 Jun;63(6):1148-52.	2004	USA	English	outpatient based cross sectional study	68.2 mean	LUTS	IIEF	antihypertensives	C02	antihypertensives	C02			112	prevalence of erectile dysfunction as compared to normotensive men	correlation with IIEF -0.14		no					3	
2240: Jensen J, Lendorf A, Stimpel H, Frost J, Ibsen H, Rosenkilde P. The prevalence and etiology of impotence in 101 male hypertensive outpatients. Am J Hypertens. 1999 Mar;12(3):271-5.	1999	Denmark	English	outpatient based cross sectional study	middle-aged	hypertension	sexual function questionnaire	antihypertensives	C02	antihypertensives	C02			101	prevalence of erectile dysfunction as compared to normotensive men	27%, mainly associated with intermittent claudication and ischemic heart disease		no					2-	
1156: Fogari R, Zoppi A. Effects of antihypertensive therapy on sexual activity in hypertensive men. Curr Hypertens Rep. 2002 Jun;4(3):202-10.	2002	Italy	English	review	old	hypertension	erectile function	antihypertensives	C02	antihypertensives	C02				erectile function, impairment	dependent on antihypertensive classes			diuretics, centrally acting sympatholytic drugs, b-blockers have a greater impact	calcium antagonists and ACE inhibitors lower impact			4	
1195: Mikhailidis DP, Khan MA, Milionis HJ, Morgan RJ. The treatment of hypertension in patients with erectile dysfunction. Curr Med Res Opin. 2000;16 Suppl 1:s31-6.	2000		English	review	all ages	hypertension	erectile function	antihypertensives	C02	antihypertensives	C02				erectile function, impairment	dependent on drug type			thiazide diuretics and beta-blockers effective	alpha-blocker, doxazosin not effective in e.d.			4	In general, thiazide diuretics and beta-blockers seem to cause ED more often. In contrast, the alpha-blocker, doxazosin, has not been associated with an increased incidence of ED as a side effect.
1284: Rosen RC, Weiner DN. Cardiovascular disease and sleep-related erections. J Psychosom Res. 1997 Jun;42(6):517-30.	1997	USA	English	review	old	coronary artery disease	erectile function assessed by Rigiscan	antihypertensives	C02	antihypertensives	C02				erectile function, impairment	dependent on medication							4	Effect of antihypertensive drugs on sleep-related erectile function remains unclear.

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1458: Bansal S: Sexual dysfunction in hypertensive men. A critical review of the literature. Hypertension 1988; 12: 1-10	1988	USA	English	review	all ages	hypertension	sexual function questionnaires	antihypertensives	C02	antihypertensives	C02				erectile function, unaltered								3	"Based on the data reviewed, there is no definite evidence of an increased prevalence of sexual dysfunction in treated hypertensive men. Despite this ... the majority of authors … suggest that hypotensive therapy is an important cause of sexual dysfunction.. an area in need of considerable research. It is not clear from the reported studies whether the impairment is due to the drugs, the influence of the disease, or both."
2210: Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. Sexual function in men older than 50 years of age: results from the health professionals follow-up study. Ann Intern Med. 2003;139(3):161-8	2003	USA	English	population based cross sectional study	53-90	hypertension	sexual function questionnaire	antihypertensives	C02	antihypertensives	C02			31742	prevalence of erectile dysfunction as compared to normotensive men	RR 1.2 (95% CI 1.1–1.3)		no					2++	
2215: Martin-Morales A, Sanchez-Cruz JJ, Saenz de Tejada I, Rodriguez-Vela L, Jimenez-Cruz JF, Burgos-Rodriguez R.J Prevalence and independent risk factors for erectile dysfunction in Spain: results of the Epidemiologia de la Disfuncion Erectil Masculina Study. Urol. 2001 Aug;166(2):569-74;	2001	Spain	English	population based cross sectional study	25-70	hypertension	IIEF	antihypertensives	C02	antihypertensives	C02			2476	prevalence of erectile dysfunction as compared to normotensive men	OR 1.58 (95% CI 1.11–2.24)		no					2++	
2229: Moreira ED Jr, Abdo CH, Torres EB, Lobo CF, Fittipaldi JA. Prevalence and correlates of erectile dysfunction: results of the Brazilian study of sexual behavior. Urology. 2001 Oct;58(4):583-8.	2001	Brazil	English	population based cohort study	40-70	hypertension	single question from the NIH consensus definition	antihypertensives	C02	antihypertensives	C02			428	incidence of erectile dysfunction within 2 years	RR 2.42 (95% CI 1.42–4.13)		no					2+	
1641: Blumentals WA, Brown RR, Gomez-Caminero A. Antihypertensive treatment and erectile dysfunction in a cohort of type II diabetes patients. Int J Impot Res. 2003 Oct;15(5):314-7.	2003	USA	English	retrospective	middle-aged	erectile dysfunction in diabetes mellitus	erectile function	antihypertensives	C02	α blockers	C02CA			3160	erectile function, impairment	increase of risk by alpha blockers (OR=1.54, 95% CI=1.11, 2.12)		no					2-	
1596: Piha J, Kaaja R. Effects of moxonidine and metoprolol in penile circulation in hypertensive men with erectile dysfunction: results of a pilot study. Int J Impot Res. 2003 Aug;15(4):287-9.	2003	Finland	English	prospective	middle-aged	erectile dysfunction in hypertension	erectile function	antihypertensives	C02	moxonidine + metoprolol	C02AC05	n.g.	8w+8w	11	erectile function, improvement	after moxonidine, again impairment after metoprolol							3	
1031: Baldwin DS. Sexual dysfunction associated with antidepressant drugs. Expert Opin Drug Saf. 2004 Sep;3(5):457-70.	2004	UK	English	meta-analysis	young	depression	erectile function	antihypertensives	C02	monoamine oxidase type A inhibitors	C02KC				erectile function, impairment	common in depressive patients		no					4	
1172: Tam SW, Worcel M, Wyllie M. Yohimbine: a clinical review. Pharmacol Ther. 2001 Sep;91(3):215-43.	2001	USA	English	review	old	erectile dysfunction	erectile function	antihypertensives	C02	yohimbine	not listed				erectile function, improvement	moderate		in part					4	
1641: Blumentals WA, Brown RR, Gomez-Caminero A. Antihypertensive treatment and erectile dysfunction in a cohort of type II diabetes patients. Int J Impot Res. 2003 Oct;15(5):314-7.	2003	USA	English	retrospective	middle-aged	erectile dysfunction in diabetes mellitus	erectile function	diuretics	C03	diuretics	C03			3160	erectile function, impairment	reduced risk on diuretics (OR=0.73, 95% CI=0.54, 0.99).		no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2224: Shiri R, Koskimaki J, Hakkinen J, Auvinen A, Tammela TL, Hakama M. Cardiovascular drug use and the incidence of erectile dysfunction. Int J Impot Res. 2006 Aug 10;	2006	Finland	English	population based cross sectional study	55-75	hypertension	sexual function questionnaire	diuretics	C03	diuretics	C03			2837	prevalence of erectile dysfunction as compared to men not using diuretics	RR 1.3 (95% CI 0.7-2.4)		no					2+	
2231: Ricci E, Parazzini F, Mirone V, Imbimbo C, Palmieri A, Bortolotti A, Di Cintio E, Landoni M, Lavezzari M. Current drug use as risk factor for erectile dysfunction: results from an Italian epidemiological study. Int J Impot Res. 2003 Jun;15(3):221-4.	2003	Italy	English	outpatient based cross sectional study	>18	hypertension	interview by general practitioner	diuretics	C03	diuretics	C03			2010	prevalence of erectile dysfunction as compared to men not using diuretics	RR 3.1 (95% CI 1.4-6.9)		no					2-	
1451: Wassertheil-Smoller S, Blaufox MD, Oberman A, Davis BR, Swencionis C, O'Connell Knerr M, Hawkins CM, Langford HG: Effect of antihypertensives on sexual function and quality of life: The TAIM study. Ann Intern Med 1991;114: 613-620	1991	USA	English	prospective	21-65	hypertension	sexual function questionnaires	diuretics	C03	thiazide	C03AA	n.g.	6m	697	sexual function, impairment	sexual satisfaction decreased by 0.27, not in atenolol		yes	chlorthalidone	atenolol	placebo	n.g.	1+	Measures of well-being and sexual satisfaction asked in a 4-point scale (not a standardized questionnaire).
1452: Chang SW, Fine R, Siegel D et al. The impact of diuretic therapy on reported sexual function. Arch Intern Med 1991;151: 2402-2408	1991	USA	English	prospective	35-70	hypertension	sexual function questionnaires	diuretics	C03	hydrochlorothiazide	C03AA03	n.g.	2m	176	sexual function, impairment	erection score in hydrochlorothiazide group 1.0; in h + KCl group 0.5; in placebo group 0.0		yes	hydrochlorothiazide	h+KCl	placebo	n.g.	1+	"Our analysis found that the relationship between randomised diuretic therapy and increase sexual dysfunction remained significant when controlling for age, diabetes mellitus, and the use of a nondiuretic antihypertensive medication."
1453: Scharf MB, Mayleben DW: Comparative effects of prazosin and hydrochlorothiazide on sexual functio in hypertensive men. Am J Med 1989;86: 110-112	1989	USA	English	prospective	old	hypertension	nocturnal tumescence, penis	diuretics	C03	hydrochlorothiazide	C03AA03	n.g.	6m	12	erections nocturnal, decrease of duration	no significant difference between groups		yes	titrated hydrochlorothiazid	titrated prazosin	placebo	n.g.	1+	
1604: Suzuki H, Tominaga T, Kumagai H, Saruta T. Effects of first-line antihypertensive agents on sexual function and sex hormones. J Hypertens Suppl. 1988 Dec;6(4): S649-51.	1988	Japan	English	retrospective	old	hypertension	erectile function questionnaire, hormones	diuretics	C03	trichloromethiazide	C03AA06	4mg/d	1y	156	erectile function unaltered, testosterone levels unaltered	impairment after 4 weeks, but unaltered after 1 year			trichloromethiazide	atenolol	captopril		2+	
2230: Blumentals WA, Gomez-Caminero A, Joo S, Vannappagari V. Is erectile dysfunction predictive of peripheral vascular disease? Aging Male. 2003 Dec;6(4):217-21.	2003	USA	English	retrospective cohort study	43.9 mean	peripheral vascular disorder	physicians diagnosis	peripheral vasodilators	C04	peripheral vasodilators	C04			12825; 12825	prevalence of peripheral vascular disease in erectile dysfunction	OR 1.75 (95% CI 1.06-2.90)		no					2-	
2220: Safarinejad MR. Prevalence and risk factors for erectile dysfunction in a population-based study in Iran. Int J Impot Res. 2003 Aug;15(4):246-52.	2993	Iran	English	population based cross sectional study	20-70	peripheral vascular disorder	sexual function questionnaire	peripheral vasodilators	C04	peripheral vasodilators	C04			2674	prevalence of erectile dysfunction as compared to patients not suffering from peripheral vascular disorders	OR 2.44, 95% CI (1.65-3.74)		no					2-	
1225: Floth A. Topical therapy in erectile dysfunction. Wien Med Wochenschr. 2000;150(1-2):14-7.	2000	Austria	German	review	old	erectile dysfunction	erectile function	peripheral vasodilators	C04	topical vasodilating drugs	C04A				erectile function, impairment	different efficacy		no					4	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1438: Barbanti G, Beneforti P, Lapini A, Turini D. Relaxation of isolated corpus cavernosum induced by smooth-muscle relaxant drugs. A comparative study. Urol Res. 1988;16(4):299-302.	1988	Italy	English	experimental	42-68	cavernous tissue in vitro	muscle relaxation	peripheral vasodilators	C04	tolazoline	C04AB02	5x10-4g	in vitro	16	cavernous tissue, relaxation	poor							2-	
1549: Szasz G, Stevenson RW, Lee L, Sanders HD. Induction of penile erection by intracavernosal injection: a double-blind comparison of phenoxybenzamine versus papaverine-phentolamine versus saline. Arch Sex Behav. 1987 Oct;16(5):371-8.	1987	Canada	English	prospective, randomized	old	erectile dysfunction, vascular	erectile function	peripheral vasodilators	C04	phenoxybenzamine or papaverine-phenotolamine	C04AX02	n.g.	single dose	11	erectile function, tumescence	in all patients to different degree			phenoxybenzamine	papaverine + phentolamine	placebo		2-	
1506: Mulhall JP, Daller M, Traish AM, Gupta S, Park K, Salimpour P, Payton TR, Krane RJ, Goldstein I. Intracavernosal forskolin: role in management of vasculogenic impotence resistant to standard 3-agent pharmacotherapy. J Urol. 1997 Nov;158(5):1752-8; discussion 1758-9.	1997	USA	English	prospective	old	erectile dysfunction	erectile function	peripheral vasodilators	C04	forskolin, alprostadil, papaverine, phentolamine	not listed	n.g.		31	erectile rigidity, improvement	61% of patients			forskolin	other intracavernous drugs			2-	
2210: Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. Sexual function in men older than 50 years of age: results from the health professionals follow-up study. Ann Intern Med. 2003;139(3):161-8	2003	USA	English	population based cross sectional study	53-90	hypertension	sexual function questionnaire	beta blocking agents	C07	beta blocking agents	C07A			31742	prevalence of erectile dysfunction as compared to men not using beta blocking agents	RR 1.2 (95% CI 1.1–1.5)		no					2++	
2224: Shiri R, Koskimaki J, Hakkinen J, Auvinen A, Tammela TL, Hakama M. Cardiovascular drug use and the incidence of erectile dysfunction. Int J Impot Res. 2006 Aug 10;	2006	Finland	English	population based cross sectional study	55-75	hypertension	sexual function questionnaire	beta blocking agents	C07	beta blocking agents	C07A			2837	prevalence of erectile dysfunction as compared to men not using beta blocking agents	RR 1.7 (95% CI 0.9-3.2)		no					2+	
1598: Rosen RC, Kostis JB, Jekelis AW. Beta-blocker effects on sexual function in normal males. Arch Sex Behav. 1988 Jun;17(3):241-55.	1988	USA	English	prospective	middle-aged	healthy	erectile function	beta blocking agents	C07	beta blocking agents	C07A	n.g.	4w	30	erectile function, impairment	no conclusive effects			atenolol	metoprolol	propranolol		1+	personal vulnerability to propranolol
1062: Toda N. Vasodilating beta-adrenoceptor blockers as cardiovascular therapeutics. Pharmacol Ther. 2003 Dec;100(3):215-34.	2003	Japan	English	review	old	coronary artery disease	erectile function	beta blocking agents	C07	beta blocking agents	C07A				erectile function, impairment	frequent side effect							4	
1597: Franzen D, Metha A, Seifert N, Braun M, Hopp HW. Effects of beta-blockers on sexual performance in men with coronary heart disease. A prospective, randomized and double blinded study. Int J Impot Res. 2001 Dec;13(6):348-51.	2001	Germany	English	prospective, randomized	middle-aged	coronary heart disease	erectile function	beta blocking agents	C07	metoprolol	C07AB02	95mg/d	4m	65	erectile function according to „Kölner Erhebungsbogen", unaltered	sex life unaffected		yes	metoprolol	placebo			1+	
1630: Piha J, Kaaja R. Effects of moxonidine and metoprolol in penile circulation in hypertensive men with erectile dysfunction: results of a pilot study. Int J Impot Res. 2003 Aug;15(4):287-9. Finland	2003	Finland	English	prospective	middle-aged	hypertension	erectile function	beta blocking agents	C07	metoprolol	C07AB02	100mg/d	8w	11	erectile function, impairment	in 9/11 patients with metropolol		yes	metoprolol	moxonidine			1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1604: Suzuki H, Tominaga T, Kumagai H, Saruta T. Effects of first-line antihypertensive agents on sexual function and sex hormones. J Hypertens Suppl. 1988 Dec;6(4): S649-51.	1988	Japan	English	retrospective	old	hypertension	erectile function questionnaire, hormones	beta blocking agents	C07	atenolol	C07AB03	100mg/d	1y	156	erectile function, impairment and testosterone level decreased								3	
1622: Fogari R, Preti P, Derosa G, Marasi G, Zoppi A, Rinaldi A, Mugellini A. Effect of antihypertensive treatment with valsartan or atenolol on sexual activity and plasma testosterone in hypertensive men. Eur J Clin Pharmacol. 2002 Jun;58(3):177-80. Epub 2002 May 1.	2002	Italy	English	prospective	40-49	hypertension	sexual function questionnaire	beta blocking agents	C07	atenolol	C07AB03	50mg/d	16w	110	sexual activity, impairment	reduced in atenolol, increase in valsartan		yes	atenolol	valsartan	placebo		2+	
1560: Silvestri A, Galetta P, Cerquetani E, Marazzi G, Patrizi R, Fini M, Rosano GM. Report of erectile dysfunction after therapy with beta-blockers is related to patient knowledge of side effects and is reversed by placebo. Eur Heart J. 2003 Nov;24(21):1928-32.	2003	Italy	English	prospective	52 mean	cardiovascular disease	sexual function questionnaires	beta blocking agents	C07	atenolol	C07AB03	50mg/d	3m	96	erectile function, impairment	3.1% of group A, 15.6% of group B, 31.2% of group C		yes	32 patients blinded on the drug given	32 informed on the drug given but not on its side effects	32 informed on the side effects on erectile function		2+	Knowledge and prejudice about side effects of beta-blockers may contribute to occurrence of erectile function.
1383: Law MR, Copland RF, Armitstead JG, Gabriel R. Labetalol and priapism. Br Med J. 1980 Jan 12;280(6207):115	1980	UK	English	retrospective	25	terminal renal insufficiency	erectile function	beta blocking agents	C07	labetalol	C07AG01	800mg/d	2m	1	priapism, development	after addition of labetalol							3	
1604: Suzuki H, Tominaga T, Kumagai H, Saruta T. Effects of first-line antihypertensive agents on sexual function and sex hormones. J Hypertens Suppl. 1988 Dec;6(4): S649-51.	1988	Japan	English	retrospective	old	hypertension	erectile function questionnaire, hormones	calcium channel blockers	C08	nifedipine	C08CA05	80mg/d	1y	156	erectile function unaltered, testosterone levels unaltered	in all patients							3	
1619: Di Stasi SM, Giannantoni A, Capelli G, Jannini EA, Virgili G, Storti L, Vespasiani G. Transdermal electromotive administration of verapamil and dexamethasone for Peyronie's disease. BJU Int. 2003 Jun;91(9):825-9.	2003	Italy	English	prospective	old	induratio penis plastica	erectile function questionnaire, hormones	calcium channel blockers	C08	verapamil	C08DA01	transdermal electromotive	6w	49	fibrotic plaques	disappearance in 8%, reduction in 74%, no change in 18% of plaques		no					3	
1387: King BD, Pitchon R, Stern EH, Schweitzer P, Schneider RR, Weiner I. Impotence during therapy with verapamil. Arch Intern Med. 1983 Jun;143(6):1248-9.	1983	USA	English	retrospective	41-75	cardiac disease	erectile function	calcium channel blockers	C08	verapamil	C08DA01	240-480mg/d	32m	14	erectile function, impairment	in 3/14 patients		no					3	
2224: Shiri R, Koskimaki J, Hakkinen J, Auvinen A, Tammela TL, Hakama M. Cardiovascular drug use and the incidence of erectile dysfunction. Int J Impot Res. 2006 Aug 10;	2006	Finland	English	population based cross sectional study	55-75	hypertension	sexual function questionnaire	calcium channel blockers	C08	non-selective calcium channel blockers	C08E			2837	prevalence of erectile dysfunction as compared to men not using the drugs	RR 1.6 (95% CI 1.0-2.4)		no					2+	
2224: Shiri R, Koskimaki J, Hakkinen J, Auvinen A, Tammela TL, Hakama M. Cardiovascular drug use and the incidence of erectile dysfunction. Int J Impot Res. 2006 Aug 10;	2006	Finland	English	population based cross sectional study	55-75	hypertension	sexual function questionnaire	agents acting on the renin-angiotensin system	C09	various	C09			2837	prevalence of erectile dysfunction as compared to men not using the drugs	RR 2.2 (95% CI 1.0-4.7)		no					2+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1354: Croog SH, Levine S, Sudilovsky A, Baume RM, Clive J. Sexual symptoms in hypertensive patients. A clinical trial of antihypertensive medications. Arch Intern Med. 1988 Apr;148(4):788-94.	1988	USA	English	prospective, randomized	35-65	hypertension	sexual Symptoms Disstress Index	agents acting on the renin-angiotensin system	C09	captopril	C09AA01	100mg/d	6m	213	sexual function, impairment	no alteration		yes	captopril +diuretic	methyldopa	propranolol		1-	
1604: Suzuki H, Tominaga T, Kumagai H, Saruta T. Effects of first-line antihypertensive agents on sexual function and sex hormones. J Hypertens Suppl. 1988 Dec;6(4): S649-51.	1988	Japan	English	retrospective	old	hypertension	erectile function questionnaire, hormones	agents acting on the renin-angiotensin system	C09	captopril	C09AA01	75mg/d	1y	156	erectile function unaltered, testosterone levels unaltered	in all patients							3	
1119: Ferrario CM, Levy P. Sexual dysfunction in patients with hypertension: implications for therapy. J Clin Hypertens (Greenwich). 2002 Nov-Dec;4(6):424-32.	2002	USA	English	review	old	hypertension	erectile function	agents acting on the renin-angiotensin system	C09	losartan	C09CA01				erectile function, impairment	none		no					4	All has contractile effects on corporal smooth muscle. Losartian increases relaxation.
1640: Speel TG, Kiemeney LA, Thien T, Smits P, Meuleman EJ. Long-term effect of inhibition of the angiotensin-converting enzyme (ACE) on cavernosal perfusion in men with atherosclerotic erectile dysfunction: a pilot study. J Sex Med. 2005 Mar;2(2):207-12.	2005	The Netherlands	English	prospective, randomized	old	erectile dysfunction, vascular	IIEF	agents acting on the renin-angiotensin system	C09	ACE inhibitor	C09A	n.g.	26w	59	cavernosal perfusion, improvement	in all patients, no difference between groups		yes	ACE inhibitor	placebo			1+	
1641: Blumentals WA, Brown RR, Gomez-Caminero A. Antihypertensive treatment and erectile dysfunction in a cohort of type II diabetes patients. Int J Impot Res. 2003 Oct;15(5):314-7.	2003	USA	English	retrospective	middle-aged	erectile dysfunction in diabetes mellitus	erectile function	agents acting on the renin-angiotensin system	C09	ACE inhibitor	C09A	n.g.	n.g.	3160	erectile function, impairment	in ACE inhibitors increased risk (OR=1.47, 95% CI=1.21, 1.80)		no					3	
2208: Rosen RC, Fisher WA, Eardley I, Niederberger C, Nadel A, Sand M; Men's Attitudes to Life Events and Sexuality (MALES) Study. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. Curr Med Res Opin. 2004 May;20(5):607-17.	2004	USA	English	population based cross sectional study	20-75	hypercholesterolemia	sexual function questionnaire	lipid modifying agents	C10	lipid modifying agents	C10			27839	prevalence of erectile dysfunction as compared to men with normolipemia	16% reporting no erectile dysfunction, 29% reporting erectile dysfunction		no					2-	
2211: Rosen R, Altwein J, Boyle P, Kirby RS, Lukacs B, Meuleman E, O'Leary MP, Puppo P, Robertson C, Giuliano F. Lower urinary tract symptoms and male sexual dysfunction: the multinational survey of the aging male (MSAM-7). Eur Urol. 2003 Dec;44(6):637-49.	2003	USA	English	population based cross sectional study	50-80	hypercholesterolemia	IIEF	lipid modifying agents	C10	lipid modifying agents	C10			3242	prevalence of erectile dysfunction as compared to men with normolipemia	OR 1.19 (95% CI 1.06–1.33)		no					2+	
2215: Martin-Morales A, Sanchez-Cruz JJ, Saenz de Tejada I, Rodriguez-Vela L, Jimenez-Cruz JF, Burgos-Rodriguez R.J Prevalence and independent risk factors for erectile dysfunction in Spain: results of the Epidemiologia de la Disfuncion Erectil Masculina Study. Urol. 2001 Aug;166(2):569-74;	2001	Spain	English	population based cross sectional study	25-70	hypercholesterolemia	IIEF	lipid modifying agents	C10	lipid modifying agents	C10			2476	prevalence of erectile dysfunction as compared to men with normolipemia	OR 1.63 (95% CI 1.07–2.49)		no					2++	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2220: Safarinejad MR. Prevalence and risk factors for erectile dysfunction in a population-based study in Iran. Int J Impot Res. 2003 Aug;15(4):246-52.	2003	Iran	English	population based cross sectional study	20-70	hypercholesterolemia	sexual function questionnaire	lipid modifying agents	C10	lipid modifying agents	C10			2674	prevalence of erectile dysfunction as compared to men with normolipemia	OR 1.71 (95% CI 1.11-2.65)		no					2-	
1001: Herrmann HC, Levine LA, Macaluso J, Walsh M, Bradbury D, Schwartz S, Mohler ER, Kimmel SE: Can Atorvastatin improve the response to sildenafil in men with erectile dysfunction not initially respondive to sildenafil? J Sex Med 2006; 3(2): 303-308	2006	USA	English	prospective	old	erectile dysfunction	erectile function	lipid modifying agents	C10	atorvastatin	C10AA05	n.g.	12w	12	erectile function, improvement	increase of domain score of 7.8		yes	atorvastatin + sildenafil	atorvastatin + placebo		n.g.	1+	
1165: Rizvi K, Hampson JP, Harvey JN. Do lipid-lowering drugs cause erectile dysfunction? A systematic review. Fam Pract. 2002 Feb;19(1):95-8.	2002	UK	English	review	old	hyperlipidemia	erectile function	lipid modifying agents	C10	fibrates	C10AB				erectile function, impairment	no clear evidence of association							4	
1192: Schachter M. Erectile dysfunction and lipid disorders. Curr Med Res Opin. 2000;16 Suppl 1:s9-12.	2000	USA	English	review	all ages	erectile dysfunction	erectile function	lipid modifying agents	C10	fibrates	C10AB				erectile function, impairment	no association							4	No prospective studies available, which correlate lipid lowering and improving erectile function
1365: Figueras A, Castel JM, LaPorte JR, Capella D. Gemfibrozil-induced impotence. Ann Pharmacother. 1993 Jul-Aug;27(7-8):982.	1993	UK	English	retrospective	39-56	dyslipemia		erectile function, lipid modifying agents	C10	gemfibrozil	C10AB04	1200mg/d	6w	3	erectile function, impairment	starting 4w - 7m after beginning of treatment							3	
1384: Bain SC, Lemon M, Jones AF. Gemfibrozil-induced impotence. Lancet. 1990 Dec 1;336(8727):1389.	1990	UK	English	retrospective	53	coronary artery disease	erectile function	lipid modifying agents	C10	gemfibrozil	C10AB04	1200mg/d	4w	1	erectile function, impairment	quick improvement after discontinuation							3	
1571: Park HJ, Lee KM, Nam JK, Park NC. A case of erectile dysfunction associated with chronic methyl bromide intoxication. Int J Impot Res. 2005 Mar-Apr;17(2):207-8.	2004	Korea	English	case report	old	poisoning	sexual function	antipruritics	D04	methyl bromide	D04AA33		continuous	1	erectile function, impairment	complete							3	Only this isolated report in the literature
1251: Isidori AM, Giannetta E, Gianfrilli D, Greco EA, Bonifacio V, Aversa A, Isidori A, Fabbri A, Lenzi A. Effects of testosterone on sexual function in men: results of a meta-analysis. Clin Endocrinol (Oxf). 2005 Oct;63(4):381-94.	2005	Italy	English	meta-analysis		hypogonadism	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03			656	erectile function, improvement	Effects of T on erectile function inversely related to the mean baseline T concentration. Testosterone treatment might be useful for improving vasculogenic erectile dysfunction	n.g.	yes					1++	
1219: El-Sakka AI, Hassoba HM, Elbakry AM, Hassan HA. Prostatic specific antigen in patients with hypogonadism: effect of testosterone replacement. J Sex Med. 2005 Mar;2(2):235-40.	2005	Egypt	English	prospective	>45	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	250mg/2w	1y	187	PSA level, unaltered	No significant difference between pre- and post-treatment level	none	no					2-	
1213: Kalinchenko SY, Kozlov GI, Gontcharov NP, Katsiya GV. Oral testosterone undecanoate reverses erectile dysfunction associated with diabetes mellitus in patients failing on sildenafil citrate therapy alone. Aging Male. 2003 Jun;6(2):94-9.	2003	Russia	English	prospective	43-74	erectile dysfunction in diabetes mellitus	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	40mg/d orally	2w	120	erectile function, improvement	In 84/120 sildenafil non-responders, combined therapy with testosterone orally induced a significant increase in IIEF	none	no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
923: Stief J, Sohn HY, Alt A, Uberfuhr P, Theisen K, Stempfle HU. Effect of immunosuppression-induced hypogonadism on bone metabolism after heart transplantation. Dtsch Med Wochenschr. 2004 Jul 30;129(31-32):1674-8.	2004	Germany	German	prospective	old	cardiac transplants	bone mineral density	sex hormones and modulators of the genital system	G03	testosterone enanthate	G03BA03		n.g.	88	bone mineral density	decreased in 25% of patients, no increase by testosterone substitution							3	
1202: Shabsigh R, Kaufman JM, Steidle C, Padma-Nathan H. Randomized study of testosterone gel as adjunctive therapy to sildenafil in hypogonadal men with erectile dysfunction who do not respond to sildenafil alone. J Urol. 2004 Aug;172(2):658-63.	2004	USA	English	prospective	all ages	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	12w	75	erectile function, improvement	better effect of sildenafil when testosterone was added	none	yes	testosterone + sildenafil	placebo + sildenafil			1+	
1220: Yassin AA, Saad F, Diede HE. Testosterone and erectile function in hypogonadal men unresponsive to tadalafil: results from an open-label uncontrolled study. Andrologia. 2006 Apr;38(2):61-8.	2006	Germany	English	prospective, randomized	59 mean	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	3m	69	erectile function, improvement	testosterone + tadalafil better than tadalafil alone	none	yes	testosterone + tadalafil	tadalafil alone			1+	
1200: Greenstein A, Mabjeesh NJ, Sofer M, Kaver I, Matzkin H, Chen J. Does sildenafil combined with testosterone gel improve erectile dysfunction in hypogonadal men in whom testosterone supplement therapy alone failed? J Urol. 2005 Feb;173(2):530-2.	2005	Israel	English	prospective	60.7 mean	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	20m	49	erectile function, improvement	31 of 49 patients mean increase from 13.6 to 27	none	no					3	
1201: Shamloul R, Ghanem H, Fahmy I, El-Meleigy A, Ashoor S, Elnashaar A, Kamel I. Testosterone therapy can enhance erectile function response to sildenafil in patients with PADAM: a pilot study. J Sex Med. 2005 Jul;2(4):559-64.	2005	Egypt	English	prospective	40-70	erectile dysfunction not responding to sildenafil	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	n.g.	2m	40	erectile function, improvement	better effect of sildenafil when testosterone was added	none	no					2-	
1237: Foresta C, Caretta N, Rossato M, Garolla A, Ferlin A. Role of androgens in erectile function. J Urol. 2004 Jun;171(6 Pt 1):2358-62, quiz 2435.	2004	Italy	English	prospective, case-control	old	erectile dysfunction in hypogonadism	measurement of nocturnal penile tumescence (NPT)	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	3m	35	erectile function, improvement	Testosterone treatment for 6 months induced normalization of NPT parameters, and restoration of response to sildenafil	none	no					2-	
1198: Mulhall JP, Valenzuela R, Aviv N, Parker M. Effect of testosterone supplementation on sexual function in hypogonadal men with erectile dysfunction. Urology. 2004 Feb;63(2):348-52; discussion 352-3.	2004	USA	English	prospective	48 mean	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	1m	32	erectile function, improvement	statistical significance was reached for the difference between the baseline and 1-month	none	no					2-	
1203: Hwang TI, Chen HE, Tsai TF, Lin YC. Combined use of androgen and sildenafil for hypogonadal patients unresponsive to sildenafil alone. Int J Impot Res. 2006 Jul-Aug;18(4):400-4. Epub 2006 Jan 5.	2006	Taiwan	English	prospective	all ages	erectile dysfunction in hypogonadism, not responding to sildenafil	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	40mg/d orally	2m	32	erectile function, improvement	in 11 patients with testosterone alone, in 12 patients with testosterone + sildenafil	none	no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1238: Seidman SN, Roose SP. The sexual effects of testosterone replacement in depressed men: randomized, placebo-controlled clinical trial. J Sex Marital Ther. 2006 May-Jun;32(3):267-73.	2006	USA	English	prospective, randomized	52 mean	depression and hypogonadism	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	200mg/w	6w	30	erectile function, improvement	self-reported sexual functioning no between-group difference	none	yes	testosterone	placebo			1+	
1218: Hong JH, Ahn TY. Oral testosterone replacement in Korean patients with PADAM. Aging Male. 2002 Mar;5(1):52-6.	2002	Korea	English	prospective	56 mean	erectile dysfunction in hypogonadism	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	80mg/d orally	3m	28	erectile function, improvement	mean IIEF scores from 37.2 to 40.2 after 3m	no significant changes in liver function tests, red blood cell count or lipid profiles, no significant adverse reactions leading to cessation.	no					2-	
1430: Seidman SN, Miyazaki M, Roose SP. Intramuscular testosterone supplementation to selective serotonin reuptake inhibitor in treatment-resistant depressed men: randomized placebo-controlled clinical trial. J Clin Psychopharmacol. 2005 Dec;25(6):584-8.	2005	USA	English	prospective	46.8 mean	depression and treatment with SSRI	Hamilton rating scale	sex hormones and modulators of the genital system	G03	testosterone enanthate	G03BA03		6w	26	Hamilton rating scale, improvement	53.8% (7/13) in the testosterone group, 23.1% (3/13) in the placebo group	none	yes	testosterone	placebo			2+	
1234: Morales A, Johnston B, Heaton JP, Lundie M. Testosterone supplementation for hypogonadal impotence: assessment of biochemical measures and therapeutic outcomes. J Urol. 1997 Mar;157(3):849-54.	1997	Canada	English	prospective	old	erectile dysfunction in hypogonadism	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	80mg/d orally	60d	23	erectile function, improvement	restoration of plasma testosterone levels in all patients, but improvement in sexual attitudes and performance in only 61%	n.g.	no					2-	
1197: Aversa A, Isidori AM, Spera G, Lenzi A, Fabbri A. Androgens improve cavernous vasodilation and response to sildenafil in patients with erectile dysfunction. Clin Endocrinol (Oxf). 2003 May;58(5):632-8.	2003	Italy	English	prospective, randomized	old	erectile dysfunction, vascular	IIEF	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	5mg/d	1m	20	erectile function, improvement	IIEF score increase in the androgen group increase to 21.8, in the placebo group to 14.4 ($P < 0.05$)	none	yes	testosterone	placebo			1+	
1196: Yassin AA, Saad F, Traish A. Testosterone undecanoate restores erectile function in a subset of patients with venous leakage: a series of case reports. J Sex Med. 2006 Jul;3(4):727-35. Germany	2006	Germany	English	case report	old	erectile dysfunction in hypogonadism	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	1000mg/12w	12m	12	erectile function, improvement; occlusion of corporal veins, improvement	5 of 12	n.g.	no					3	
1235: Chatterjee R, Kottaridis PD, McGarrigle HH, Linch DC. Management of erectile dysfunction by combination therapy with testosterone and sildenafil in recipients of high-dose therapy for haematological malignancies. Bone Marrow Transplant. 2002 Apr;29(7):607-10.	2002	UK	English	prospective	22-58	erectile dysfunction in hypogonadism after bone marrow transplantation	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	250mg/4w	6m	8	erectile function, improvement	favourable response of all men	none	no					3	
1199: Yassin AA, Saad F. Dramatic improvement of penile venous leakage upon testosterone administration. A case report and review of literature. Andrologia. 2006 Feb;38(1):34-7.	2006	Germany	English	case report	56	erectile dysfunction, vascular	erectile function	sex hormones and modulators of the genital system	G03	testosterone	G03BA03	n.g.	1m	1	erectile function, improvement	dramatically	none						3	
1071: Lunenfeld B. Androgen therapy in the aging male. World J Urol. 2003 Nov;21(5):292-305. Epub 2003 Oct 24.	2003	Israel	English	review	old	hormone deficiency	quality of life (QOL)	sex hormones and modulators of the genital system	G03	testosterone	G03BA03				QOL, improvement	in most men	observation of prostatic side effects necessary						4	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1101: Higano CS. Side effects of androgen deprivation therapy: monitoring and minimizing toxicity. Urology. 2003 Feb;61(2 Suppl 1):32-8.	2003	USA	English	review	old	prostatic carcinoma	androgen deprivation effects	sex hormones and modulators of the genital system	G03	androgen deprivation	G03BA03				androgen deficiency symptoms, sexual dysfunction	dependent on kind of androgen deprivation		no					4	
1376: Guay AT, Bansal S, Heatley GJ. Effect of raising endogenous testosterone levels in impotent men with secondary hypogonadism: double blind placebo-controlled trial with clomiphene citrate. J Clin Endocrinol Metab. 1995 Dec;80(12):3546-52.	1995	USA	English	prospective, randomized	middle-aged	late-onset hypogonadism	hormones; erectile function	sex hormones and modulators of the genital system	G03	clomiphene citrate	not listed	150mg/d	2m	17	hormone levels, alteration; erectile function, alteration	significant increase of LH, FSH, and total and free testosterone levels; no improvement of sexual function		yes	clomiphene	placebo			1-	
1049: Urciuoli R, Cantisani TA, Carlinil M, Giuglietti M, Botti FM. Prostaglandin E1 for treatment of erectile dysfunction. Cochrane Database Syst Rev. 2004;(2): CD001784.	2004	Italy	English	meta-analysis	old	erectile dysfunction	erectile function	urologicals	G04	alprostadil	G04BE01			1873	erectile rigidity, improvement	55% of patients	penile pain, urethral trauma	no					2+	
1503: Engel JD, McVary KT. Transurethral alprostadil as therapy for patients who withdrew from or failed prior intracavernous injection therapy. Urology. 1998 May;51(5):687-92.	1998	USA	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	alprostadil	G04BE01	intraurethrally		1511	erectile rigidity, improvement	58% of patients with "not effective" intracavernous injection	penile pain in 7.8% of applications	yes					1+	
1540: Earle CM, Keogh EJ, Wisniewski ZS, Tulloch AG, Lord DJ, Watters GR, Glatthaar C. Prostaglandin E1 therapy for impotence, comparison with papaverine. J Urol. 1990 Jan;143(1):57-9.	1990	Australia	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	alprostadil, papaverine	G04BE01	5ug, 18mg	single dose	129	erectile rigidity, improvement	55% alprostadil better than papaverine, 18% papaverine better than alprostadil	discomfort during injection in 8.5% on PGE1, 4.7% on papaverin.		alprostadil	papaverine			2-	
1243: Fulgham PF, Cochran JS, Denman JL, Feagins BA, Gross MB, Kadesky KT, Kadesky MC, Clark AR, Roehrborn CG. Disappointing initial results with transurethral alprostadil for erectile dysfunction in a urology practice setting. J Urol. 1998 Dec;160(6 Pt 1):2041-6.	1998	USA	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	alprostadil	G04BE01	1000mg intraurethral	test dose	115	erectile function, improvement	Rigidity score 4 or 5 was achieved in 13.2% after 500 mg and 30% after 1,000 mg of patients at 30 min.	41.2% of patients orthostatic hypotension, 21 patients penile pain, penile burning, dizziness, chest pain. 1 patient syncope	no					3	
1236: Shabsigh R, Padma-Nathan H, Gittleman M, McMurray J, Kaufman J, Goldstein I. Intracavernous alprostadil alfadex (EDEX/VIRIDAL) is effective and safe in patients with erectile dysfunction after failing sildenafil (Viagra). Urology. 2000 Apr;55(4):477-80.	2000	USA	English	prospective	old	erectile dysfunction not responding to sildenafil	IIEF	urologicals	G04	alprostadil	G04BE01	40mg	4w	67	erectile function, improvement	in questions 3 and 4 in 60 patients, in question 4 in 57 patients	penile pain in 25 (29. 4%) of 85 patients	no					3	
1537: Kattan S, Collins JP, Mohr D. Double-blind, cross-over study comparing prostaglandin E1 and papaverine in patients with vasculogenic impotence. Urology. 1991 Jun;37(6):516-8.	1992	Canada	English	prospective	old	erectile dysfunction, vascular	erectile function	urologicals	G04	alprostadil, papaverine	G04BE01	20ug, 50mg	single dose	54	erectile rigidity, improvement	46% of alprostadil group, 14% of papaverin group	44% of patients on papaverine, 45% of patients on PGE1 mild pain at the site of injection. In 3 patients dizziness and headache.	yes	alprostadil	papaverine			1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1535: Mahmoud KZ, el Dakhli MR, Fahmi IM, Abdel-Aziz AB. Comparative value of prostaglandin E1 and papaverine in treatment of erectile failure: double-blind crossover study among Egyptian patients. J Urol. 1992 Mar;147(3):623-6.	1992	Egypt	English	pro-spective, random-ized	old	erectile dysfunci-ton	erectile function	urologicals	G04	alprostadil, papaverine	G04BE01	n.g.	single dose	52	erectile rigidity, improvement	81% of alprostadil group, 89% of papaverine group	penile pain in a relevant number of applications	yes					1+	
1544: Lee LM, Stevenson RW, Szasz G. Prostaglan-din E1 versus phentol-amine/papaverine for the treatment of erectile impotence: a double-blind comparison. J Urol. 1989 Mar;141(3):549-50.	1989	Canada	English	pro-spective, random-ized	old	erectile dys-function, vascular	erectile function	urologicals	G04	alprostadil, papaverine, phentol-amine	G04BE01	n.g.	single dose	48	erectile rigidity, improvement	2/3 of patients	alprostadil: 20 of 25 pain on injection, 4 men suf-ficient to preclude sexual activity. Papaverine: 1 of 25 pain on injection.						2-	
1515: Meinhardt W, de la Fuente RB, Lycklama a Nijeholt AA, Vermeij P, Zwartendijk J. Prostaglandin E1 with phentolamine for the treatment of erectile dysfunction. Int J Impot Res. 1996 Mar;8(1):5-7.	1996	The Nether-lands	English	pro-spective	old	erectile dys-function	erectile function	urologicals	G04	alprostadil, phentol-amine	G04BE01	10+0.5mg	14m	42	erectile rigidity, improvement	10 of 42 patients	5 patients priapism, 4 patients severe pain, 1 patient fibrosis.						3	
1241: Ismail M, Abbott L, Hirsch IH. Experience with intracavernous PGE-1 in the treatment of erectile dysfunction: dose considerations and efficacy. Int J Impot Res. 1997 Mar;9(1):39-42.	1997	USA	English	pro-spective	old	erectile dys-function	erectile function	urologicals	G04	alprostadil	G04BE01	20mg	test dose	40	erectile function, improvement	Patients with central neuro-genic erectile dysfunction required a dose of 5 mg, men with vascular etiologies required 20 mg	not mentioned	no					3	
1493: Bacar MM, Batislam E, Altinok D, Yilmaz E, Bacar H. Sildenafil citrate for penile hemodynamic determi-nation: an alternative to intracavernosal agents in Doppler ultrasound evaluation of erectile dysfunction. Urology. 2001 Apr;57(4):623-6; discussion 626-7.	2001	Turkey	English	pro-spective	old	erectile dys-function	Doppler ultra-sound, penis	urologicals	G04	alprostadil, papaverine, sildenafil	G04BE01	n.g.	n.g.	20	erectile function, duplex sonography, improvement	identical results with com-pounds, but sildenafil most convenient	no patient had side effects or complications from intracavernosal va-soactive agent injection or oral sildenafil citrate.		alprostadil	papaverine	sildenafil		2-	
1518: Shenfeld O, Hanani J, Shalhav A, Vardi Y, Goldwasser B. Papaver-ine-phentolamine and prostaglandin E1 versus papaverine-phentolamine alone for intracorporeal injection therapy: a clinical double-blind study. J Urol. 1995 Sep;154(3):1017-9.	1995	Israel	English	pro-spective, random-ized	old	erectile dys-function	erectile function	urologicals	G04	alprostadil, papaverine, phentol-amine	G04BE01	n.g.	twotimes	20	erectile rigidity, improvement	73% of a+p+p group, 28% of p+p group	2-drug-solution: No pain after injection, 1 prolonged erection. 3-drug-solution: 3 patients pain after injection, 2 prolonged erection		alprostadil + papav-erine + phentol-amine	papav-erine + phentol-amine			2-	
1545: Sarosdy MF, Hudnall CH, Erickson DR, Hardin TC, Novicki DE. A prospective double-blind trial of intra-corporeal papaverine versus prostaglandin E1 in the treatment of impotence. J Urol. 1989 Mar;141(3):551-3.	1989	Austria	English	pro-spective, random-ized	old	erectile dys-function	erectile function	urologicals	G04	alprostadil, papaverine	G04BE01	10 mg	single dose	15	erectile rigidity, improvement	9 of 15 patients	no significant side effects	cross-over	10mg alprostadil	30mg papaverin			2-	
1547: Waldhauser M, Sch-ramek P. Efficiency and side effects of prostaglandin E1 in the treatment of erectile dysfunction. J Urol. 1988 Sep;140(3):525-7.	1988	Austria	English	pro-spective	52 mean	erectile dys-function	erectile function	urologicals	G04	alprostadil, papaverine, phentol-amine	G04BE01	n.g.	single dose	12	erection, rigid; 75% burning sensations	11 of 12 patients	75 % of patients burning sensations during the entire period of erection		alprostadil	papav-erine + phentol-amine			2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1052: Becher E. Topical alprostadil cream for the treatment of erectile dysfunction. Expert Opin Pharmacother. 2004 Mar;5(3):623-32.	2004	Argentina	English	meta-analysis	old	erectile dysfunction	erectile function	urologicals	G04	alprostadil	G04BE01	cream	on demand		erectile function, improvement	good results in patients with mild symptoms	no significant side effects	no					1-	
1514: Purvis K, Brekke I, Christiansen E. Determinants of satisfactory rigidity after intracavernosal injection with prostaglandin E1 in men with erectile failure. Int J Impot Res. 1996 Mar;8(1):9-16.	1996	Norway	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, alprostadil	G04BE02	7-15mg A+15mg P	single dose	516	erectile rigidity, improvement	60% of alprostadil group, 15% papaverine group	n.g.		papaverine	alprostadil			2-	
1505: Sogari PR, Teloken C, Souto CA. Atropine role in the pharmacological erection test: study of 228 patients. J Urol. 1997 Nov;158(5):1760-3.	1997	Brazil	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine + alprostadil + phentolamine + atropine	G04BE02	50+0+0.2 +0.075	single dose	230	erectile rigidity, improvement	45.6% of patients	In both groups, about 50% of patients mentioned some painful sensation without significant difference.	yes	combination +atropine	combination without atropine			1+	
1485: Seyam R, Mohamed K, Akhras AA, Rashwan H. A prospective randomized study to optimize the dosage of trimix ingredients and compare its efficacy and safety with prostaglandin E1. Int J Impot Res. 2005 Jul-Aug;17(4):346-53.	2005	Saudi Arabia	English	prospective	50.5 mean	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, alprostadil	G04BE02	n.g.	1w	180	erectile function, duplex sonography, unaltered	similar in both treatments	priapism in a relevant number		papaverine	alprostadil			2-	
1526: Sparwasser C, Drescher P, Pust RA, Madsen PO. Long-term results of therapy with intracavernousal injections and penile venous surgery in chronic erectile dysfunction. Scand J Urol Nephrol Suppl. 1994;157:107-12.	1994	Germany	English	retrospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine	G04BE02	n.g.	12m	172	erectile rigidity, improvement	96% of patients	3.4% fibrotic plaques, 0.15% prolonged erection						3	
1486: Moemen MN, Hamed HA, Kamel II, Shamloul RM, Ghanem HM. Clinical and sonographic assessment of the side effects of intracavernous injection of vasoactive substances. Int J Impot Res. 2004 Apr;16(2):143-5.	2004	Egypt	English	retrospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, alprostadil	G04BE02	n.g.	n.g.	168	cavernous injection, side effects	highest in papaverine therapy	No systemic side effects, but mild clinically impalpable fibrosis, 10 patients prolonged erection, 7 patients penile fibrosis, 3 cavernositis, 1 intracavernous needle breakage						2-	
1504: Zaher TF. Papaverine plus prostaglandin E1 versus prostaglandin E1 alone for intracorporeal injection therapy. Int Urol Nephrol. 1998;30(2):193-6.	1998	Egypt	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, alprostadil	G04BE02	n.g.	three-times	100	erectile rigidity, improvement	60 min duration in 75% of patients	n.a.	no	papaverine + alprostadil	alprostadil			2-	
1554: Sidi AA, Cameron JS, Duffy LM, Lange PH. Intracavernous drug-induced erections in the management of male erectile dysfunction: experience with 100 patients. J Urol. 1986 Apr;135(4):704-6.	1986	USA	English	retrospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine	G04BE02	25mg + 0.8mg	n.g.	100	erectile rigidity, improvement	65.7% of vascular e.d., 100% of neurogenic e.d.	4 patients prolonged erection						2-	
1508: Bechara A, Casabe A, Cheliz G, Romano S, Rey H, Fredotovich N. Comparative study of papaverine plus phentolamine versus prostaglandin E1 in erectile dysfunction. J Urol. 1997 Jun;157(6):2132-4.	1997	Argentinia	English	prospective	58 mean	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, alprostadil	G04BE02	30, 0.5, 30mg	single dose	60	erectile rigidity, improvement	54% of patients	18% prolonged erections		papaverine + phentolamine	alprostadl			2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1489: Lammers PI, Rubio-Aurioles E, Castell R, Castaneda J, Ponce de Leon R, Hurley D, Lipezker M, Loehr LA, Lowrey F. Combination therapy for erectile dysfunction: a randomized, double blind, unblinded active-controlled, cross-over study of the pharmacodynamics and safety of combined oral formulations of apomorphine hydrochloride, phentolamine mesylate and papaverine hydrochloride in men with moderate to severe erectile dysfunction. Int J Impot Res. 2002 Feb;14(1):54-9;	2002	USA	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, apomorphine	G04BE02	n.g.	n.g.	44	sexual score, increase	significant difference to baseline, but no difference between formulations	with apomorphine nasocongestion, headache frequently	yes	phentolamine	apomorphine	papaverine		1-	
1541: Keogh EJ, Watters GR, Earle CM, Carati CJ, Wisniewski ZS, Tulloch GS, Lord DJ. Treatment of impotence by intrapenile injections. A comparison of papaverine versus papaverine and phentolamine: a double-blind, crossover trial. J Urol. 1989 Sep;142(3):726-8.	1989	USA	English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	papaverine	G04BE02	40, 0.5mg	single dose	40	erectile rigidity, improvement	27% of papaverine group, 48% of papaverine-phentolamine group	papaverine: 11 men discomfort during injection, combination: 7 men discomfort, 1 patient prolonged erection	yes	40mg papaverine alone	20mg papaverine + 5mg phentolamine			2+	
1483: Shamloul R, Atteya A, Elnashaar A, Gadallah A, Zohdy W, Abdelsalam W. Intracavernous sodium nitroprusside (SNP) versus papaverine/phentolamine in erectile dysfunction: a comparative study of short-term efficacy and side-effects. J Sex Med. 2005 Jan;2(1):117-20.	2005	Egypt	English	prospective	young	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, sodium nitroprusside	G04BE02	30, 1, 300mg	1w	40	erectile function, improvement	similar in both treatments	no side-effects with sodium nitroprusside, priapism and local penile pain with bimix solution		papaverine + phentolamine	Sodium prusside			2-	
1490: Lebib Ben Achour S, Laffont I, Boyer F, Boiteau F, Dizien O. Intracavernous injections in the treatment of erectile dysfunction in spinal cord injured patients: experience with 36 patients. Ann Readapt Med Phys. 2001 Feb;44(1):35-40.	2001	France	French	prospective	31 mean	paraplegics	erectile function	urologicals	G04	papaverine, phentolamine, moxisylite	G04BE02	n.g.	n.g.	36	erectile function, improvement	average dose to obtain grade 4 or 5 erection 12.3 +/- 4.8 ug with alprostadil, 14 +/- 5.4 mg with moxisylite	no significant side effects						2-	
1552: Gasser TC, Roach RM, Larsen EH, Madsen PO, Bruskewitz RC. Intracavernous self-injection with phentolamine and papaverine for the treatment of impotence. J Urol. 1987 Apr;137(4):678-80.	1987		English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine	G04BE02	n.g.	4w	30	erectile rigidity, improvement	83% of patients	penile ecchymosis common, 1 patient prolonged erectiion		papaverine + phentolamine	placebo			2-	
1487: Shamloul R, Ghanem HM, Salem A, Kamel II, Mousa AA. The value of penile duplex in the prediction of intracavernous drug-induced priapism. Int J Impot Res. 2004 Feb;16(1):78-9.	2004	Egypt	English	retrospective	old	erectile dysfunction	priapism	urologicals	G04	papaverine, phentolamine, alprostadil	G04BE02	n.g.	single dose	29	priapism as a side effect	The disappearance of blood flow in the cavernous artery after an 1hour of sustained rigid erection predicts priapism with 100% specificity and sensitivity	n.g.					3	
1509: Renganathan R, Suranjan B, Kurien T. Comparison of transdermal nitroglycerin and intracavernous injection of papaverine in the treatment of erectile dysfunction in patients with spinal cord lesions. Spinal Cord. 1997 Feb;35(2):99-103.	1997	India	English	prospective	young	erectile dysfunction in spinal cord lesion	erectile function	urologicals	G04	papaverine intracavernous. nitroglycerin transcutaneous	G04BE02	n.g.	single dose	28	erectile rigidity, improvement	93% of papaverin group, 17% of nitroglycerin group	mild headache in six (21%) patients		papaverine	nitroglycerin			2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1511: Kayigil O, Atahan O, Metin A. Electromyographic changes of corpus cavernosum due to papaverine and nitroprusside in veno-occlusive dysfunction. J Urol. 1996 Oct;156(4):1316-9.	1996	Turkey	English	prospective	old	erectile dysfunction	electrostimulation of cavernosal nerve	urologicals	G04	papaverine, nitroprusside	G04BE02	n.g.	single dose	22	nerval amplitude, increased	more significant in nitroprusside	n.g.		papaverine	nitroprusside			2-	
1521: Kim ED, el-Rashidy R, McVary KT. Papaverine topical gel for treatment of erectile dysfunction. J Urol. 1995 Feb;153(2):361-5.	1995	USA	English	prospective	old	erectile dysfunction	erectile function	urologicals	G04	papaverine transcutaneously	G04BE02	n.g.	single dose	20	peak systolic flow velocity of cavernous artery, increase	26% of tests	no significant side effects						3	
1551: Kiely EA, Ignotus P, Williams G. Penile function following intracavernosal injection of vasoactive agents or saline. Br J Urol. 1987 May;59(5):473-6.	1987	UK	English	prospective, randomized	25-65	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine	G04BE02	30mg	single dose	18	erectile rigidity, improvement	70% of patients, none in saline group	no significant side effects		papaverine 30mg + phentolamine 1mg	saline solution			2-	
1438: Barbanti G, Beneforti P, Lapini A, Turini D. Relaxation of isolated corpus cavernosum induced by smooth-muscle relaxant drugs. A comparative study. Urol Res. 1988;16(4):299-302.	1988	Italy	English	experimental	42-68	cavernous tissue in vitro	muscle relaxation	urologicals	G04	papaverine, phentolamine	G04BE02	5x10-4g	in vitro	16	cavernous tissue, relaxation	good; poor							2-	
1534: Allen RP, Engel RM, Smolev JK, Brendler CB. Objective double-blind evaluation of erectile function with intracorporeal papaverine in combination with phentolamine and/or prostaglandin E1. J Urol. 1992 Oct;148(4):1181-3.	1992	USA	English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	papaverine, phentolamine, alprostadil	G04BE02	1mg, 0,5mg, 5ug	single dose	7	erectile rigidity, improvement	all patients	no significant side effects, no penile pain		papaverine + phentolamine	papaverine + alprostadil			2-	
1313: Lomas GM, Jarow JP. Risk factors for papaverine-induced priapism. J Urol. 1992 May;147(5):1280-1.	1992	USA	English	review	old	erectile dysfunction	erectile function	urologicals	G04	papaverine	G04BE02			400	erectile function, improvement	risk factors for priapism	higher in patients with psychogenic or neurogenic impotence than in those with vasculogenic impotence						4	
1239: Vick RN, Benevides M, Patel M, Parivar K, Linnet O, Carson CC. The efficacy, safety and tolerability of intracavernous PNU-83757 for the treatment of erectile dysfunction. J Urol. 2002 Jun;167(6):2618-23.	2002	USA	English	prospective	middle-aged	erectile dysfunction, vascular		urologicals	G04	PNU-83757 (potassium channel opener)	not listed	140mg	test dose	66	erectile function, improvement	Of 25 patients receiving 60 to 140 mg only 1 had no erectile response, 15 had partial erection and 9 had complete erection	no significant side effects	no					3	
1006: Kostis JB, Jackson G, Rosen R, Barrett-Connor E, Billups K, Burnett AL, Carson C 3rd, Cheitlin M, Debusk R, Fonseca V, Ganz P, Goldstein I, Guay A, Hatzichristou D, Hollander JE, Hutter A, Katz S, Kloner RA, Mittleman M, Montorsi F, Montorsi P, Nehra A, Sadovsky R, Shabsigh R. Sexual dysfunction and cardiac risk (the Second Princeton Consensus Conference). Am J Cardiol. 2005 Jul 15;96(2):313-21. Original 151205	2005	USA	English	review	old	coronary artery disease	clinical symptoms	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03	n.g.	n.g.	n.g.	erectile function, improvement	different risk groups	no cardiac side effects	no					1-	erectile dysfunction as part of metabolic syndrome
1048: Kloner RA. Assessment of cardiovascular risk in patients with erectile dysfunction: focus on the diabetic patient. Endocrine. 2004 Mar-Apr;23(2-3):125-9.	2004	USA	English	review	old	diabetes mellitus	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03	various	various	n.g.	erectile function, impairment	lower than in non-diabetic men	no cardiac side effects						4	

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2203: Thompson IM, Tangen CM, Goodman PJ, Probstfield JL, Moinpour CM, Coltman CA. Erectile dysfunction and subsequent cardiovascular disease. JAMA. 2005 Dec 21;294(23):2996-3002	2005	USA	English	placebo group in the Prostate Cancer Prevention Trial	62 mean	erectile dysfunction	sexual function questionnaire	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03	various	various	9457	incidence of myocardial infarction in men complaining erectile dysfunction as compared to men without erectile dysfunction	OR 1.29 (95% CI 0.96-1.74)		no					2++	
1556. Kloner RA, Mullin SH, Shook T, Matthews R et al.: Erectile dysfunction in the cardiac patient: How common and should we treat? J Urol 2001;170: S46-S50	2001	USA	English	prospective	n.g.	erectile dysfunction	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03	n.g.	n.g.	3414	erectile function, impairment	38% of patients using antihypertensives, 34% of of normal men	Similar rate for patients taking sildenafil and antihypertensive medication (34%) and those not taking antihypertensive agents (38%).	no					2-	
1066: Brindis RG, Kloner RA. Sildenafil in patients with cardiovascular disease. Am J Cardiol. 2003 Nov 6;92(9A):26M-36M.	2003	USA	English	review	old	coronary artery disease	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				cardiovascular parameters	no influence of phosphodiesterase 5-inhibitors	no cardiac side effects						4	
1016: Kloner R, Padma-Nathan H. Erectile dysfunction in patients with coronary artery disease. Int J Impot Res. 2005 May-Jun;17(3):209-15.	2005	USA	English	review	old	coronary artery disease	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				coronary artery disease, improvement with phosphodiesterase 5-inhibitors		no cardiac side effects						4	
1021: Seftel AD. Phosphodiesterase type 5 inhibitor differentiation based on selectivity, pharmacokinetic, and efficacy profiles. Clin Cardiol. 2004 Apr;27(4 Suppl 1):I14-19.	2004	USA	English	review	old	erectile dysfunction	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	most patients	Most frequent side effects are related to their vasodilatory effects, such as headache, flushing, dyspepsia, nasal congestion, rhinitis. They are generally reversible.	no					4	lower resorption in high-fat food
1022: Padma-Nathan H, McCullough A, Forest C. Erectile dysfunction secondary to nerve-sparing radical retropubic prostatectomy: comparative phosphodiesterase-5 inhibitor efficacy for therapy and novel prevention strategies. Curr Urol Rep. 2004 Dec;5(6):467-71.	2004	USA	English	review	old	prostate cancer	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	7fold increase in maintaining erections after nerve-sparing surgery	not mentioned	no					4	
1024: Basu A, Ryder RE. New treatment options for erectile dysfunction in patients with diabetes mellitus. Drugs. 2004;64(23):2667-88.	2004	UK	English	review	old	diabetes mellitus	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement		headache, nasal congestion and dyspepsia. The drugs are generally well tolerated, withdrawal from clinical studies as a result of drug-related adverse effects were rare.	no					4	
1030: Kendirci M, Hellstrom WJ. Current concepts in the management of erectile dysfunction in men with prostate cancer. Clin Prostate Cancer. 2004 Sep;3(2):87-92.	2004	USA	English	review	old	prostate cancer	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	16-82% following radical prostatectomy	not mentioned	no					4	
1038: Gontero P, Kirby R. Proerectile pharmacological prophylaxis following nerve-sparing radical prostatectomy (NSRP). Prostate Cancer Prostatic Dis. 2004;7(3):223-6.	2004	UK	English	review	old	prostate cancer	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	phosphodiesterase 5-inhibitors following nerve sparing operation	n.g.					4	
1041: Porst H. Erectile dysfunction. New drugs with special consideration of the PDE 5 inhibitors. Urologe A. 2004 Jul;43(7):820-8.	2004	Germany	German	review	old	erectile dysfunction	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	highly effective	Absolute contraindication in patients taking nitrate- or molsidomine-containing medications, interaction with non-uroselective alpha-adrenoceptor blockers						4	contraindicated when taking nitrates

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1120: Gresser U, Gleiter CH. Erectile dysfunction: comparison of efficacy and side effects of the PDE-5 inhibitors sildenafil, vardenafil and tadalafil--review of the literature. Eur J Med Res. 2002 Oct 29;7(10):435-46.	2002	Germany	English	review	old	erectile dysfunction	erectile function	urologicals	G04	phosphodiesterase-5 inhibitors	G04BE03				erectile function, improvement	43% in radical prostatectomy, 82% in neurologic diseases	insufficient data on adverse effects of vardenafil and tadalafil, particularly their long-term use and use in high-risk groups	no					4	
1087: Eisenhardt A, Siffert W. Genetic risk factors for erectile dysfunction and genetic determinants of drug response--on the way to improve drug safety? Herz. 2003 Jun;28(4):304-13.	2003	Germany	English	prospective	old	erectile dysfunction	genotype polymorphism	urologicals	G04	sildenafil	G04BE03	n.g.	n.g.	n.g.	erectile function, improvement	GNB3 825C allele carriers 50%, in genotype TT 90% positive response to sildenafil	n.g.	no	GNB3 825C allele carriers	genotype TT			2-	genetic profile may be of relevance for cardiovascular side effects of sildenafil
1150: Fink HA, Mac Donald R, Rutks IR, Nelson DB, Wilt TJ. Sildenafil for male erectile dysfunction: a systematic review and meta-analysis. Arch Intern Med. 2002 Jun 24;162(12):1349-60.	2002	USA	English	meta-analysis	old	erectile dysfunction	erectile function	urologicals	G04	sildenafil	G04BE03			6659	erectile function, improvement	83% of sildenafil group, 45% of placebo group	flushing (12%), headache (11%), dyspepsia (5%), and visual disturbances (3%); all adverse events were significantly less likely to occur with placebo. No significant association with with serious cardiovascular events or death	yes	sildenafil	placebo			1-	
1121: Nurnberg HG, Seidman SN, Gelenberg AJ, Fava M, Rosen R, Shabsigh R. Depression, antidepressant therapies, and erectile dysfunction: clinical trials of sildenafil citrate (Viagra) in treated and untreated patients with depression. Urology. 2002 Sep;60(2 Suppl 2):58-66.	2002	USA	English	meta-analysis	old	depression	erectile function	urologicals	G04	sildenafil	G04BE03		12w	500	erectile function, improvement	various conditions	not mentioned	yes	untreated minor depression	depression refractory to SRI	ED after SRI treatment		1+	
1123: Derry F, Hultling C, Seftel AD, Sipski ML. Efficacy and safety of sildenafil citrate (Viagra) in men with erectile dysfunction and spinal cord injury: a review. Urology. 2002 Sep;60(2 Suppl 2):49-57. Original	2002	UK	English	meta-analysis	37 mean	spinal cord injury	erectile function	urologicals	G04	sildenafil	G04BE03		30d	382	erectile function, improvement	94%	similar rate as in other indications	yes	sildenafil	placebo			1+	responser rates higher than in diabetes (65%)
1207: Conti CR, Pepine CJ, Sweeney M. Efficacy and safety of sildenafil citrate in the treatment of erectile dysfunction in patients with ischemic heart disease. Am J Cardiol. 1999 Mar 4;83(5A):29C-34C.	1999	USA	English	meta-analysis	middle-aged	erectile dysfunction and ischemic heart disease	IIEF	urologicals	G04	sildenafil	G04BE03	200mg	24w	357	erectile function, improvement	Mean scores for Question 3 and 4 of the IIEF significantly higher for the sildenafil group than for the placebo group. Improved erections 70% of sildenafil patients 20% of placebo patients.	headache 25%, flushing 14%, and dyspepsia 12% for patients with ischemic heart disease, 21%, 15%, 10% for patients without ischemic heart disease.	yes	sildenafil	placebo			1+	
1208: Meuleman E, Cuzin B, Opsomer RJ, Hartmann U, Bailey MJ, Maytom MC, Smith MD, Osterloh IH. A dose-escalation study to assess the efficacy and safety of sildenafil citrate in men with erectile dysfunction. BJU Int. 2001 Jan;87(1):75-81.	2001	The Netherlands	English	prospective, randomized	middle-aged	erectile dysfunction in different conditions	IIEF	urologicals	G04	sildenafil	G04BE03	100mg	26w	315	erectile function, improvement	Patients' abilities to achieve and maintain an erection in the sildenafil group was significantly improved compared with the placebo group.	mild to moderate in 27% of patients of sildenafil group, and in 8% of patients of placebo group.	yes	sildenafil	placebo			1-	

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1229: Althof SE, O'leary MP, Cappelleri JC, Hvidsten K, Stecher VJ, Glina S, King R, Siegel RL; International SEAR Study Group. Sildenafil citrate improves self-esteem, confidence, and relationships in men with erectile dysfunction: Results from an international, multicenter, double-blind, placebo-controlled trial. J Sex Med. 2006 May;3(3):521-9.	2006	USA	English	prospective, randomized	>18	erectile dysfunction	IIEF	urologicals	G04	sildenafil	G04BE03	100mg	12w	300	erectile function, improvement	Compared with placebo, sildenafil significantly improved self-esteem, confidence, sexual relationship satisfaction, and overall relationship satisfaction.	n.g.	yes	sildenafil	placebo			1-	
1289: Chia SJ, Ramesh K, Earnest A. Clinical application of prognostic factors for patients with organic causes of erectile dysfunction on 100 mg of sildenafil citrate. Int J Urol. 2004 Dec;11(12):1104-9.	2004	USA	English	prospective	55 mean	erectile dysfunction	IIEF	urologicals	G04	sildenafil	G04BE03	100mg	2y	232	erectile function, improvement	Overall response rate 43%; best response rate in veno-occlusive cases, worst responses from neurogenic causes.		no					2-	
1224: Basar M, Tekdogan UY, Yilmaz E, Basar H, Atan A, Batislam E. The efficacy of sildenafil in different etiologies of erectile dysfunction. Int Urol Nephrol. 2001;32(3):403-7.	2001	Turkey	English	prospective	27-78	erectile dysfunction	IIEF	urologicals	G04	sildenafil	G04BE03	100mg	6m	141	erectile function, improvement	The IIEF score increased from 11.80 to 20.70. Positive response in 102 patients, 38 unresponsive.	n.g.	no					3	
1499: McMahon CG, Samali R, Johnson H. Treatment of intracorporeal injection nonresponse with sildenafil alone or in combination with triple agent intracorporeal injection therapy. J Urol. 1999 Dec;162(6):1992-7; discussion 1997-8.	1999	Australia	English	retrospective	56 mean	erectile dysfunction	IIEF	urologicals	G04	sildenafil, alprostadil	G04BE03	different		93	erectile function, improvement	good in all drugs	29/93 patients treated with intracavernosal injection: penile pain in 27, dizziness in 5 and headache in 2. 34/93 patients treated with sildenafil: headache in 30, facial flushing in 25, dyspepsia in 12, nasal congestion in 9, dizziness in 5, visual disturbances in 1. 20/41 patients on combined therapy: penile pain in 15, headache in 15, facial flushing in 12, dyspepsia in 7, nasal congestion in 3, dizziness in 12 and syncope in 1.						2-	
1246: Incrocci L, Hop WC, Slob AK. Favorable effect of sildenafil on erectile dysfunction in patients after radiotherapy for prostate cancer; randomised, double-blind, placebo-controlled crossover study. Ned Tijdschr Geneeskd. 2003 Aug 30;147(35):1687-90.	2003	The Netherlands	Dutch	prospective, randomized	old	erectile dysfunction after brachytherapy of prostate	IIEF	urologicals	G04	sildenafil	G04BE03	100mg	12w	60	erectile function, improvement	significant increase in sildenafil treatment vs. placebo	mild or moderate	crossover	sildenafil	placebo			2+	
1085: Raina R, Lakin MM, Agarwal A, Sharma R, Goyal KK, Montague DK, Klein E, Zippe CD. Long-term effect of sildenafil citrate on erectile dysfunction after radical prostatectomy: 3-year follow-up. Urology. 2003 Jul;62(1):110-5.	2003		English	prospective	old	prostate cancer	erectile function	urologicals	G04	sildenafil	G04BE03	n.g.		48	erectile function, improvement	71%	headache (12%), flushing (10%), blue or blurred vision (2%).	no	nerves-paring surgery	unilateral nerves-paring surgery	no nerves-paring surgery		2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1245: Rochira V, Balestrieri A, Madeo B, Granata AR, Carani C. Sildenafil improves sleep-related erections in hypogonadal men: evidence from a randomized, placebo-controlled, crossover study of a synergic role for both testosterone and sildenafil on penile erections. J Androl. 2006 Mar-Apr;27(2):165-75. Epub 2005 Nov 8.	2006	Italy	English	prospective, randomized	middle-aged	erectile dysfunction in hypogonadism	nocturnal penile tumescence and rigidity monitoring	urologicals	G04	sildenafil	G04BE03	50mg	6w	48	nocturnal erection, improvement	significant increase in sildenafil treatment vs. placebo	n.g.	yes	sildenafil	placebo			1+	
1233: McMahon CG. High dose sildenafil citrate as a salvage therapy for severe erectile dysfunction. Int J Impot Res. 2002 Dec;14(6):533-8.	2002	Australia	English	prospective	60 mean	erectile dysfunction not responding to sildenafil	IIEF	urologicals	G04	sildenafil	G04BE03	200mg		45	erectile function, improvement	Treatment was regarded as having improved the erections by 37%, 46.3% and 68% of patients with sildenafil 100 mg, 150 mg and 200 mg, resp.	34/54: headache (19), facial flushing (32), dyspepsia (14), nasal congestion (11), dizziness (5), visual disturbances (5). 4/13 responders refused to continue treatment due to adverse effects.	no					3	sildenafil up to 200 mg is an effective salvage therapy for 24.1% of previous sildenafil non-responders: Limited by a significantly higher incidence of adverse effects and a 31% treatment discontinuation rate
1212: Webster LJ, Michelakis ED, Davis T, Archer SL. Use of sildenafil for safe improvement of erectile function and quality of life in men with New York Heart Association classes II and III congestive heart failure: a prospective, placebo-controlled, double-blind crossover trial. Arch Intern Med. 2004 Mar 8;164(5):514-20.	2004	USA	English	prospective, randomized	old	erectile dysfunction in congestive heart failure	IIEF	urologicals	G04	sildenafil	G04BE03	50mg	12w	35	erectile function, improvement	of IIEF compared with placebo and both sets of depression scores	n.g.	yes	sildenafil	placebo			1+	
1231: Turk S, Karalezli G, Tonbul HZ, Yildiz M, Altintepe L, Yildiz A, Yeksan M. Erectile dysfunction and the effects of sildenafil treatment in patients on haemodialysis and continuous ambulatory peritoneal dialysis. Nephrol Dial Transplant. 2001 Sep;16(9):1818-22.	2001	Turkey	English	prospective	48 mean	erectile dysfunction in chronic renal dialysis	IIEF	urologicals	G04	sildenafil	G04BE03	100mg		35	erectile function, improvement	IIEF score increased after sildenafil treatment	dyspepsia in 2 patients, headache in 1 patient	no					2-	
1247: Lindsey I, George B, Kettlewell M, Mortensen N. Randomized, double-blind, placebo-controlled trial of sildenafil (Viagra) for erectile dysfunction after rectal excision for cancer and inflammatory bowel disease. Dis Colon Rectum. 2002 Jun;45(6):727-32.	2002	UK	English	prospective	middle-aged	erectile dysfunction after rectal surgery	IIEF	urologicals	G04	sildenafil	G04BE03	50mg	n.g.	32	erectile function, improvement	erectile function domain scores and total IIEF score significant improvement in sildenafil, not in placebo	7/14 patients of sildenafil group, 4/18 of placebo group, but mild and well tolerated.	yes	sildenafil	placebo			1+	
1248: Herrmann HC, Levine LA, Macaluso J Jr, Walsh M, Bradbury D, Schwartz S, Mohler ER 3rd, Kimmel SE. Can atorvastatin improve the response to sildenafil in men with erectile dysfunction not initially responsive to sildenafil? Hypothesis and pilot trial results. J Sex Med. 2006 Mar;3(2):303-8.	2006	USA	English	prospective	middle-aged	erectile dysfunction, sildenafil non-responder	IIEF	urologicals	G04	sildenafil	G04BE03		12w	12	erectile function, improvement	Co-treatment with atorvastatin resulted in an improvement with sildenafil in IIEF domain score of 7.8	n.g.	yes	sildenafil + atorvastatin	sildenafil + placebo			1+	
1424: Balon R. Fluvoxamine-induced erectile dysfunction responding to sildenafil. J Sex Marital Ther. 1998 Oct-Dec;24(4):313-7.	1998	USA	English	case report	young	erectile dysfunction, fluvoxamine-induced	erectile function	urologicals	G04	sildenafil	G04BE03	n.g.		1	erectile function, improvement	mechanism questionable	n.g.						3	

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1075: Mittleman MA, Glasser DB, Orazem J. Clinical trials of sildenafil citrate (Viagra) demonstrate no increase in risk of myocardial infarction and cardiovascular death compared with placebo. Int J Clin Pract. 2003 Sep;57(7):597-600.	2003	Israel	English	meta-analysis	old	coronary artery disease	deaths	urologicals	G04	sildenafil	G04BE03			120 clinical trials	cardiovascular death	no difference	Rate of myocardial infarction cardiovascular 0.91 per 100 person-years (PY) in sildernafil, 0.84 per 100 PY in placebo groups, RR 1.08 (95% CI: 0.45-2.77).	yes	sildenafil	placebo			1-	
1105: Herschorn S. Cardiovascular safety of PDE5 inhibitors. Can J Urol. 2003 Feb;10 Suppl 1:23-8.	2003	Canada	English	review	old	erectile dysfunction	cardiovascular diseases	urologicals	G04	sildenafil	G04BE03				cardiovascular death	no enhancement	contraindicated in men who use nitrate medications	no					4	
1158: Seidman SN. Exploring the relationship between depression and erectile dysfunction in aging men. J Clin Psychiatry. 2002;63 Suppl 5:5-12; discussion 23-5.	2002	USA	English	review	old	depression	erectile function	urologicals	G04	sildenafil	G04BE03				erectile function, impairment	effective treatment possible, no impairment of depression	n.g.						4	be careful with yohimbine
1177: Rosenkranz S, Erdmann E. Wechselwirkungen zwischen Sildenafil und Antihypertensiva – was ist gesichert? Dtsch Med Wochenschr. 2001 Oct 12;126(41):1144-9.	2001	Germany	German	review	old	hypertension	erectile function	urologicals	G04	sildenafil	G04BE03				erectile function, improvement	no hypotension by sildenafil	Sildenafil + organic nitrates is contraindicated, it may cause life-threatening hypotension. In contrast, sildenafil + antihypertensive agents may lead to additive but not to potentiating blood pressure decreases.						4	additive effect of sildenafil and antihypertensives
1034: Cheitlin MD. Should the patient with coronary artery disease use sildenafil? Prev Cardiol. 2003 Summer;6(3):161-5.	2003	USA	English	review	old	coronary artery disease	erectile function	urologicals	G04	sildenafil	G04BE03				erectile function, impairment	risk of 1% sexual intercourse to induce myocard infarction	n.g.						4	
1559: Kloner RA, Sadovsky R, Johnson EG, Mo D, Ahuja S. Efficacy of tadalafil in the treatment of erectile dysfunction in hypertensive men on concomitant thiazide diuretic therapy. Int J Impot Res. 2005 Sep-Oct;17(5):450-4.	2005	USA	English	meta-analysis	old	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08			2501	IIEF score, improvement	significantly better effect of tadalafil regardless of concomitant thiazide use	Tadalafil: headache 15%, dyspepsia 8%, backpain 5.3%. Placebo headache 4.0%, dyspepsia 0.7%, backpain 1.2%. No statistical significant difference between thiazide users and nonusers.						1-	
1216: Fonseca V, Seftel A, Denne J, Fredlund P. Impact of diabetes mellitus on the severity of erectile dysfunction and response to treatment: analysis of data from tadalafil clinical trials. Diabetologia. 2004 Nov;47(11):1914-23. Epub 2004 Nov 25.	2004	USA	English	prospective	56 mean	erectile dysfunction in diabetes mellitus	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	2318	erectile function, improvement	Diabetes group receiving tadalafil 20 mg a mean improvement of 7.4 in the IIEF score against baseline versus 0.9 for placebo. 53% of the attempts at intercourse were successful, compared with 22% for placebo.	n.g.	yes	tadalafil	placebo			1-	
1240: Rosen RC, Shabsigh R, Kuritzky L, Wang WC, Sides GD. The efficacy of tadalafil in improving sexual satisfaction and overall satisfaction in men with mild, moderate, and severe erectile dysfunction: a retrospective pooled analysis of data from randomized, placebo-controlled clinical trials. Curr Med Res Opin. 2005 Nov;21(11):1701-9.	2005	USA	English	meta-analysis	middle-aged	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	2100	erectile function, improvement	Satisfactory intercourse almost always (IIEF-Q7) was reported by 59% and 79% of patients with mild ED taking tadalafil 10 mg and 20 mg vs. 32% taking placebo		yes	tadalafil	placebo			1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1227: Skoumal R, Chen J, Kula K, Breza J, Calomfirescu N, Basson BR, Kopernicky V. Efficacy and treatment satisfaction with on-demand tadalafil (Cialis) in men with erectile dysfunction. Eur Urol. 2004 Sep;46(3):362-9; discussion 369.	2004	Czechia	English	prospective, randomized	middle-aged	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	443	erectile function, improvement	tadalafil significant superior to placebo	Significantly more common with tadalafil than placebo: headache (7.2% versus 1.9%), flushing (4.6% versus 0%). One patient discontinued tadalafil treatment due to back pain.	yes	tadalafil	placebo			1+	
1221: Carrier S, Brock GB, Pommerville PJ, Shin J, Anglin G, Whitaker S, Beasley CM Jr. Efficacy and safety of oral tadalafil in the treatment of men in Canada with erectile dysfunction: a randomized, double-blind, parallel, placebo-controlled clinical trial. J Sex Med. 2005 Sep;2(5):685-98.	2005	Canada	English	prospective, randomized	59 mean	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	253	erectile function, improvement	significant improvement, mean IIEF scores were 14.5, 21.2, and 23.3 of 30 for placebo, tadalafil 10 mg, and tadalafil 20 mg	tadalafil 20mg: dyspepsia 22%, heache 17%; tadalafil 10 mg: dyspepsia 9,7%, headache 14,6%; placebo: dyspepsia 2%, headache 8%.	yes	tadalafil	placebo			1+	
1232: Eardley I, Gentile V, Austoni E, Hackett G, Lembo D, Wang C, Beardsworth A. Efficacy and safety of tadalafil in a Western European population of men with erectile dysfunction. BJU Int. 2004 Oct;94(6):871-7.	2004	UK	English	prospective, randomized	53 mean	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	168;52	erectile function, improvement	Mean baseline EF domain score 13.5. Tadalafil improved mean erectile function domain scores by 11.1, vs 0.4 for placebo. 73.9% of sexual intercourse attempts were successful in tadalafil-treated patients, compared with 29.9% in placebo-treated.	Most common (>2%) headache, dyspepsia, flushing, back pain, pain in limb and myalgia, mild to moderate.	yes	tadalafil	placebo			1-	
1250: Carson C, Shabsigh R, Segal S, Murphy A, Fredlund P, Kuepfer C; Trial Evaluating the Activity of Tadalafil for Erectile Dysfunction-United States (TREATED-US) Study Group. Efficacy, safety, and treatment satisfaction of tadalafil versus placebo in patients with erectile dysfunction evaluated at tertiary-care academic centers. Urology. 2005 Feb;65(2):353-9.	2005	USA	English	prospective, randomized		erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	12w	195	erectile function, improvement	Significantly better in tadalafil group vs. placebo	Mild or moderate headache, dyspepsia, and myalgia most frequent side effects		tadalafil	placebo			1-	
1209: McMahon CG, Carson CC, Fischer CJ, Wang WC, Florio VA, Bradley JD. Tolerance to the therapeutic effect of tadalafil does not occur during 6 months of treatment: A randomized, double-blind, placebo-controlled study in men with erectile dysfunction. J Sex Med. 2006 May;3(3):504-11.	2006	Australia	English	prospective, randomized	middle-aged	erectile dysfunction	IIEF	urologicals	G04	tadalafil	G04BE08	20mg	6m	140	erectile function, improvement	IIEF score 16.2 +/- 0.7 at baseline, 24.3 +/- 0.8 after 3 months, 24.3 +/- 0.9 after 6 months of treatment.	not mentioned	yes	tadalafil	placebo			1-	
1226: Greco EA, Pili M, Bruzziches R, Corona G, Spera G, Aversa A. Testosterone: estradiol ratio changes associated with long-term tadalafil administration: a pilot study. J Sex Med. 2006 Jul;3(4):716-22.	2006	Italy	English	prospective	55 mean	erectile dysfunction	total testosterone (T), free T (f T), and estradiol (E) levels	urologicals	G04	tadalafil	G04BE08	20mg	12m	20	hormone levels, alteration	significant decrease in E levels, increase in the T:E ratio, no changes in T and f T serum levels.	n.g.	yes	tadalafil	placebo			1-	
1106: Brock GB. Tadalafil: a new agent for erectile dysfunction. Can J Urol. 2003 Feb;10 Suppl 1:17-22.	2003	Canada	English	review	old	erectile dysfunction	cardiovascular diseases	urologicals	G04	tadalafil	G04BE08				erectile function, improvement	good	no significant side effects	no					4	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1222: Donatucci C, Eardley I, Buvat J, Gittelman M, Kell P, Segerson T, Homering M, Montorsi F; Vardenafil Study Group. Vardenafil improves erectile function in men with erectile dysfunction irrespective of disease severity and disease classification. J Sex Med. 2004 Nov;1(3):301-9.	2004	USA	English	prospective, randomized	middle-aged	erectile dysfunction in different conditions	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	12w	1385	erectile function, improvement	Men treated with 10 or 20 mg showed statistically significant improvements. The greatest improvements relative to placebo were noted in patients with more severe dysfunction.	Most common: headache, flushing, rhinitis, dyspepsia, dose-related, mostly mild to moderate.	yes	vardenafil	placebo			1+	
1223: Porst H, Young JM, Schmidt AC, Buvat J; International Vardenafil Study Group. Efficacy and tolerability of vardenafil for treatment of erectile dysfunction in patient subgroups. Urology. 2003 Sep;62(3):519-23; discussion 523-4.	2003	Germany	English	prospective, randomized	middle-aged	erectile dysfunction	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	12w	580	erectile function, improvement	Mean erectile function domain scores of IIEF statistically greater than placebo, irrespective of etiology, baseline severity, or age. Vardenafil significantly improved the IIEF domain scores of erectile function, orgasmic function, intercourse satisfaction.	Rates of the adverse events (headache, flushing, and dyspepsia) either constant or declining over time; generally mild to moderate and transient in nature	yes	vardenafil	placebo			1+	
1214: Carson CC, Hatzichristou DG, Carrier S, Lording D, Lyngdorf P, Aliotta P, Auerbach S, Murdock M, Wilkins HJ, McBride TA, Colopy MW; Patient Response with Vardenafil in Slidenafil Non-Responders (PROVEN) Study Group. Erectile response with vardenafil in sildenafil nonresponders: a multicentre, double-blind, 12-week, flexible-dose, placebo-controlled erectile dysfunction clinical trial. BJU Int. 2004 Dec;94(9):1301-9.	2004	USA	English	prospective	>18	erectile dysfunction, sildenafil non-responder	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	8w	463	erectile function, improvement	Significantly better erectile function with vardenafil than with placebo. Normal erectile function was achieved by 30% of patients receiving vardenafil and 6% receiving placebo.	infrequent	yes	vardenafil	placebo			1+	
1211: Nehra A, Grantmyre J, Nadel A, Thibonnier M, Brock G. Vardenafil improved patient satisfaction with erectile hardness, orgasmic function and sexual experience in men with erectile dysfunction following nerve sparing radical prostatectomy. J Urol. 2005 Jun;173(6):2067-71.	2005	USA	English	prospective, randomized	old	erectile dysfunction after nerve-sparing radical prostatectomy	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	12w	440	erectile function, improvement	In group with 10 and 20 mg vardenafil doses significantly greater than in placebo group. Significant improvement in the satisfaction rate with erection hardness for each vardenafil dose compared with placebo.	Generally well tolerated. Common adverse events: headache, vasodilatation and rhinitis	yes	vardenafil	placebo			1+	
1210: Keating GM, Scott LJ. Spotlight on vardenafil in erectile dysfunction. Drugs Aging. 2004;21(2):135-40.	2004	New Zealand	English	review	middle-aged	erectile dysfunction	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	26w	n.g.	erectile function, improvement	improvements of IIEF score were significantly greater with vardenafil 10 or 20mg than with placebo	Most common: headache, flushing, rhinitis, dyspepsia and sinusitis. No reports of abnormal colour vision	yes	vardenafil	placebo			4	
1244: Giuliano F, Donatucci C, Montorsi F, Auerbach S, Karlin G, Norenberg C, Homering M, Segerson T, Eardley I; Vardenafil Study Group. Vardenafil is effective and well-tolerated for treating erectile dysfunction in a broad population of men, irrespective of age. BJU Int. 2005 Jan;95(1):110-6.	2004	USA	English	prospective, randomized	middle-aged	erectile dysfunction	IIEF	urologicals	G04	vardenafil	G04BE09	20mg	12w	n.g.	erectile function, improvement	Compared to placebo, patients taking 10 mg and 20 mg doses of vardenafil showed statistically significantly greater improvement in IIEF domain scores vs. placebo	Most frequent in the 5 mg, 10 mg, and 20 mg of vardenafil and placebo groups, resp.: headache (10%, 22%, 21% and 4%), flushing (5%, 10%, 13% and 0%), dyspepsia (1%, 4%, 6% and < 1%), and rhinitis (9%, 14%, 17% and 5%). Mild or moderate, transient in nature.	yes	vardenafil	placebo			1+	
1184: Bukofzer S, Livesey N. Safety and tolerability of apomorphine SL (Uprima). Int J Impot Res. 2001 Aug;13 Suppl 3:S40-4.	2001	USA	English	meta-analysis	old	erectile dysfunction	erectile function	urologicals	G04	apomorphine	G04BE07			5000	erectile function, improvement	good safety profile, but syncope at higher doses	Mild side effects (<7%): nausea, headache and dizziness.	in part					1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1588: Dula E, Keating W, Siami PF, Edmonds A, O'neil J, Buttler S. Efficacy and safety of fixed-dose and dose-optimization regimens of sublingual apomorphine versus placebo in men with erectile dysfunction. The Apomorphine Study Group. Urology. 2000 Jul;56(1):130-5.	2000	USA	English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	apomorphin	G04BE07	2-6mg	8w	569	erection sufficient for coitus	significantly higher in apomorphine group (53%) than in placebo group (35%)	Nausea was dose related and diminished treatment	yes	apomorphin	placebo			1+	
1584: Von Keitz AT, Stroberg P, Bukofzer S, Mallard N, Hibberd M. A European multicentre study to evaluate the tolerability of apomorphine sublingual administered in a forced dose-escalation regimen in patients with erectile dysfunction. BJU Int. 2002 Mar;89(4):409-15.	2002	Germany	English	prospective, randomized	18-70	erectile dysfunction	sexual function	urologicals	G04	apomorphin	G04BE07	2-4mg	8w	507	erectile function, improvement	significantly higher in apomorphine than in placebo	> 5% of patients in treated group: nausea (9.8%), dizziness (7.1%), headache (6.7%), compared with 0.4%, 2.4% and 4.0% in placebo group.	yes	apomorphin	placebo			1+	
1587: Dula E, Bukofzer S, Perdok R, George M; Apomorphine SL Study Group. Double-blind, crossover comparison of 3 mg apomorphine SL with placebo and with 4 mg apomorphine SL in male erectile dysfunction. Eur Urol. 2001 May;39(5):558-3; discussion 564.	2001	USA	English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	apomorphin	G04BE07	4mg	4w	296	erection sufficient for coitus	significantly higher in apomorphine than in placebo	nausea in 3.3% of patients on 3 mg, 14.1% on 4 mg, 1.1% of patients on placebo.	yes	apomorphin	placebo			1+	
1573: Eardley I, Wright P, MacDonagh R, Hole J, Edwards A. An open-label, randomized, flexible-dose, crossover study to assess the comparative efficacy and safety of sildenafil citrate and apomorphine hydrochloride in men with erectile dysfunction. BJU Int. 2004 Jun;93(9):1271-5.	2004	UK	English	prospective, crossover	old	erectile dysfunction	IIEF	urologicals	G04	apomorphin	G04BE07	n.g.	8w	139	erection sufficient for coitus	35% of apomorphin group, 75% of sildenafil group	96% expressed a preference for sildenafil as a treatment	yes	apomorphin	sildenafil			1+	
1570: Gontero P, D'Antonio R, Pretti G, Fontana F, Panella M, Kocjancic E, Allochis G, Frea B. Clinical efficacy of Apomorphine SL in erectile dysfunction of diabetic men. Int J Impot Res. 2005 Jan-Feb;17(1):80-5.	2004	Italy	English	prospective, randomized	old	erectile dysfunction in diabetes mellitus	IIEF	urologicals	G04	apomorphin	G04BE07	3mg	n.g.	130	erection sufficient for coitus	22% in apomorphin, 13% in placebo	not mentioned	yes	apomorphin	placebo			1+	
1578: Amornvejsukit T. Evaluating dose regimens of apomorphine, an open-label study. Int J Impot Res. 2003 Apr;15 Suppl 2:S10-2.	2003	Thailand	English	prospective	old	erectile dysfunction	IIEF	urologicals	G04	apomorphin	G04BE07	2-3mg	10w	110	erectile function, improvement	15.9 to 20.4 IIEF score	Drug is safe and efficacious in the treatment, irrespective of underlying diseases and concomitant medications	no					3	
1569: Pavone C, Curto F, Anello G, Serretta V, Almasio PL, Pavone-Macaluso M. Prospective, randomized, crossover comparison of sublingual apomorphine (3 mg) with oral sildenafil (50 mg) for male erectile dysfunction. J Urol. 2004 Dec;172(6 Pt 1):2347-9.	2004	Italy	English	prospective, randomized	old	erectile dysfunction	erectile function	urologicals	G04	apomorphin	G04BE07	n.g.	4w	77	erection sufficient for coitus	44% in apomorphin, 85% in sildenafil	incidence of adverse events not significantly different for the 2 drugs.	yes	apomorphin	sildenafil			1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1575: Perimenis P, Gyftopoulos K, Giannitsas K, Markou SA, Tsota I, Chrysanthopoulou A, Athanasopoulos A, Barbalias G. A comparative, crossover study of the efficacy and safety of sildenafil and apomorphine in men with evidence of arteriogenic erectile dysfunction. Int J Impot Res. 2004 Feb;16(1):2-7.	2004	Greece	English	prospective, randomized	old	erectile dysfunction, vascular	sexual function	urologicals	G04	apomorphin	G04BE07	2-3mg	4w	41	erectile function, improvement	32% in apomorphin, 64% in sildenafil	higher rate of side effects in apomorphin group	yes	apomorphin	sildenafil			1+	
1572: Perimenis P, Markou S, Gyftopoulos K, Giannitsas K, Athanasopoulos A, Liatsikos E, Barbalias G. Efficacy of apomorphine and sildenafil in men with nonarteriogenic erectile dysfunction. A comparative crossover study. Andrologia. 2004 Jun;36(3):106-10.	2004	Greece	English	prospective, randomized	old	erectile dysfunction	sexual function	urologicals	G04	apomorphin	G04BE07	2-3mg	10d	40	erectile function, improvement	statistically better in sildenafil than in apomorphin	not mentioned	yes	apomorphin	sildenafil			1+	
1576: Caruso S, Intelisano G, Farina M, DiMari L, Agnello C, Giammusso B. Efficacy and safety of daily intake of apomorphine SL in men affected by erectile dysfunction and mild hyperprolactinemia: a prospective, open-label, pilot study. Urology. 2003 Nov;62(5):922-7.	2003	Italy	English	prospective	old	hyperprolactinemia	IIEF	urologicals	G04	apomorphin	G04BE07	2-3mg	4w	34	erectile function, improvement	13 of 20 patients	Mild or moderate severity in 4 patients taking on demand and in 3 patients taking daily use, nausea, dizziness, or headache.	no					2-	
1590: Lal S, Tesfaye Y, Thavundayil JX, Thompson TR, Kiely ME, Nair NP, Grassino A, Dubrovsky B. Apomorphine: clinical studies on erectile impotence and yawning. Prog Neuropsychopharmacol Biol Psychiatry. 1989;13(3-4):329-39.	1989	Canada	English	prospective	old	erectile dysfunction	erectile function assessed by Rigiscan	urologicals	G04	apomorphin	G04BE07	1mg	n.g.	28	erection sufficient for coitus	17 of 28 patients	Placebo induced spontaneous yawning, antagonized by 3.5 and 5.0 ug/kg apomorphin, but increased by 7.0 ug/kg apomorphin	no					2-	
1581: Montorsi F, Perani D, Anchisi D, Salonia A, Scifo P, Rigiroli P, Deho F, De Vito ML, Heaton J, Rigatti P, Fazio F. Brain activation patterns during video sexual stimulation following the administration of apomorphine: results of a placebo-controlled study. Eur Urol. 2003 Apr;43(4):405-11.	2003	Italy	English	prospective, randomized	young	erectile dysfunction	magnetic resonance tomography (MRT), cerebral	urologicals	G04	apomorphin	G04BE07	2mg	7d	16	activation in thalamus, associtated with erection, during visual stimulation, improvement	cerebral activation of an area associated with sexual arousal	not mentioned		apomorphin	placebo			2-	
1580: Hagemann JH, Berding G, Bergh S, Sleep DJ, Knapp WH, Jonas U, Stief CG. Effects of visual sexual stimuli and apomorphine SL on cerebral activity in men with erectile dysfunction. Eur Urol. 2003 Apr;43(4):412-20.	2003	Germany	English	prospective	young	erectile dysfunction	cerebral PET scans	urologicals	G04	apomorphin	G04BE07	2mg	single dose	12	erectile rigidity during visual stimulation	cerebral activation of an area associated with sexual arousal	not mentioned	yes	apomorphin	placebo			1-	
1589: Heaton JP, Morales A, Adams MA, Johnston B, el-Rashidy R. Recovery of erectile function by the oral administration of apomorphine. Urology. 1995 Feb;45(2):200-6.	1995	USA	English	prospective	old	erectile dysfunction	erectile function assessed by Rigiscan	urologicals	G04	apomorphin	G04BE07	5mg/d	n.g.	10	erection sufficient for coitus	67% of patients	not mentioned	no					3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2221: Lyngdorf P, Hemmingsen L. Epidemiology of erectile dysfunction and its risk factors: a practice-based study in Denmark. Int J Impot Res. 2004 Apr;16(2):105-11	2004	Denmark	English	outpatient based cross sectional study	40-79	erectile dysfunction	IIEF	urologicals	G04	none				2210	prevalence of erectile dysfunction	significantly increasing with age		no					2-	
2214: Berrada S, Kadri N, Mechakra-Tahiri S, Nejjari C. Prevalence of erectile dysfunction and its correlates: a population-based study in Morocco. Int J Impot Res. 2003 Apr;15 Suppl 1:S3-7.	2003	Morocco	English	population based cross sectional study	>25	erectile dysfunction	standardized sexual function questionnaire	urologicals	G04	none				655	prevalence of erectile dysfunction	increasing with age; with diabetes mellitus OR 16.7; with hypertension OR 13.5; with cardiac disease OR 16.3		no					2-	
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	erectile dysfunction	single question from the NIH consensus definition	urologicals	G04	none				428	prevalence of erectile dysfunction, increment per year of age	RR 1.07 (95% CI 1.04–1.11)		no					2+	
2217: Shabsigh R, Perelman MA, Lockhart DC, Lue TF, Broderick GA. Health issues of men: prevalence and correlates of erectile dysfunction. J Urol. 2005 Aug;174(2):662-7.	2005	USA	English	population based cross sectional study	20-75	LUTS	IIEF	urologicals	G04	urologicals	G04C			28691	prevalence of erectile dysfunction as compared to men without LUTS	OR 2.0 (95% CI 1.8–2.5)		no						
2225: Braun MH, Sommer F, Haupt G, Mathers MJ, Reifenrath B, Engelmann UH. Lower urinary tract symptoms and erectile dysfunction: co-morbidity or typical "Aging Male" symptoms? Results of the "Cologne Male Survey". Eur Urol. 2003 Nov;44(5):588-94.	2003	Germany	English	population based cross sectional study	30-80	LUTS	Kölner Erhebungsbogen	urologicals	G04	urologicals	G04C			4489	prevalence of erectile dysfunction as compared to men without LUTS	In men with erectile dysfunction the prevalence of LUTS was 72.2%, in men without erectile dysfunction LUTS were present in 37.7%.		no					2-	
2222: Ponholzer A, Temml C, Obermayr R, Madersbacher S. Association between lower urinary tract symptoms and erectile dysfunction. Urology. 2004 Oct;64(4):772-6.	2004	Austria	English	outpatient based cross sectional study	20-80	LUTS	IIEF, IPSS	urologicals	G04	urologicals	G04C			2858	prevalence of erectile dysfunction as compared to men without LUTS	OR 2.2 (95% CI 1.8–2.8) in high IPSS as compared to low IPPS		no					2-	
2216: Akkus E, Kadioglu A, Esen A, Doran S, Ergen A, Anafarta K, Hattat H; Turkish Erectile Dysfunction Prevalence Study Group. Prevalence and correlates of erectile dysfunction in Turkey: a population-based study. Eur Urol. 2002 Mar;41(3):298-304.	2002	Turkey	English	population based cross sectional study	>40	LUTS	single question for erectile function	urologicals	G04	urologicals	G04C			1982	prevalence of erectile dysfunction as compared to men without LUTS	OR 3.03 (95% CI 2.09-4.44)		no					2++	
2211: Rosen R, Altwein J, Boyle P, Kirby RS, Lukacs B, Meuleman E, O'Leary MP, Puppo P, Robertson C, Giuliano F. Lower urinary tract symptoms and male sexual dysfunction: the multinational survey of the aging male (MSAM-7). Eur Urol. 2003 Dec;44(6):637-49.	2003	USA	English	population based cross sectional study	50-80	LUTS	IIEF	urologicals	G04	urologicals	G04C			794	prevalence of erectile dysfunction with severe LUTS as compared to men without LUTS	OR 7.67 (95% CI 5.87–10.02)		no					2+	
2237: El-Sakka AI. Lower urinary tract symptoms in patients with erectile dysfunction: analysis of risk factors. J Sex Med. 2006 Jan;3(1):144-9.	2006	Egypt	English	outpatient based cross sectional study	55 mean	LUTS	IIEF	urologicals	G04	urologicals	G04C			476	prevalence of erectile dysfunction as compared to men without LUTS	77%; mean age lower than in patients without LUTS		no					3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2229: Moreira ED Jr, Abdo CH, Torres EB, Lobo CF, Fittipaldi JA. Prevalence and correlates of erectile dysfunction: results of the Brazilian study of sexual behavior. Urology. 2001 Oct;58(4):583-8.	2001	Brazil	English	population based cohort study	40-70	LUTS	single question from the NIH consensus definition	urologicals	G04	urologicals	G04C			428	incidence of erectile dysfunction within 2 years of duration	RR 1.83 (95% CI 0.65–5.20)		no					2+	
2242: O'Brien JH, Lazarou S, Deane L, Jarvi K, Zini A. Erectile dysfunction and andropause symptoms in infertile men. J Urol. 2005 Nov;174(5):1932-4; discussion 1934	2005	USA	English	outpatient based cross sectional study	not mentioned	infertility	Sexual Health Inventory for Men (SHIM)	urologicals	G04	urologicals	G04C			302	prevalence of erectile dysfunction as compared to men without LUTS	higher ratio than in healthy controls		no					2-	
2215: Martin-Morales A, Sanchez-Cruz JJ, Saenz de Tejada I, Rodriguez-Vela L, Jimenez-Cruz JF, Burgos-Rodriguez R.J Prevalence and independent risk factors for erectile dysfunction in Spain: results of the Epidemiologia de la Disfuncion Erectil Masculina Study. Urol. 2001 Aug;166(2):569-74;	2001	Spain	English	population based cross sectional study	25-70	LUTS	IIEF	urologicals	G04	urologicals	G04C			2476	prevalence of erectile dysfunction as compared to men without LUTS	OR 2.93 (95% CI 1.86–4.61)		no					2++	
2207: Nicolosi A, Moreira ED Jr, Shirai M, Bin Mohd Tambi MI, Glasser DB. Epidemiology of erectile dysfunction in four countries: cross-national study of the prevalence and correlates of erectile dysfunction. Urology. 2003 Jan;61(1):201-6.	2003	Italy	English	population based cross sectional study	40-70	LUTS	single question	urologicals	G04	urologicals	G04C			491	prevalence of erectile dysfunction as compared to men without LUTS	OR 4.56 (95% CI 2.24-9.27)		no						
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	LUTS	single question from the NIH consensus definition	urologicals	G04	urologicals	G04C			428	prevalence of erectile dysfunction as compared to men without LUTS	RR 3.67 (95% CI 1.17–11.48)		no					2+	
1100: Larson TR. Current treatment options for benign prostatic hyperplasia and their impact on sexual function. Urology. 2003 Apr;61(4):692-8.	2003	USA	English	review	old	benign prostatic hyperplasia	erectile function	urologicals	G04	alfuzosin	G04CA01	as recommended	continuous	1044	erectile function, improvement	score 35 improves to 50							4	
1116: Leliefeld HH, Stoevelaar HJ, McDonnell J. Sexual function before and after various treatments for symptomatic benign prostatic hyperplasia. BJU Int. 2002 Feb;89(3):208-13	2002	Belgium	English	prospective	66 mean	benign prostatic hyperplasia	erectile function	urologicals	G04	α1-adrenoceptor agonists	G04CA	n.g.	n.g.	43	sexual function, alteration	84% of patients		no					3	
1012: Martin DJ, Mulhall JP. Enlarging the scope of managing benign prostatic hyperplasia: addressing sexual function and quality of life. Int J Clin Pract. 2005 May;59(5):579-90.	2005	USA	English	review	old	benign prostatic hyperplasia	sexual function	urologicals	G04	α adrenoreceptor agonists	G04CA				sexual function and QOL, improvement	best improved							4	
1260: van Dijk MM, de la Rosette JJ, Michel MC. Effects of alpha(1)-adrenoceptor antagonists on male sexual function. Drugs. 2006;66(3):287-301.	2006	The Netherlands	English	review	old	LUTS	sexual function	urologicals	G04	α adrenoreceptor agonists	G04CA				erectile function, impairment	Reports on erectile function are inconsistent. Impotence can occur in some patients without clear differences between drugs.							4	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1446: Lukacs B, Grange JC, Comet D and the BPM Group in General Practice: one year follow-up of 2829 patients with moderate to severe lower urinary tract symptoms treated with alfuzosin in genera practice according to IPSS and a health-related quality-of-life questionnaire. Urology 2000;55, 540-546	2000	France	English	prospective cohort	mean 66	LUTS	sexual function questionnaires	urologicals	G04	alfuzosin	G04CA01	7.5 mg/d	12m	2829	sexual function rating scale, improvement	191% (correct!)	13.7% discontinuation	no				n.g.	2-	
1261: Roehrborn CG, Van Kerrebroeck P, Nordling J. Safety and efficacy of alfuzosin 10 mg once-daily in the treatment of lower urinary tract symptoms and clinical benign prostatic hyperplasia: a pooled analysis of three double-blind, placebo-controlled studies. BJU Int. 2003 Aug;92(3):257-61.	2004	USA	English	prospective, randomized	old	LUTS	IPSS	urologicals	G04	alfuzosin	G04CA01	10mg/d	12w	955	erectile function, impairment	none		yes	alfuzosin	placebo			1+	
1591: Elhilali M, Emberton M, Matzkin H, van Moorselaar RJ, Hartung R, Harving N, Alcaraz A, Vallancien G; ALF-ONE Study Group. Long-term efficacy and safety of alfuzosin 10 mg once daily: a 2-year experience in 'real-life' practice. BJU Int. 2006 Mar;97(3):513-9.	2006	Canada	English	retrospective	67 mean	LUTS	IPSS	urologicals	G04	alfuzosin	G04CA01	10mg/d	2y	823	symptom score, improvement	by 7 points	dizziness, no ejaculatory disorder	real-life practice					3	
1445: Höfner K, Claes H, De Reijke TM et al for the European Tamsulosin Study Group: Tamsulosin 0.4 mg once daily: effect on seual function in patients with lower urinary tract symptoms suggestiveof benign prostatic obstruction. Eur Urology 1999;36, 335-341	1999	Germany	English	prospective	>45	LUTS	sexual function questionnaires	urologicals	G04	tamsulosin, alfuzosin	G04CA02	n.g.	14w	256	erectile function, impairment	3.1% of tamsulosin group, 2.4% of alfuzosin group		yes	tamsulosin 0.4/d	alfuzosin 3x2.5/d	placebo	n.g.	1-	Abnormal ejaculation is related to the pharmacological action
1262: Kim SC, Seo KK, Lee SK, Song ES, Lee MY. Comparison of the synergistic effects of tamsulosin versus phentolamine on penile erection: in vitro and in vivo studies. Urol Res. 1999 Dec;27(6):437-44. Korea.	1999	Korea	English	experimental	45-75	cavernous tissue in vitro	isometric tension	urologicals	G04	tamsulosin, alfuzosin	G04CA02				relaxation, improvement	Tamsulosin and PGE1 strongest effect. Relaxation responses to drug mixtures containing tamsulosin significantly better than phentolamine-containing mixtures.							2-	
1448: Kaplan SA, Holgrevw HL, Buskewitz RC et al. for the PROSCAR Long term Efficacy, Safety Study group: comparison of the efficacy and safety of finasteride in older versus younger men with benign prostatic hyperlasie. Urology 2001;57, 1073-1077,	2001	USA	English	prospective	45-78	benign prostatic hyperplasia	sexual dysfunction, self reported	urologicals	G04	finasteride	G04CB01	5mg/d	48m	3040	erectile function, impairment	8.8% of finasterid group, 3.8% of placebo group		yes	fluoxetine 5 mg/d	placebo		n.g.	1++	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1628: Wessells H, Roy J, Bannow J, Grayhack J, Matsumoto AM, Tenover L, Herlihy R, Fitch W, Labasky R, Auerbach S, Parra R, Rajfer J, Culbertson J, Lee M, Bach MA, Waldstreicher J; PLESS Study Group. Incidence and severity of sexual adverse experiences in finasteride and placebo-treated men with benign prostatic hyperplasia. Urology. 2003 Mar;61(3):579-84.	2003	USA	English	prospective	old	BPH	erectile function	urologicals	G04	finasteride	G04CB01	5mg	4y	3040	sexual dysfunction	15% in finasteride group, 7% of placebo group		yes	finasteride	placebo			1++	
1447: Nickel JC, Fradet Y, Boake RC et al for the PROSPECT Study Group: Efficacy and safety of finasteride therapy for benign prostatic hperplasia: results of a 2-year randomized controlled trial. Can Med Assoc J 1996 155, 1251-1259	1996	Canada	English	prospective	45-80	benign prostatic hyperplasia	sexual dysfunction, self reported	urologicals	G04	finasteride	G04CB01	5 mg/d	24m	472	sexual dysfunction	15.8% of finasteride group, in 6.3% of placebo group		yes	fluoxetine 5 mg/d	placebo		n.g.	1++	
1629: Tosti A, Piraccini BM, Soli M. Evaluation of sexual function in subjects taking finasteride for the treatment of androgenetic alopecia. J Eur Acad Dermatol Venereol. 2001 Sep;15(5):418-21.	2001	Italy	English	case control	young	androgenetic alopecia	sexual dysfunction, self reported	urologicals	G04	finasteride	G04CB01	1mg	n.g.	472	sexual dysfunction	no difference between groups		no	finasteride	untreated age matched			2+	
1100: Larson TR. Current treatment options for benign prostatic hyperplasia and their impact on sexual function. Urology. 2003 Apr;61(4):692-8.	2003	USA	English	review	old	benign prostatic hyperplasia	erectile function	urologicals	G04	finasteride	G04CB01	5mg/d	6m	48	erectile function, impairment	decrease of sexual drive							4	
1116: Leliefeld HH, Stoevelaar HJ, McDonnell J. Sexual function before and after various treatments for symptomatic benign prostatic hyperplasia. BJU Int. 2002 Feb;89(3):208-13	2002	Belgium	English	prospective	66 mean	benign prostatic hyperplasia	erectile function	urologicals	G04	finasteride	G04CB01	n.g.		47	sexual function, alteration	84% of patients		no					2-	
1012: Martin DJ, Mulhall JP. Enlarging the scope of managing benign prostatic hyperplasia: addressing sexual function and quality of life. Int J Clin Pract. 2005 May;59(5):579-90.	2005	USA	English	review	old	benign prostatic hyperplasia	sexual function	urologicals	G04	finasteride	G04CB01				sexual function and QOL, impairment	modest		no					4	
1265: Hernandez Fernandez C, Moncada Iribarren I, Jara Rascon J, Castano Gonzalez I, Moralejo Garate M. [Treatment with Doxazosin in 3347 patients with lower urinary tract symptoms. Impact on sexual function. The impros study] Actas Urol Esp. 2004 Apr;28(4):290-7. Spain	2005	Spain	Spanish	prospective	>40y	LUTS	erectile function	urologicals	G04	doxazosin	C02CA04	4mg	6m	3447	erectile function, improvement during treatment for 6 months	in 4.5% of patients, 17.5% in the 40-49y age group and 1.1% in the over 70y age group		no					3	
1264: Kirby RS, O'Leary MP, Carson C. Efficacy of extended-release doxazosin and doxazosin standard in patients with concomitant benign prostatic hyperplasia and sexual dysfunction. BJU Int. 2005 Jan;95(1):103-9; discussion 109.	2005	UK	English	prospective	50-80	LUTS	IIEF	urologicals	G04	doxazosin	C02CA04	8m	13w	680	erectile function, improvement	statistically and clinically significant in each dose of doxazosin	no side effects given	yes	doxazosin	placebo			1+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1268: Uygur MC, Gur E, Arik AI, Altug U, Erol D. Erectile dysfunction following treatments of benign prostatic hyperplasia: a prospective study. Andrologia. 1998 Feb-Mar;30(1):5-10. Turkey	1998	Turkey	English	prospective	middle-aged	LUTS	erectile function	urologicals	G04	doxazosin	C02CA04	4mg	6m	305	erectile function, impairment	Transurethral vaporization caused loss of erectile functions in 4/14 patients; 1/33 patients using doxazosin		no					2-	
1501: Kaplan SA, Reis RB, Kohn IJ, Shabsigh R, Te AE. Combination therapy using oral alpha-blockers and intracavernosal injection in men with erectile dysfunction. Urology. 1998 Nov;52(5):739-43.	1998	USA	English	prospective	old	erectile dysfunction	IIEF	urologicals	G04	doxazosin	C02CA04	4mg	4w	38	IIEF score, improvement								1-	
1267: Kaplan SA, Reis RB, Kohn IJ, Shabsigh R, Te AE. Combination therapy using oral alpha-blockers and intracavernosal injection in men with erectile dysfunction. Urology. 1998 Nov;52(5):739-43. USA.	1998	USA	English	prospective	middle-aged	erectile dysfunction	IIEF	urologicals	G04	doxazosin	C02CA04	4mg	12w	38	erectile function, improvement	Intracavernosal therapy: IIEF improved to 36.1+/-11.4 (17.7%). Addition of doxazosin: IIEF improved to 51.5+/-14.3	2/38 dizziness, 1/38 asthenia	yes	doxazosin	placebo			1+	
1266: De Rose AF, Giglio M, Traverso P, Lantieri P, Carmignani G. Combined oral therapy with sildenafil and doxazosin for the treatment of non-organic erectile dysfunction refractory to sildenafil monotherapy. Int J Impot Res. 2002 Feb;14(1):50-3. Italy	2002	Italy	English	prospective, randomized	middle-aged	erectile dysfunction, non responder to sildenafil	IIEF	urologicals	G04	doxazosin	C02CA04	4mg	60d	28	erectile function, improvement	11/14 patients treated with doxazosin and sildenafil, 1/14 patients in the placebo group	minimal side effects	yes	doxazosin + sildenafil	placebo + sildenafil			1+	
1263: Demir O, Murat N, Aslan G, Gidener S, Esen AA. Effect of doxazosin with and without rho-kinase inhibitor on human corpus cavernosum smooth muscle in the presence of bladder outlet obstruction. J Urol. 2006 Jun;175(6):2345-9.	2006	Turkey	English	experimental	old	cavernous tissue in vitro		urologicals	G04	doxazosin	C02CA04				cavernous tissue, relaxation	doxazosin and Y-27632 caused concentration dependent relaxation		yes					1-	
1126: Flack JM. The effect of doxazosin on sexual function in patients with benign prostatic hyperplasia, hypertension, or both. Int J Clin Pract. 2002 Sep;56(7):527-30.	2002	USA	English	review	old	benign prostatic hyperplasia	erectile function	urologicals	G04	doxazosin	C02CA04				erectile function, impairment	no effect							4	
1186: Khan MA, Calvert RC, Sullivan ME, Thompson CS, Mumtaz FH, Morgan RJ, Mikhailidis DP. Normal and pathological erectile function: the potential clinical role of endothelin-1 antagonists. Curr Drug Targets. 2000 Nov;1(3):247-60.	2000	UK	English	review	old	erectile dysfunction	erectile function	urologicals	G04	endothelin 1antagonist	not listed				erectile function, improvement	experimental benefit							4	
1375: Contreras LN, Masini AM, Danna MM, Kral M, Bruno OD, Rossi MA, Andrada JA. Glucocorticoids: their role on gonadal function and LH secretion. Minerva Endocrinol. 1996 Jun;21(2):43-6.	1996	Argentina	English	prospective	23-56	chronic corticoid therapy	hormones; erectile function	corticosteroids for systemic use	H02	cortisone	H02AB10	various	continuous	17	hormone levels, alteration; erectile function, alteration	58% decreased libido, 52% impotence (52%), 41% and lower back pain. T levels significantly lower than in controls, SHBG levels unchanged		no					3	
1002: Carani C, Isidori A, Granata A et al. Multicenter study on the prevalence of sexual symptoms in male hypo- and hyperthyroid patients. J Clin Endocrin Metab 2005;96: 6472-79	2005	Italy	English	retrospective	18-70	thyroid dysregulation	sexual function questionnaire	thyroid therapy	H03	overproduction	H03AA	n.g.	continuous	34	sexual dysfunction	15% of patients		no					3	most frequent disorder was premature ejaculation

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1002: Carani C, Isidori A, Granata A et al. Multicenter study on the prevalence of sexual symptoms in male hypo- and hyperthyroid patients. J Clin Endocrin Metab 2005;96: 6472-79	2005	Italy	English	retrospective	18-70	thyroid dysregulation	sexual function questionnaire	thyroid therapy	H03	thyroid hormone	H03AA	n.g.	continuous	14	sexual dysfunction	64% of patients		no					3	
1277: Sugar AM, Alsip SG, Galgiani JN, Graybill JR, Dismukes WE, Cloud GA, Craven PC, Stevens DA. Pharmacology and toxicity of high-dose ketoconazole. Antimicrob Agents Chemother. 1987 Dec;31(12):1874-8.	1987	USA	English	prospective	all ages	mycosis	liquor levels	antimycotics for systemic use	J02	ketoconazole	J02AB02	2000mg/d	3m	168	sexual functions, alteration	gynecomastia (21%), decreased libido (13%)		no					3	
1278: Vanuytsel L, Ang KK, Vantongelen K, Drochmans A, Baert L, van der Schueren E. Ketoconazole therapy for advanced prostatic cancer: feasibility and treatment results. J Urol. 1987 May;137(5):905-8.	1987	The Netherlands	English	prospective	old	prostate cancer	testosterone production	antimycotics for systemic use	J02	ketoconazole	J02AB02	3x400mg/d	4w	22	testosterone levels, decline	rapidly to castration levels		no					3	
1276: Mahler C, Verhelst J, Denis L. Ketoconazole and liarozole in the treatment of advanced prostatic cancer. Cancer. 1993 Feb 1;71(3 Suppl):1068-73.	1993	USA	English	prospective	old	prostate cancer	objective remission	antimycotics for systemic use	J02	ketoconazole	J02AB02	400mg/d	n.g.	20	cancer, remission	50% of patients		no					3	
1282: Nicolle P, Pontin A, Sarembock L. High-dose ketoconazole therapy in prostatic cancer. A pilot study. S Afr Med J. 1985 Jun 1;67(22):888-9.	1985	South Africa	English	prospective	old	prostate carcinoma	testosterone production	antimycotics for systemic use	J02	ketoconazole	J02AB02	3x200mg/d	7d	19	testosterone levels, decline	in 33% rapidly to castration levels		no					3	
1283: Trachtenberg J. Ketoconazole therapy in advanced prostatic cancer. J Urol. 1984 Jul;132(1):61-3.	1984	USA	English	prospective	old	prostate cancer	testosterone production	antimycotics for systemic use	J02	ketoconazole	J02AB02	3x400mg/d	7d	13	testosterone levels, decline	rapidly to castration levels within 1 day		no					3	
1279: Aabo K, Kjaer M, Hansen HH. High-dose ketoconazole to untreated stage D prostate cancer. Eur J Cancer Clin Oncol. 1988 Mar;24(3):431-7.	1988		English	prospective	old	prostate cancer	testosterone production	antimycotics for systemic use	J02	ketoconazole	J02AB02	3x400mg	3d	11	testosterone levels, decline	rapidly to castration levels		no					3	
1281: Krause W, Effendy I. How does ketoconazole affect testosterone metabolism? Z Hautkr. 1985 Jul 15;60(14):1147-55.	1985	Germany	German	prospective	young	healthy	testosterone production in response to hCG	antimycotics for systemic use	J02	ketoconazole	J02AB02	200mg/d	7d	10	testosterone levels, decline	only decline of hCG response		no					3	
1271: Lambert A, Mitchell R, Robertson WR. The effect of ketoconazole on adrenal and testicular steroidogenesis in vitro. Biochem Pharmacol. 1986 Nov 15;35(22):3999-4004.	1986	USA	English	experimental	n.g.	normal Leydig cells	testosterone production	antimycotics for systemic use	J02	ketoconazole	J02AB02	0.61 +/- 0.03 mumol/l		n.g.	testosterone production in vitro, decline	dose-related		yes	ketoconazole	placebo			1-	
1475: Pont A, Graybill JR, Craven PC, Galgiani JN, Dismukes WE, Reitz RE, Stevens DA. High-dose ketoconazole therapy and adrenal and testicular function in humans. Arch Intern Med. 1984 Nov;144(11):2150-3.	1984		English	review	all ages	mycosis	hormones	antimycotics for systemic use	J02	ketoconazole	J02AB02	800-1200 mg/d			erectile function, impairment, libido decreased	correlated with ketoconazole levels							3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2074: Schover LR, Gonzales M, von Eschenbach AC. Sexual and marital relationships after radiotherapy for seminoma. Urology. 1986 Feb;27(2):117-23.	1986	USA	English	retrospective	young	cancer, testicular	sexual functions by questionnaire	antineoplastic agents	L01	radiation	not listed			84	sexual functions, impairment	19% low rates of sexual activity, 12% low sexual desire, 15% erectile dysfunction, 10% difficulty reaching orgasm, 14% premature ejaculation. 33% reduced intensity of orgasm, 49% reduced semen volume (49%).		no					3	
1351: Howell SJ, Radford JA, Smets EM, Shalet SM. Fatigue, sexual function and mood following treatment for haematological malignancy: the impact of mild Leydig cell dysfunction. Br J Cancer. 2000 Feb;82(4):789-93.	2000	UK	English	retrospective	all ages	lymphoma and leukemia	hormones	antineoplastic agents	L01	radiation	not listed			66	fatigue, mood and sexual function by questionnaire; decrease	no significant differences between men with normal and low T levels		no	normal T levels	low T levels			2-	
1320: Little FA, Howard GC. Sexual function following radical radiotherapy for bladder cancer. Radiother Oncol. 1998 Nov;49(2):157-61.	1998	UK	English	retrospective	all ages	cancer, bladder	sexual function questionnire	antineoplastic agents	L01	radiation	not listed			13	erectile function, impairment	7/13 patients decline in the quality of erections, decreased libido and frequency. 3/13 no erections. 4/13 reduced intensity of orgasms.		no					3	
1372: Green HJ, Pakenham KI, Headley BC, Gardiner RA. Coping and health-related quality of life in men with prostate cancer randomly assigned to hormonal medication or close monitoring. Psychooncology. 2002 Sep-Oct;11(5):401-14.	2002	USA	English	prospective	old	prostate cancer	health-related quality of life	endocrine therapy	L02	GnRH agonist	L02AE	various		65	sexual function, alteration	reports of impaired sexual function		yes	GnRH	wait-and-see			1-	
2095: Wilke DR, Parker C, Andonowski A, Tsuji D, Catton C, Gospodarowicz M, Warde P. Testosterone and erectile function recovery after radiotherapy and long-term androgen deprivation with luteinizing hormone-releasing hormone agonists. BJU Int. 2006 May;97(5):963-8.	2006	Canada	English	retrospective	55-81	prostate cancer	erectile function	endocrine therapy	L02	GnRH agonist	L02AE		2y	20	IIEF, increase after cessation	no significant changes		no					3	
1369: Wilke DR, Parker C, Andonowski A, Tsuji D, Catton C, Gospodarowicz M, Warde P. Testosterone and erectile function recovery after radiotherapy and long-term androgen deprivation with luteinizing hormone-releasing hormone agonists. BJU Int. 2006 May;97(5):963-8.	2006	Canada	English	prospective	old	prostate cancer	IIEF	endocrine therapy	L02	GnRH agonist	L02AE	various	2y	20	hormone levels, alteration; erectile function, alteration	median duration of castrate T levels 8m; no significant changes in the scores of the IIEF		no					3	
1379: Benkert O, Jordan R, Dahlen HG, Schneider HP, Gammel G. Sexual impotence: a double-blind study of LHRH nasal spray versus placebo. Neuropsychobiology. 1975;1(4):203-10.	1975	Germany	English	prospective	middle-aged	erectile dysfunction	hormones; erectile function	endocrine therapy	L02	GnRH pulsatile	L02AE	1mg/d	4w	20	hormone levels, alteration; erectile function, alteration	significant increase of LH levels; no significant increase in erectile function		no					3	
1378: Levitt NS, Vinik AI, Sive AA, Klaff LJ, Phillips C. Synthetic luteinizing hormone-releasing hormone in impotent male diabetics. S Afr Med J. 1980 Apr 26;57(17):701-4.	1980	South Africa	English	prospective	middle-aged	diabetes mellitus	hormones; erectile function	endocrine therapy	L02	GnRH pulsatile	L02AE	500mg/8h	4w	8	hormone levels, alteration; erectile function, alteration	significant increase of LH levels; no significant increase in erectile function		yes	GnRH	placebo			1-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1368: Pettersson B, Varenhorst E, Petas A, Sandow J. Duration of testosterone suppression after a 9.45 mg implant of the GnRH-analogue buserelin in patients with localised carcinoma of the prostate a 12-month follow-up study. Eur Urol. 2006 Sep;50(3):483-9.	2006	Sweden	English	prospective	old	prostate cancer	hormones; erectile function	endocrine therapy	L02	buserelin	L02AE01	9.45mg implant	single dose	21	hormone levels, alteration; sexual function, alteration	testosterone suppression to 0.5ng/ml, return after 168-344 days; sexual interest present in 52%, erection possible in 60%, hot flushing remained in 24%.		no					3	
1370: Lamb DS, Denham JW, Mameghan H, Joseph D, Turner S, Matthews J, Franklin I, Atkinson C, North J, Poulsen M, Kovacev O, Robertson R, Francis L, Christie D, Spry NA, Tai KH, Wynne C, Duchesne G. Acceptability of short term neo-adjuvant androgen deprivation in patients with locally advanced prostate cancer. Radiother Oncol. 2003 Sep;68(3):255-67.	2003	New Zealand	English	prospective	old	prostate cancer	hormones; erectile function	endocrine therapy	L02	goserelin	L02AE03	various	6m	818	sexual function, alteration	the majority became sexually inactive during treatment		yes	radiation + goserelin	radiation alone			2+	
1374: Rosler A, Witztum E. Treatment of men with paraphilia with a long-acting analogue of gonadotropin-releasing hormone. N Engl J Med. 1998 Feb 12;338(7):416-22.	1998	Israel	English	prospective	32 mean	paraphilia	Intensity of Sexual Desire and Symptoms Scale	endocrine therapy	L02	triptorelin	L02AE04	3.75 mg/m	continuous	30	sexual fantasies, decrease	from mean (+/-SD) of 48+/-10 per week before therapy to zero during therapy		no					3	
1217: Dang G, Matern R, Bivalacqua TJ, Sikka S, Hellstrom WJ. Intralesional interferon-alpha-2B injections for the treatment of Peyronie's disease. South Med J. 2004 Jan;97(1):42-6.	2004	USA	English	prospective	old	induratio penis plastica	IIEF	immunostimulants	L03	interferon a-2B	L03AB05	2 x 10(6)/2w	6w	25	erectile function, improvement	significantly in 5 of 7 men	significant improvements in penile pain and curvature	no	interferon	placebo			1-	
2219: Shiri R, Koskimaki J, Hakama M, Hakkinen J, Tammela TL, Huhtala H, Auvinen A. Effect of chronic diseases on incidence of erectile dysfunction. Urology. 2003 Dec;62(6):1097-102	2003	Finland	English	population based cross sectional study	40-69	arthritis	two questions from the NIH consensus definition	antiinflammatory and antirheumatic products	M01	antiinflammatory and antirheumatic products, non-steroids	M01A			1683	prevalence of erectile dysfunction	RR 1.3 (95% CI 0.9–1.9)		no					2+	
1010: Dario A, Scamoni C, Picano M, Casagrande F, Tomei G. Pharmacological complications of the chronic baclofen infusion in the severe spinal spasticity. Personal experience and review of the literature. J Neurosurg Sci. 2004 Dec;48(4):177-81.	2004	Italy	English	retrospective	young	spinal spasticity	erectile function	muscle relaxants	M03	baclofen intrathecal	M03BX01	various	n.g.	25	erectile function, impairment	8% of patients		no					3	
1323: Mendelson JH, Sholar MB, Mutschler NH, Jaszyna-Gasior M, Goletiani NV, Siegel AJ, Mello NK. Effects of intravenous cocaine and cigarette smoking on luteinizing hormone, testosterone, and prolactin in men. J Pharmacol Exp Ther. 2003 Oct;307(1):339-48.	2003	USA	English	retrospective	all ages	cocaine addiction	hormones	anaesthetics	N01	cocaine	N01BC01	0.4mg/kg	single dose	24	hormone levels, alteration	LH levels increase, T levels unchanged, prolactin levels decrease		no	cocaine	nicotine			2-	
1326: Mendelson JH, Teoh SK, Lange U, Mello NK, Weiss R, Skupny A, Ellingboe J. Anterior pituitary, adrenal, and gonadal hormones during cocaine withdrawal. Am J Psychiatry. 1988 Sep;145(9):1094-8. USA	1988	USA	English	retrospective	all ages	cocaine addiction	hormones	anaesthetics	N01	cocaine	N01BC01	various	4w after cessation	16	hormone levels, alteration	prolactin levels increase, LH and T unchanged		no					3	Persistent elevation of plasma prolactin levels after cocaine withdrawal may reflect a chronic derangement in dopaminergic regulatory systems

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1324: Heesch CM, Negus BH, Bost JE, Keffer JH, Snyder RW 2nd, Eichhorn EJ. Effects of cocaine on anterior pituitary and gonadal hormones. J Pharmacol Exp Ther. 1996 Sep;278(3):1195-200.	1996	USA	English	retrospective	all ages	cocaine addiction	hormones	anaesthetics	N01	cocaine	N01BC01	2mg intranasally	single dose	12	hormone levels, alteration	LH levels increase, T levels unchanged, prolactin levels decrease		yes	cocaine	placebo			1-	
1325: Mendelson JH, Mello NK, Teoh SK, Ellingboe J, Cochin J. Cocaine effects on pulsatile secretion of anterior pituitary, gonadal, and adrenal hormones. J Clin Endocrinol Metab. 1989 Dec;69(6):1256-60.	1989	USA	English	retrospective	all ages	cocaine addiction	hormones	other nervous system drugs	N07	cocaine	N01BC01	various	continuous	8	hormone levels, alteration	LH peaks increase		no					3	
1398: Bliesener N, Albrecht S, Schwager A, Weckbecker K, Lichtermann D, Klingmuller D. Plasma testosterone and sexual function in men receiving buprenorphine maintenance for opioid dependence. J Clin Endocrinol Metab. 2005 Jan;90(1):203-6. Epub 2004 Oct 13.	2005	USA	English	retrospective	young	opiate addiction	sexual function scale; hormones	analgesics	N02	buprenorphine	N02AE01	n.g.	continuous	105	sexual function, impairment; testosterone level, increased	significantly higher in buprenorphine group than in methadon group			methadone	buprenorphine	healthy blood donors		2-	
1625: Dunzendorfer U, Behm A, Dunzendorfer E, Dunzendorfer A. Drug combinations in the therapy of low response to phosphodiesterase 5 inhibitors in patients with erectile dysfunction. In Vivo. 2002 Sep-Oct;16(5):345-8.	2002	Germany	English	prospective	old	erectile dysfunction	erectile function	analgesics	N02	dihydergotamine	N02CA01	5mg	on demand	n.g.	erectile function, duplex sonography, improvement	in non-responders to sildenafil							3	
1438: Barbanti G, Beneforti P, Lapini A, Turini D. Relaxation of isolated corpus cavernosum induced by smooth-muscle relaxant drugs. A comparative study. Urol Res. 1988;16(4):299-302.	1988	Italy	English	experimental	42-68	cavernous tissue in vitro	muscle relaxation	analgesics	N02	ergotamine	N02CA02	5x10(-4)g	in vitro	16	cavernous tissue, relaxation	poor							2-	
1364: Herzog AG, Drislane FW, Schomer DL, Pennell PB, Bromfield EB, Dworetzky BA, Farina EL, Frye CA. Differential effects of antiepileptic drugs on sexual function and hormones in men with epilepsy. Neurology. 2005 Oct 11;65(7):1016-20.	2005	USA	English	prospective	young	epilepsy	sexual function scale; hormones	antiepileptics	N03	antiepileptics	N03A	n.g.	6m	85	sexual function, impairment; testosterone level, increased	various			carbamazepine	phenytoin	untreated epilepsy		2-	
1357: Mattson RH, Cramer JA. Epilepsy, sex hormones, and antiepileptic drugs. Epilepsia. 1985;26 Suppl 1: S40-51.	1985		English	review	young	epilepsy	erectile function	antiepileptics	N03	antiepileptics	N03A	n.g.	no treatment	n.g.	erectile function, impairment	dependent on medication							4	
1412: Toone BK, Wheeler M, Fenwick PB. Sex hormone changes in male epileptics. Clin Endocrinol (Oxf). 1980 Apr;12(4):391-5.	1980		English	retrospective	young	epilepsy	hormones	antiepileptics	N03	antiepileptics	N03A		no treatment	54	sexual activity decreased; LH, FSH, PRL, and sex-hormone binding globulin (SHBG) levels increased								2-	
1410: Herzog AG, Seibel MM, Schomer DL, Vaitukaitis JL, Geschwind N. Reproductive endocrine disorders in men with partial seizures of temporal lobe origin. Arch Neurol. 1986 Apr;43(4):347-50.	1986	USA	English	retrospective	young	epilepsy	hormones	antiepileptics	N03	antiepileptics	N03A		no treatment	20	sexual libido decrease, gonadotropin levels decreased	11 of 20 patients							3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1355: Morrell MJ. Sexual dysfunction in epilepsy. Epilepsia. 1991;32 Suppl 6: S38-45.	1991	USA	English	review	all ages	epilepsy	erectile function	antiepileptics	N03	antiepileptics	N03A		no treatment		sexual function, impairment	in 30-66% of men							4	Epileptic discharges in limbic structures may contribute to sexual dysfunction
1371: Duncan S, Blacklaw J, Beastall GH, Brodie MJ. Antiepileptic drug therapy and sexual function in men with epilepsy. Epilepsia. 1999 Feb;40(2):197-204.	1999	UK	English	retrospective	young	epilepsy	sexual function scale; hormones	antiepileptics	N03	phenytoin	N03AB02	n.g.	continuous	152	sexual function, impairment; testosterone level increased, SHBG level increased, DHEA level unaltered	significant							3	
1624: Fossey MD, Hamner MB. Clonazepam-related sexual dysfunction in male veterans with PTSD. Anxiety. 1994-95;1(5):233-6.	1994	USA	English	retrospective	middle-aged	post-traumatic stress disorder	sexual function questionnaire	antiepileptics	N03	clonazepam	N03AE01	3.4mg/d	continuous	100	sexual dysfunction	43% of patients							3	
1371: Duncan S, Blacklaw J, Beastall GH, Brodie MJ. Antiepileptic drug therapy and sexual function in men with epilepsy. Epilepsia. 1999 Feb;40(2):197-204.	1999	UK	English	retrospective	young	epilepsy	sexual function scale; hormones	antiepileptics	N03	carbamazepine	N03AF01	n.g.	continuous	184	sexual function, depressed; testosterone level unaltered, SHBG level increae, DHEA level decreased	men receiving antiepileptic drugs embraced a stricter sexual morality than the controls and untreated, and expressed greater satisfaction with their marriages than the control and untreated groups							3	
1371: Duncan S, Blacklaw J, Beastall GH, Brodie MJ. Antiepileptic drug therapy and sexual function in men with epilepsy. Epilepsia. 1999 Feb;40(2):197-204.	1999	UK	English	retrospective	young	epilepsy	sexual function scale; hormones	antiepileptics	N03	valproate	N03AG01	n.g.	continuous	152	sexual function, depressed; testosterone level unaltered, SHBG level unaltered, DHEA level unaltered	on average							3	
1592: Husain AM, Carwile ST, Miller PP, Radtke RA. Improved sexual function in three men taking lamotrigine for epilepsy. South Med J. 2000 Mar;93(3):335-6.	2000	USA	English	retrospective	young	epilepsy	erectile function	antiepileptics	N03	lamotrigine	N03AX09	n.g.	8m	3	sexual function, improvement	after cessation of other antileptics							3	
2231: Ricci E, Parazzini F, Mirone V, Imbimbo C, Palmieri A, Bortolotti A, Di Cintio E, Landoni M, Lavezzari M. Current drug use as risk factor for erectile dysfunction: results from an Italian epidemiological study. Int J Impot Res. 2003 Jun;15(3):221-4.	2003	Italy	English	outpatient based cross sectional study	>18	Parkinson disease	interview by general practitioner	anti-Parkinson drugs	N04	anticholinergic agents	N04A	various	various	2010	incidence of erectile dysfunction	RR 12.8 (95% CI 2.7-60.1)		no					2-	
2168: Voon V, Hassan K, Zurowski M, de Souza M, Thomsen T, Fox S, Lang AE, Miyasaki J. Prevalence of repetitive and reward-seeking behaviors in Parkinson disease. Neurology. 2006 Oct 10;67(7):1254-7	2006	USA	English	retrospective, patients	old	Parkinson disease	questionnaires	anti-Parkinson drugs	N04	various	N04A	various	various	297	hypersexuality in Parkinson disease	2.4%		no					3	
2231: Ricci E, Parazzini F, Mirone V, Imbimbo C, Palmieri A, Bortolotti A, Di Cintio E, Landoni M, Lavezzari M. Current drug use as risk factor for erectile dysfunction: results from an Italian epidemiological study. Int J Impot Res. 2003 Jun;15(3):221-4.	2003	Italy	English	outpatient based cross sectional study	>18	psychosis	interview by general practitioner	psycholeptics	N05	antipsychotics	N05A	various	various	2010	erectile function, impairment	RR 9.0 (95% CI 1.8-44.4)		no					2-	
1314: Olfson M, Uttaro T, Carson WH, Tafesse E. Male sexual dysfunction and quality of life in schizophrenia. J Clin Psychiatry. 2005 Mar;66(3):331-8.	2005	USA	English	retrospective	young	schizophrenia	erectile function	psycholeptics	N05	antipsychotics	N05A	n.g.	continuous	139	erectile function, impairment	45.3%		no					2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1593: Wirshing DA, Pierre JM, Marder SR, Saunders CS, Wirshing WC. Sexual side effects of novel antipsychotic medications. Schizophr Res. 2002 Jul 1;56(1-2):25-30.	2002	USA	English	retrospective	young	schizophrenia	erectile function	psycholeptics	N05	antipsychotics	N05A	various	continuous	25	sexual function, decrease of overall functions	40-71%							3	
1316: Aizenberg D, Zemishlany Z, Dorfman-Etrog P, Weizman A. Sexual dysfunction in male schizophrenic patients. J Clin Psychiatry. 1995 Apr;56(4):137-41.	1995	Israel	English	retrospective	young	schizophrenia	erectile function	psycholeptics	N05	antipsychotics	N05A		no treatment	122	sexual function, impairment	high frequency		no					3	
1188: Compton MT, Miller AH. Priapism associated with conventional and atypical antipsychotic medications: a review. J Clin Psychiatry. 2001 May;62(5):362-6.	2000	USA	English	review	old	psychosis	priapism	psychoanaleptics	N06	antipsychotics	N05A				priapism as a side effect	frequency below 1:1000, but considerable risk							4	presumably related to α adrenergic antagonism
1388: Rinieris P, Hatzimanolis J, Markianos M, Stefanis C. Effects of treatment with various doses of haloperidol on the pituitary-gonadal axis in male schizophrenic patients.Neuropsychobiology. 1989;22(3):146-9.	1989	Greece	English	prospective	young	schizophrenia	hormones	psychoanaleptics	N05	haloperidol	N05AD01	n.g.	4w	30	prolactin levels increased, testosterone levels decreased	in higher dose			7.5 mg haloperidol	30 mg haloperidol			2-	
1605: Atmaca M, Kuloglu M, Tezcan E. Sildenafil use in patients with olanzapine-induced erectile dysfunction. Int J Impot Res. 2002 Dec;14(6):547-9.	2002	Turkey	English	retrospective	middle-aged	psychosis	erectile function	psychoanaleptics	N05	olanzapine	N05AH03	n.g.	continuous	10	erectile function, impairment	improved with sildenafil							3	
1626: Weizman A, Maoz B, Treves I, Asher I, Ben-David M. Sulpiride-induced hyperprolactinemia and impotence in male psychiatric outpatients. Prog Neuropsychopharmacol Biol Psychiatry. 1985;9(2):193-8.	1985	Israel	English	retrospective	middle-aged	psychosis	erectile function	psychoanaleptics	N05	sulpiride	N05AL01	600mg	3w	13	erectile function, improvement	after reduction or discontinuation of sulpiride							3	
1392: Ghadirian AM, Annable L, Belanger MC. Lithium, benzodiazepines, and sexual function in bipolar patients. Am J Psychiatry. 1992 Jun;149(6):801-5.	1992	Canada	English	retrospective	young	bipolar psychosis	sexual function score	psychoanaleptics	N05	lithium, benzodiazepines	N05AN01	n.g.	n.g.	45	sexual function, alteration	49% difficulties in combination of lithium + benzodiazepins							2-	
1414: Knegtering R, Castelein S, Bous H, Van Der Linde J, Bruggeman R, Kluiter H, van den Bosch RJ. A randomized open-label study of the impact of quetiapine versus risperidone on sexual functioning. J Clin Psychopharmacol. 2004 Feb;24(1):56-61.	2004	The Netherlands	English	prospective	young	schizophrenia	erectile function	psychoanaleptics	N05	risperidone	N05AX08	n.g.	6w	25	erectile function, impairment	less impaired in patients treated with quetiapine than with risperidone							2-	
1413: Spollen JJ 3rd, Wooten RG, Cargile C, Bartztokis G. Prolactin levels and erectile function in patients treated with risperidone. J Clin Psychopharmacol. 2004 Apr;24(2):161-6.	2004	USA	English	retrospective	old	schizophrenia	erectile function	psychoanaleptics	N05	risperidone	N05AX08	3mg/d	3m	14	erectile function, improvement	associated with prolactin rise, contrary to expectation							2-	
1428: Margolese HC, Assalian P. Sexual side effects of antidepressants: a review. J Sex Marital Ther. 1996 Fall;22(3):209-17. McGill University, Canada.	1996	Canada	English	review	young	depression	sexual functions	psychoanaleptics	N06	antidepressants	N06A			n.g.	sexual dysfunction	painful ejaculation in imipramine, priapism in tradozone,							4	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2210: Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. Sexual function in men older than 50 years of age: results from the health professionals follow-up study. Ann Intern Med. 2003;139(3):161-8	2003	USA	English	population based cross sectional study	53-90	depression	sexual function questionnaire	psychoanaleptics	N06	antidepressant	N06A			31742	incidence of erectile dysfunction	RR 1.7 (95% CI 1.2–2.2)		no					2++	
2208: Rosen RC, Fisher WA, Eardley I, Niederberger C, Nadel A, Sand M; Men's Attitudes to Life Events and Sexuality (MALES) Study. The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. Curr Med Res Opin. 2004 May;20(5):607-17.	2004	USA	English	population based cross sectional study	20-75	depression	sexual function questionnaire	psychoanaleptics	N06	antidepressant	N06A			27839	prevalence of erectile dysfunction	13% reporting no erectile dysfunction, 25% reporting erectile dysfunction		no					2-	
1558: Montejo AL, Llorca G, Izquierdo JA, Rico-Villademoros F. Incidence of sexual dysfunction associated with antidepressant agents: a prospective multicenter study of 1022 outpatients. Spanish Working Group for the Study of Psychotropic-Related Sexual Dysfunction. J Clin Psychiatry. 2001;62 Suppl 3:10-21.	2001	Spain	English	prospective	young	depression	sexual function	psychoanaleptics	N06	antidepressants	N06A	n.g.	n.g.	412	sexual dysfunction	up to 59.1% different for different drugs							2-	
2228: Mak R, De Backer G, Kornitzer M, De Meyer JM. Prevalence and correlates of erectile dysfunction in a population-based study in Belgium. Eur Urol. 2002 Feb;41(2):132-8.	2002	Belgium	English	population based cross sectional study	40-69	depression	IIEF	psychoanaleptics	N06	antidepressant	N06A			204	prevalence of erectile dysfunction in patients 40-49 years old	OR 1.14 (95% CI 0.51-2.54)		no					2-	
2207: Nicolosi A, Moreira ED Jr, Shirai M, Bin Mohd Tambi MI, Glasser DB. Epidemiology of erectile dysfunction in four countries: cross-national study of the prevalence and correlates of erectile dysfunction. Urology. 2003 Jan;61(1):201-6.	2003	Italy	English	population based cross sectional study	40-70	depression	single question	psychoanaleptics	N06	antidepressant	N06A			81	prevalence of erectile dysfunction as compared to non-depressed men	OR 2.09 (95% CI 1.60- 2.74)		no						
2209: Elliott SP, Gulati M, Pasta DJ, Spitalny GM, Kane CJ, Yee R, Lue TF. Obstructive lower urinary tract symptoms correlate with erectile dysfunction. Urology. 2004 Jun;63(6):1148-52.	2004	USA	English	outpatient based cross sectional study	68.2 mean	LUTS	IIEF	psychoanaleptics	N06	antidepressant	N06A			36	prevalence of erectile dysfunction	correlation with IIEF -0.12		no					3	
1557: Balon R, Yeragani VK, Pohl R, Ramesh C. Sexual dysfunction during antidepressant treatment. J Clin Psychiatry. 1993 Jun;54(6):209-12.	1993	USA	English	retrospective	young	depression	sexual function	psychoanaleptics	N06	antidepressants	N06A	n.g.	n.g.	24	sexual dysfunction as a side effect	43%, not associated with diagnosis or antidepressant							2-	
1363: Sachdeo R, Sathyan RR. Amelioration of erectile dysfunction following a switch from carbamazepine to oxcarbazepine: recent clinical experience. Curr Med Res Opin. 2005 Jul;21(7):1065-8.	2005		English	case report	young	epilepsy	erectile function	psychoanaleptics	N06	antidepressants	N06A	n.g.	n.g.	1	erectile function, impairment		increased synthesis of SHBG		cabamazepine	oxycarbazepine less side effects			3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1362: Mitchell JE, Popkin MK. Antidepressant drug therapy and sexual dysfunction in men: a review. J Clin Psychopharmacol. 1983 Apr;3(2):76-9.	1983		English	review	young	depression	erectile function	psychoanaleptics	N06	antidepressants	N06A				erectile function, impairment	dependent on medication							4	
1079: Labbate LA, Croft HA, Oleshansky MA. Antidepressant-related erectile dysfunction: management via avoidance, switching antidepressants, antidotes, and adaptation. J Clin Psychiatry. 2003;64 Suppl 10:11-9.	2003	USA	English	review	old	depression	erectile function	psychoanaleptics	N06	antidepressants	N06A				erectile function, improvement	reliable effect not shown in comparing studies							4	sexual side effects of SSRI are due to overlapping neuroregulatory mechanims
1080: Rosen RC, Marin H. Prevalence of antidepressant-associated erectile dysfunction. J Clin Psychiatry. 2003;64 Suppl 10:5-10.	2003	USA	English	review	old	depression	erectile function	psychoanaleptics	N06	antidepressants	N06A				erectile function, improvement	treatment of erectile dysfunction increases compliance							4	
1428: Margolese HC, Assalian P. Sexual side effects of antidepressants: a review. J Sex Marital Ther. 1996 Fall;22(3):209-17.	1996	Canada	English	review	young	depression	sexual function	psychoanaleptics	N06	antidepressants	N06A				sexual dysfunction	painful ejaculation in imipramine, priapism in tradozone							4	
2216: Akkus E, Kadioglu A, Esen A, Doran S, Ergen A, Anafarta K, Hattat H; Turkish Erectile Dysfunction Prevalence Study Group. Prevalence and correlates of erectile dysfunction in Turkey: a population-based study. Eur Urol. 2002 Mar;41(3):298-304.	2002	Turkey	English	population based cross sectional study	>40	depression	single question for erectile function	psychoanaleptics	N06	antidepressants	N06A			1982	prevalence of erectile dysfunction as compared to non-depressed men	OR 1.18 (95% CI 1.11-1.26)		no					2++	
2212: Nicolosi A, Moreira ED Jr, Villa M, Glasser DB. A population study of the association between sexual function, sexual satisfaction and depressive symptoms in men. J Affect Disord. 2004 Oct 15;82(2):235-43.	2004	Italy	English	population based cross sectional study	40-70	depression	AUA criteria	psychoanaleptics	N06	antidepressants	N06A			1709	prevalence of erectile dysfunction as compared to non-depressed men	OR 1.81 (95% CI 1.28– 2.55)		no					2+	
2213: Moreira ED Jr, Lbo CF, Diament A, Nicolosi A, Glasser DB. Incidence of erectile dysfunction in men 40 to 69 years old: results from a population-based cohort study in Brazil. Urology. 2003 Feb;61(2):431-6.	2003	Brazil	English	population based cross sectional study	40-70	depression	single question from the NIH consensus definition	psychoanaleptics	N06	antidepressants	N06A			428	prevalence of erectile dysfunction as compared to non-depressed men	RR 1.16 (95% CI 0.33–4.07)		no					2+	
2233: Kantor J, Bilker WB, Glasser DB, Margolis DJ. Prevalence of erectile dysfunction and active depression: an analytic cross-sectional study of general medical patients. Am J Epidemiol. 2002 Dec 1;156(11):1035-42	2002	USA	English	outpatient based cross sectional study	>18	depression	IIEF	psychoanaleptics	N06	antidepressants	N06A			334	prevalence of erectile dysfunction as compared to non-depressed men	6.3%, no statistical significant association		no					2-	
1565; Kockott G,, Pfeiffer W: Sexual disorders in nonacute psychiatric outpatients. Compr Psychiatry 1996;37: 56-61	1996	Germany	English	case-control study	young	depression	sexual function score	psychoanaleptics	N06	antidepressants	N06A			88	sexual dysfunction	36.2% prevalence in depressed men, 13.3% in controls							2-	
1564: Angst J: Seuxal problems in healthy and depressed patients. Int Clin Phychopharmacol 1998;13: S1-S3	1998		English	case-control study	young	depression	sexual function score	psychoanaleptics	N06	antidepressants	N06A			49	sexual dysfunction	48.2% prevalence in depressed men, 17.6 in controls							2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1031: Baldwin DS. Sexual dysfunction associated with antidepressant drugs. Expert Opin Drug Saf. 2004 Sep;3(5):457-70.	2004	USA	English	structured review	all ages	depression	sexual function score	psychoanaleptics	N06	antidepressants	N06A			7 case-control studies quoted (40 – 264 patients)	sexual dysfunction	prevalence up to 48.2% in depressed men		no					2++	
1566: Harrison WM, Rabkin JG, Ehrhardt AA et al. Effects of antidepressant medication on sexual function : a controlled study. J Clin Phychopharmacol 1986;6: 144-149	1986		English	prospective	young	depression	sexual function score	psychoanaleptics	N06	imipramine	N06AA02	200 mg	n.g.	26;41	sexual dysfunction as a side effect	30% in imipramin group, 6% in placebo group		yes					3	
1449: Ashton AK, Hamer R, Rosen RC. Serotonin reuptake inhibitor-induced sexual dysfunction and its treatment: a large-scale retrospective study of 596 psychiatric outpatients. J Sex Marital Ther 1997;23: 165-173	1997		English	retrospective	young	depression	sexual dysfunction, self reported	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI)	N06AB	n.g.	n.g.	596	sexual dysfunction	23.4% of patients clear association							3	
1429: Hsu JH, Shen WW. Male sexual side effects associated with antidepressants: a descriptive clinical study of 32 patients. Int J Psychiatry Med. 1995;25(2):191-201.	1995	USA	English	retrospective	young	depression	sexual function score	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI) in comparison to tricyclic antidepressants	N06AB	n.g.	n.g.	34	sexual function, disturbance of different phases	independent of type of antidepressant							3	
1425: Labbate LA, Grimes JB, Arana GW. Serotonin reuptake antidepressant effects on sexual function in patients with anxiety disorders. Biol Psychiatry. 1998 Jun 15;43(12):904-7.	1998	USA	English	prospective	young	depression	sexual function score	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI)	N06AB	n.g.	n.g.	31	libido unaltered, erection/lubrication unaltered, orgasm quality impaired, sexual frequency unaltered	all patients							3	
1416: Labbate LA, Grimes JB, Arana GW. Serotonin reuptake antidepressant effects on sexual function in patients with anxiety disorders. Biol Psychiatry. 1998 Jun 15;43(12):904-7.	1998	USA	English	prospective	young	depression	sexual function score	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI)	N06AB	n.g.	3m	31	orgasm quality, decreased	most patients							3	
1159: Fava M, Rankin M. Sexual functioning and SSRIs. J Clin Psychiatry. 2002;63 Suppl 5:13-6; discussion 23-5.	2002	USA	English	review	old	depression	erectile function	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI)	N06AB				erectile function, impairment	association by SSRI questionable, no controlled trials available							4	
1428: Margolese HC, Assalian P. Sexual side effects of antidepressants: a review. J Sex Marital Ther. 1996 Fall;22(3):209-17. McGill University, Canada.	1996	Canada	English	review	young	depression	sexual functions	psychoanaleptics	N06	selective serotonin reuptake inhibitors (SSRI)	N06AB				sexual dysfunction	decreased libido in fluoxetine, abnormal ejaculation in venlafaxine							4	
1568: Michelson D, Schmidt M, Lee J, Tepner R: Changes in sexual function during acute and six-month fluoxetine therapy: a prospective assessment. J Sex Marital Ther 2001;27: 289-302	2001		English	prospective	young	depression	sexual function score	psychoanaleptics	N06	fluoxetine	N06AB03	20 mg	n.g.	190;150	sexual dysfunction	no differences between drugs		yes					1+	
1474: Jacobsen FM. Fluoxetine-induced sexual dysfunction and an open trial of yohimbine. J Clin Psychiatry. 1992 Apr;53(4):119-22.	1992	USA	English	retrospective	all ages	depression	sexual function	psychoanaleptics	N06	fluoxetine	N06AB03	20-40mg/d	continuous	160	erectile function, impairment, libido, decrease	21% and 10% of patients		no					2+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1473: Smith DM, Levitte SS. Association of fluoxetine and return of sexual potency in three elderly men. J Clin Psychiatry. 1993 Aug;54(8):317-9.	1993	USA	English	retrospective	old	erectile dysfunction, vascular	sexual function	psychoanaleptics	N06	fluoxetine	N06AB03	n.g.	continuous	3	erectile function, improvement	moderate							3	
1426: Aizenberg D, Gur S, Zemishlany Z, Granek M, Jeczmien P, Weizman A. Mianserin, a 5-HT2a/2c and alpha 2 antagonist, in the treatment of sexual dysfunction induced by serotonin reuptake inhibitors. Clin Neuropharmacol. 1997 Jun;20(3):210-4.	1997	Israel	English	prospective	young	depression and treatment with SSRI	sexual function score	psychoanaleptics	N06	mianserin	N06AX03	15mg/d	4w	15	sexual function, improvement	better orgasm and satisfaction		no					3	
1082: Fink HA, MacDonald R, Rutks IR, Wilt TJ. Trazodone for erectile dysfunction: a systematic review and meta-analysis. BJU Int. 2003 Sep;92(4):441-6.	2003	USA	English	meta-analysis	old	erectile dysfunction	erectile function	psychoanaleptics	N06	tradozone	N06AX05	different	different	396	erectile function, improvement	trazodone monotherapy appeared more likely than placebo to lead to a 'positive treatment response', the difference was not statistically significant	Specific adverse events with trazodone included drymouth (19%), sedation (16%), dizziness (16%) and fatigue (15%).	yes	200mg/d	50mg/d	placebo		1+	
1436: Aydin S, Odabas O, Ercan M, Kara H, Agargun MY. Efficacy of testosterone, trazodone and hypnotic suggestion in the treatment of non-organic male sexual dysfunction. Br J Urol. 1996 Feb;77(2):256-60.	1996	Turkey	English	prospective	young	erectile dysfunction	sexual function score	psychoanaleptics	N06	tradozone	N06AX05	n.g.	8w	79	sexual function, improvement	60% of testosterone group, 69% of tradozone group, 39% of placebo group			tradozone	testosterone	placebo		2+	
1272: Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. A prospective study of risk factors for erectile dysfunction. J Urol. 2006 Jul;176(1):217-21. USA	2006	USA	English	retrospective	all ages	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses	20y	22086	erectile function, impairment	RR 1.5, 95% CI 1.3-1.7 in smokers		no					2++	
1304: Bortolotti A, Fedele D, Chatenoud L, Colli E, Coscelli C, Landoni M, Lavezzari M, Santeusanio F, Parazzini F. Cigarette smoking: a risk factor for erectile dysfunction in diabetics. Eur Urol. 2001 Oct;40(4):392-6; discussion 397.	2001	Italy	English	retrospective	20-70	erectile dysfunction in diabetes mellitus	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		9670	erectile function, impairment	OR for smokers 1.4 (95% CI 1.3-1.6), OR für ex-smokers 1.5 (95% CI 1.3-1.6).							2-	
1273: Millett C, Wen LM, Rissel C, Smith A, Richters J, Grulich A, de Visser R. Smoking and erectile dysfunction: findings from a representative sample of Australian men. Tob Control. 2006 Apr;15(2):136-9.	2006	Australia	English	retrospective	all ages	erectile dysfunction	erectile function, self-reported	other nervous system drugs	N07	nicotine	N07BA01	all doses		8367	erectile function, impairment	OR 1.24 (CI 1.01 to 1.52, p = 0.04) for smokers </= 20 cigarettes per day and 1.39 (CI 1.05 to 1.83) smokers >20 cigarettes per day as compared to non-smokers							2+	
1309: Mannino DM, Klevens RM, Flanders WD. Cigarette smoking: an independent risk factor for impotence? Am J Epidemiol. 1994 Dec 1;140(11):1003-8.	1994	USA	English	retrospective	31-49	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		4462	erectile function, impairment	prevalence of erectile dysfunction in 1,162 never smokers 2,2%, in 1,292 former smokers 2.0%, in 2,008 current smokers 3.7%.							2++	
1284: Austoni E, Mirone V, Parazzini F, Fasolo CB, Turchi P, Pescatori ES, Ricci E, Gentile V; Andrology Prevention Week centres; Italian Society of Andrology. Smoking as a risk factor for erectile dysfunction: data from the Andrology Prevention Weeks 2001-2002 a study of the Italian Society of Andrology (s.I.a.). Eur Urol. 2005 Nov;48(5):810-7	2005	Italy	English	retrospective	all ages	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses		4081	erectile function, impairment	current smokers >10 cigarettes/day OR 1.4, former smokers OR 1.3 as compared to non-smokers							2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1189: Tengs TO, Osgood ND. The link between smoking and impotence: two decades of evidence. Prev Med. 2001 Jun;32(6):447-52	2000	USA	English	meta-analysis	all ages	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		3819	erectile function, impairment	40.1% of patients with erectile dysfunction are smokers, 27.7% of general population are smokers							1-	Study not controlled for other risk factors. Study population sought medical care for e.d.
1298: Shiri R, Koskimaki J, Hakama M, Hakkinen J, Huhtala H, Tammela TL, Auvinen A. Effect of lifestyle factors on incidence of erectile dysfunction. Int J Impot Res. 2004 Oct;16(5):389-94.	2004	Finland	English	retrospective	50-70	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		3143	erectile function, impairment	current smoking OR=1.5 (95% CI: 0.9-2.2) as compared to non-smokers							2+	
1301: Safarinejad MR. Prevalence and risk factors for erectile dysfunction in a population-based study in Iran. Int J Impot Res. 2003 Aug;15(4):246-52.	2003	Iran	English	retrospective	20-70	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		2674	erectile function, impairment	current smokers OR 2.41 (95% CI, 1.52-3.30), ex-smokers OR 2.15 (95% CI, 1.38-3.1) as compared to non-smokers							2+	
1300: Nicolosi A, Glasser DB, Moreira ED, Villa M; Erectile Dysfunction Epidemiology Cross National Study Group. Prevalence of erectile dysfunction and associated factors among men without concomitant diseases: a population study. Int J Impot Res. 2003 Aug;15(4):253-7.	2003	Italy	English	retrospective	40-70	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		2412	erectile function, impairment	OR=2.3 for >30 cigarettes/day for smokers as compared to non-smokers							2+	
1292: Bai Q, Xu QQ, Jiang H, Zhang WL, Wang XH, Zhu JC. Prevalence and risk factors of erectile dysfunction in three cities of China: a community-based study. Asian J Androl. 2004 Dec;6(4):343-8.	2004	China	English	retrospective	20-86	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses		2226	erectile function, impairment	current cigarette smoking not correlated with erectile dysfunction, while cigarette consumption and duration were positively correlated with erectile dysfunction (P<0.01)							2-	
1303: Mirone V, Imbimbo C, Bortolotti A, Di Cintio E, Colli E, Landoni M, Lavezzari M, Parazzini F. Cigarette smoking as risk factor for erectile dysfunction: results from an Italian epidemiological study. Eur Urol. 2002 Mar;41(3):294-7.	2002	Italy	English	retrospective	>18	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		2010	erectile function, impairment	current smokers OR of 1.7 (95% CI, 1.2-2.4), ex-smokers of 1.6 (95% CI, 1.1-2.3) as compared to non-smokers							2+	
1295: Shiri R, Hakama M, Hakkinen J, Tammela TL, Auvinen A, Koskimaki J. Relationship between smoking and erectile dysfunction. Int J Impot Res. 2005 Mar-Apr;17(2):164-9.	2005	Finland	English	retrospective	50-75	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses		1442	erectile function, impairment	risk of erectile dysfunction nonsignificantly increased with smoking (OR=1.4)							2+	
1287: Gades NM, Nehra A, Jacobson DJ, McGree ME, Girman CJ, Rhodes T, Roberts RO, Lieber MM, Jacobsen SJ. Association between smoking and erectile dysfunction: a population-based study. Am J Epidemiol. 2005 Feb 15;161(4):346-51. USA.	2005	USA	English	retrospective	40-79	erectile dysfunction	Brief Male Sexual Function Inventory	other nervous system drugs	N07	nicotine	N07BA01	all doses		1329	erectile function, impairment	current smokers OR 2.74 (95%CI: 0.44, 16.89) as compared to non-smokers							2+	
1285: Corona G, Mannucci E, Petrone L, Ricca V, Mansani R, Cilotti A, Balercia G, Chiarini V, Giommi R, Forti G, Maggi M. Psychobiological correlates of smoking in patients with erectile dysfunction. Int J Impot Res. 2005 Nov-Dec;17(6):527-34.	2005	Italy	English	retrospective	all ages	erectile dysfunction	Structured Interview (SIEDY)	other nervous system drugs	N07	nicotine	N07BA01	all doses		1150	erectile function, impairment	Current smokers and past smokers (PS) showed an impairment of subjective and objective (dynamic peak systolic velocity at penile duplex ultrasound) erectile parameters							2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1294: Natali A, Mondaini N, Lombardi G, Del Popolo G, Rizzo M. Heavy smoking is an important risk factor for erectile dysfunction in young men. Int J Impot Res. 2005 May-Jun;17(3):227-30.	2005	Italy	English	retrospective	18-44	erectile dysfunciton	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses		860	erectile function, impairment	337 patients >20 cigarettes/d (39.2%), in the general population only 4% are heavy smokers.							2-	
1280: Lam TH, Abdullah AS, Ho LM, Yip AW, Fan S. Smoking and sexual dysfunction in Chinese males: findings from men's health survey. Int J Impot Res. 2006 Jul-Aug;18(4):364-9.	2006	China	English	retrospective	31-60	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	>20 cigarettes per day		819	erectile function, impairment	OR 1.47 (CI 1.00-2.16) in smokers as compared to non-smokers							2+	
1307: Feldman HA, Johannes CB, Derby CA, Kleinman KP, Mohr BA, Araujo AB, McKinlay JB. Erectile dysfunction and coronary risk factors: prospective results from the Massachusetts male aging study. Prev Med. 2000 Apr;30(4):328-38.	2000	USA	English	retrospective	40-70	erectile dysfunction	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		513	erectile function, impairment	Cigarette smoking at baseline increased the likelihood of erectile dysfunction in follow-up (24% vs. 14% in non-smokers).							2+	
1274: Polsky JY, Aronson KJ, Heaton JP, Adams MA. Smoking and other lifestyle factors in relation to erectile dysfunction. BJU Int. 2005 Dec;96(9):1355-9.	2005	Canada	English	retrospective	50-80	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	all doses		335	erectile function, impairment	OR 2.2 (CI 1.2-3.9) in smokers as compared to non-smokers, pack-years suggest a dose-response pattern.							2+	
1291: Pourmand G, Alidaee MR, Rasuli S, Maleki A, Mehrsai A. Do cigarette smokers with erectile dysfunction benefit from stopping?: a prospective study. BJU Int. 2004 Dec;94(9):1310-3. Iran.	2004	Iran	English	retrospective	middle-aged	erectile dysfunction	IIEF	other nervous system drugs	N07	nicotine	N07BA01	cessation		281	erectile function, improvement	After 1 year of cessation erectile function improved in >25% of ex-smokers but in none of the current smokers; 2.5% of ex-smokers and 6.8% of current smokers had deterioration in erectile dysfunction.							2-	
1290: Klein R, Klein BE, Moss SE. Ten-year incidence of self-reported erectile dysfunction in people with long-term type 1 diabetes. J Diabetes Complications. 2005 Jan-Feb;19(1):35-41. USA.	2005	USA	English	retrospective	>21	erectile dysfunction in diabetes mellitus	erectile function	other nervous system drugs	N07	nicotine	N07BA01	all doses		264	erectile function, impairment	Incidence of erectile dysfunction within 10 years 25%. OR for smokers 2.4 (95% CI, 1.09-5.30) as compared to non-smokers							2+	
1308: McMahon CG, Touma K. Predictive value of patient history and correlation of nocturnal penile tumescence, colour duplex Doppler ultrasonography and dynamic cavernosometry and cavernosography in the evaluation of erectile dysfunction. Int J Impot Res. 1999 Feb;11(1):47-51.	1999	Australia	English	retrospective	old	erectile dysfunction	erectile function assessed by Rigiscan	other nervous system drugs	N07	nicotine	N07BA01	all doses		207	erectile function, impairment	122 (59%) patients had an abnormal NPT, 65 out of 122 patients (53%) who smoked cigarettes							2-	
1312: Rosen MP, Greenfield AJ, Walker TG, Grant P, Dubrow J, Bettmann MA, Fried LE, Goldstein I. Cigarette smoking: an independent risk factor for atherosclerosis in the hypogastric-cavernous arterial bed of men with arteriogenic impotence. J Urol. 1991 Apr;145(4):759-63.	1991	USA	English	retrospective	middle-aged	erectile dysfunction	selective pudendal angiography	other nervous system drugs	N07	nicotine	N07BA01	all doses		200	erectile function, impairment	RR 1.31 (CI 1.05; 1.64) of developing internal pudendal artery atherosclerosis for each 10 pack-years smoked							2+	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1296: Elhanbly S, Abdel-Gaber S, Fathy H, El-Bayoumi Y, Wald M, Niederberger CS. Erectile dysfunction in smokers: a penile dynamic and vascular study. J Androl. 2004 Nov-Dec;25(6):991-5.	2004	Egypt.	English	retrospective	44-51	erectile dysfunction	nocturnal penile tumescence and rigidity monitoring	other nervous system drugs	N07	nicotine	N07BA01	all doses		109	erectile function, impairment	86% of smokers had abnormal NPTR testing compared with 55% of nonsmokers (P = .02). The average peak systolic velocity was 26.8 and 31.2 cm/s for smokers and nonsmokers							2-	
1286: Gilbert DG, Hagen RL, D'Agostino JA. The effects of cigarette smoking on human sexual potency. Addict Behav. 1986;11(4):431-4.	1986	USA	English	prospective	18-44	erectile dysfunction	sexual response to erotic film	other nervous system drugs	N07	nicotine	N07BA01	all doses		42	rate of penile diameter change, decreased	significantly with smoking high-nicotine cigarettes							1-	
1306: Derby CA, Mohr BA, Goldstein I, Feldman HA, Johannes CB, McKinlay JB. Modifiable risk factors and erectile dysfunction: can lifestyle changes modify risk? Urology. 2000 Aug 1;56(2):302-6. USA	2000	USA	English	retrospective	40-70	erectile dysfunction, response to sildenafil	erectile function	other nervous system drugs	N07	nicotine	N07BA01			593	erectile function, impairment	Changes in smoking and alcohol consumption were not associated with the incidence of erectile dysfunction.		no					2+	Midlife changes may be too late to reverse the effects of risk factors
1567: Croft H, Settle E, Houser T et al. A placebo-controlled comparison of the antidepresant efficacy and effect on sexual functioning of sustained-release buproprion and sertraline. Clin Ther 1999;21: 643-658	1999		English	prospective	young	depression	sexual function score	other nervous system drugs	N07	buproprion	N07BA02	400 mg		120;121	sexual dysfunction	15% in buproprion group, 10% in placebo group		yes					1-	
1431: Clayton AH, Warnock JK, Kornstein SG, Pinkerton R, Sheldon-Keller A, McGarvey EL. A placebo-controlled trial of bupropion SR as an antidote for selective serotonin reuptake inhibitor-induced sexual dysfunction. J Clin Psychiatry. 2004 Jan;65(1):62-7.	2004	USA	English	prospective	all ages	depression and treatment with SSRI	sexual function score	other nervous system drugs	N07	buproprion	N07BA02	150mg/d	4w	42	libido increased, sexual activity improvement	better in buproprione group		yes	buproprione	placebo			1+	
1421: Masand PS, Ashton AK, Gupta S, Frank B. Sustained-release bupropion for selective serotonin reuptake inhibitor-induced sexual dysfunction: a randomized, double-blind, placebo-controlled, parallel-group study. Am J Psychiatry. 2001 May;158(5):805-7.	2001	USA	English	prospective	young	depression and sexual dysfunction by SSRI	sexual function score	other nervous system drugs	N07	bupropion	N07BA02	n.g.	3w	40	sexual function rating scale, unaltered	no difference between groups		yes	buproprin	placebo			1+	
1623: Rowland DL, Myers L, Culver A, Davidson JM. Bupropion and sexual function: a placebo-controlled prospective study on diabetic men with erectile dysfunction. J Clin Psychopharmacol. 1997 Oct;17(5):350-7.	1997	USA	English	prospective	middle-aged	depression	sexual function questionnaire	other nervous system drugs	N07	buproprion	N07BA02	n.g.	6w	14	sexual activity, unaltered	no effect	no effect on diabetes	no					3	
1397: Brown R, Balousek S, Mundt M, Fleming M. Methadone maintenance and male sexual dysfunction. J Addict Dis. 2005;24(2):91-106.	2005	USA	English	retrospective	young	opiate addiction	sexual function score	other nervous system drugs	N07	methadone	N07BC02	n.g.	continuous	92	sexual function, alteration	in 14% of patients sexual dysfunction correlated to absolute dose							3	
1270: Hanbury R, Cohen M, Stimmel B. Adequacy of sexual performance in men maintained on methadone. Am J Drug Alcohol Abuse. 1977;4(1):13-20.	1977		English	retrospective	young	opiate addiction	sexual function	other nervous system drugs	N07	methadone	N07BC02	n.g.	continuous	50	sexual function, alteration	in 33% of patients		no					3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1269: Crowley TJ, Simpson R. Methadone dose and human sexual behavior. Int J Addict. 1978 Feb;13(2):285-95.	1978		English	retrospective	young	opiate addiction	sexual function	other nervous system drugs	N07	methadone	N07BC02	n.g.	continuous	31	sexual function, alteration	Daily methadone dose correlated significantly with frequency of ejaculation (-.31)		no					3	
1389: Sempere AP, Garcia FM, Duarte J, Mataix AL, Coria F, Claveria LE. Impotence associated with cinnarizine. Ann Pharmacother. 1993 Mar;27(3):370.	1993	USA	English	retrospective	55	postural vertigo	erectile function	other nervous system drugs	N07	cinnarizine	N07CA02	150mg/d	3m	1	erectile function, impairment	complete impotence							3	no other reports in the literature
1617: Lowe FC, Jarow JP. Placebo-controlled study of oral terbutaline and pseudoephedrine in management of prostaglandin E1-induced prolonged erections. Urology. 1993 Jul;42(1):51-3; discussion 53-4.	1993	USA	English	prospective	middle-aged	erectile dysfunction	prolonged erection due to intracavernous injection	drugs for obstructive airway diseases	R03	terbutaline	R03AC03	n.g.	single dose	75	erection, prolonged	detumescence in 36% (t) versus 12% (p)		yes	terbutaline	pseudoephedrine	placebo		1+	
1616: Soni BM, Vaidyanathan S, Krishnan KR. Management of pharmacologically induced prolonged penile erection with oral terbutaline in traumatic paraplegics. Paraplegia. 1994 Oct;32(10):670-4.	1994	UK	English	retrospective	middle-aged	paraplegics	prolonged erection due to intracavernous injection	drugs for obstructive airway diseases	R03	terbutaline	R03AC03	5mg/d orally	single dose	3	erection, prolonged	detumescence within 15 min							2-	
1618: Shantha TR, Finnerty DP, Rodriquez AP. Treatment of persistent penile erection and priapism using terbutaline. J Urol. 1989 Jun;141(6):1427-9.	1989	USA	English	retrospective	middle-aged	general anaesthesia	prolonged erection	drugs for obstructive airway diseases	R03	terbutaline	R03AC03	5mg/d orally	single dose	n.g.	erection, prolonged	rapid detumescence							3	
1438: Barbanti G, Beneforti P, Lapini A, Turini D. Relaxation of isolated corpus cavernosum induced by smooth-muscle relaxant drugs. A comparative study. Urol Res. 1988;16(4):299-302.	1988	Italy	English	experimental	42-68	cavernous tissue in vitro	muscle relaxation	drugs for obstructive airway diseases	R03	aminophyllin	R03DA05	5x10-4g	in vitro	16	cavernous tissue, relaxation	good							3	
1437: Le Roux PJ, Naude JH. Topical vasoactive cream in the treatment of erectile failure: a prospective, randomized placebo-controlled trial. BJU Int. 1999 May;83(7):810-1.	1999	South Africa	English	prospective	old	erectile dysfunction	erectile function	drugs for obstructive airway diseases	R03	aminophyllin	R03DA05	cream containing aminophylline, isosorbide dinitrate and co-dergocrine mesylate	4w	14	erectile function, improvement	moderate			cream	placebo			3	
1522: Lazzeri M, Barbanti G, Beneforti P, Turini D. Intraurethrally infused capsaicin induces penile erection in humans. Scand J Urol Nephrol. 1994 Dec;28(4):409-12.	1994	Italy	English	prospective	young	erectile dysfunction	erectile function	antihistamines for systemic use	R06	capsicain intraurethrally	not listed	10-5 mol	n.g.	20	erection, rigid	good success	none		capsicaine	papaverine intracavernous	saline		2-	
1595: Aukst-Margetic B, Margetic B. An open-label series using loratadine for the treatment of sexual dysfunction associated with selective serotonin reuptake inhibitors. Prog Neuropsychopharmacol Biol Psychiatry. 2005 Jun;29(5):754-6.	2005	Croatia	English	prospective	young	erectile dysfunction in severe depression	IIEF	antihistamines for systemic use	R06	loratadin	R06AX13	10mg/d	2w	9	IIEF score, improvement		no effect	no					3	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1339: Ravaglia S, Marchioni E, Costa A, Maurelli M, Moglia A. Erectile dysfunction as a sentinel symptom of cardiovascular autonomic neuropathy in heavy drinkers. J Peripher Nerv Syst. 2004 Dec;9(4):209-14.	2004	Italy	English	retrospective	all ages	alcohol disease	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	heavy drinkers	continuous	18	erectile function, impairment	sole clinical expression of autonomic neuropathy was impotence		no	alcohol	no alcohol			2-	
1340: Okulate G, Olayinka O, Dogunro AS. Erectile dysfunction: prevalence and relationship to depression, alcohol abuse and panic disorder. Gen Hosp Psychiatry. 2003 May-Jun;25(3):209-13.	2003	Nigeria	English	retrospective	all ages	alcohol disease	erectile function by questionnaire	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	629	erectile function, impairment	Using a multiple linear regression model, age and depression were found to be good predictors of erectile dysfunction but not alcohol abuse and panic disorder		no					3	
1347: Slag MF, Morley JE, Elson MK, Trence DL, Nelson CJ, Nelson AE, Kinlaw WB, Beyer HS, Nuttall FQ, Shafer RB. Impotence in medical clinic outpatients. JAMA. 1983 Apr 1;249(13):1736-40.	1983	USA	English	retrospective	59 mean	erectile dysfunction	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	400	erectile function, impairment	prevalence of alcoholism was 7% in patients with erectile dysfunction		no					3	
1349: Vijayasenan ME. Alcohol and sex. N Z Med J. 1981 Jan 14;93(675):18-20.	1981	New Zealand	English	retrospective	all ages	alcohol disease	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	97	erectile function, impairment	71% suffered from sexual dysfunction, among this diminished sexual desire 58%, erectile dysfunction 16%, premature ejaculation 4%, ejaculation deficiency 22%,		no					3	
1342: Wang YJ, Wu JC, Lee SD, Tsai YT, Lo KJ. Gonadal dysfunction and changes in sex hormones in postnecrotic cirrhotic men: a matched study with alcoholic cirrhotic men. Hepatogastroenterology. 1991 Dec;38(6):531-4.	1991	China	English	retrospective	all ages	liver cirrhosis	hormones	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	78	erectile function, impairment	12/21 patients with alcoholic cirrhosis, 16/27 with postnecrotic cirrhosis suffered from impotence. Both groups alcoholic had significantly lower levels of testosterone, but higher of estradiol and prolactin than the control group.		no	alcohol cirrhosis	postnecrotic cirrhosis	no cirrhosis		2-	
1345: Cornely CM, Schade RR, Van Thiel DH, Gavaler JS. Chronic advanced liver disease and impotence: cause and effect? Hepatology. 1984 Nov-Dec;4(6):1227-30.	1984	USA	English	retrospective	all ages	liver cirrhosis	hormones, erectile function	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	60	erectile function, impairment	14/20 patients with alcohol cirrhosis, 10/40 nonalcoholic cirrhosis		no	alcohol cirrhosis	other cirrhosis			2-	
1348: Van Thiel DH, Gavaler JS, Sanghvi A. Recovery of sexual function in abstinent alcoholic men. Gastroenterology. 1983 Apr;84(4):677-82.	1983		English	retrospective	all ages	alcohol disease	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	cessation of alcohol		60	erectile function, improvement after cessation	25% of the men studied experienced a spontaneous recovery. Indicators of recovery were absence of testicular atrophy and normal gonadotropin responses to GnRH.		no					3	
1350: Farnsworth WE, Cavanaugh AH, Brown JR, Alvarez I, Lewandowski LM. Factors underlying infertility in the alcoholic. Arch Androl. 1978;1(2):193-5.	1978	USA	English	retrospective	young	alcohol disease	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	35	erectile function, impairment	Erectile dysfunction not associated with hepatic disease, elevated SHBG or hyperestrogenism. Free T 30% lower, total T 20% lowerv than in normal males.		no					3	
1343: Kley HK, Stremmel W, Niederau C, Hehrmann R, Shams O, Strohmeyer G, Kruskemper HL. Androgen and estrogen response to adrenal and gonadal stimulation in idiopathic hemochromatosis: evidence for decreased estrogen formation. Hepatology. 1985 Mar-Apr;5(2):251-6.	1985	Germany	English	retrospective	all ages	liver cirrhosis	hormones	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	26	breast swelling, alteration	gynecomastia in alcoholic cirrhosis, not in other forms of cirrhosis; estradiol level decreased		no	alcohol cirrhosis	hemochromatosis	no cirrhosis		2-	

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
1339: Ravaglia S, Marchioni E, Costa A, Maurelli M, Moglia A. Erectile dysfunction as a sentinel symptom of cardiovascular autonomic neuropathy in heavy drinkers. J Peripher Nerv Syst. 2004 Dec;9(4):209-14.	2004		English	retrospective	all ages	alcohol disease	erectile dysfunction	all other therapeutic products	V03	alcohol	V03AZ01	heavy drinkers		18	erectile function, impairment	sole clinical expression of autonomic neuropathy was impotence		no					2-	
1346: Tan ET, Johnson RH, Lambie DG, Vijayasenan ME, Whiteside EA. Erectile impotence in chronic alcoholics. Alcohol Clin Exp Res. 1984;8(3):297-301.	1984	USA	English	retrospective	all ages	alcohol disease	erectile function	all other therapeutic products	V03	alcohol	V03AZ01	various	continuous	13	nocturnal erections	7 had normal, 6 had impaired nocturnal erections,		no					3	
1258: Rosas SE, Joffe M, Franklin E, Strom BL, Kotzker W, Brensinger C, Grossman E, Glasser D, Feldman HI. Prevalence and determinants of erectile dysfunction in hemodialysis patients. Kidney Int. 2001 Jun;59(6):2259-66.	2001	USA	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	302	erectile function, impairment	in 82% for all hemodialysis subjects, in 45% severe erectile dysfunction. In subjects <50y 63%, in subjects >50y 90%.							2-	
1255: Arslan D, Aslan G, Sifil A, Cavdar C, Celebi I, Gamsari T, Esen AA. Sexual dysfunction in male patients on hemodialysis: assessment with the International Index of Erectile Function (IIEF). Int J Impot Res. 2002 Dec;14(6):539-42.	2002	Turkey	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	187	erectile function, impairment	The prevalence of erectile dysfunction for patients <50 y and >or=50 y was 74.5% and 86.6%.							3	
1254: Miyata Y, Shindo K, Matsuya F, Noguchi M, Nishikido M, Koga S, Kanetake H. Erectile dysfunction in hemodialysis patients with diabetes mellitus: association with age and hemoglobin A1c levels. Int J Urol. 2004 Jul;11(7):530-4.	2004	Japan	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis		n.g.	continuing	180	erectile function, impairment	higher in patients with diabetes mellitus, higher in elevated hemoglobin A1c levels							2-	
1257: Naya Y, Soh J, Ochiai A, Mizutani Y, Ushijima S, Kamoi K, Ukimura O, Kawauchi A, Fujito A, Ono T, Iwamoto N, Aoki T, Imada N, Marumo K, Murai M, Miki T. Significant decrease of the International Index of Erectile Function in male renal failure patients treated with hemodialysis. Int J Impot Res. 2002 Jun;14(3):172-7.	2002	Japan	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	174	erectile function, impairment	prevalence significantly higher than in controls							2-	
1256: Neto AF, de Freitas Rodrigues MA, Saraiva Fittipaldi JA, Moreira ED Jr. The epidemiology of erectile dysfunction and its correlates in men with chronic renal failure on hemodialysis in Londrina, southern Brazil. Int J Impot Res. 2002 Aug;14 Suppl 2:S19-26	2002	Brazil	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	118	erectile function, impairment	In 86.4% of patients, more frequent in patients >50y.							3	
1253: Ali ME, Abdel-Hafez HZ, Mahran AM, Mohamed HZ, Mohamed ER, El-Shazly AM, Gadallah AM, Abbas MA. Erectile dysfunction in chronic renal failure patients undergoing hemodialysis in Egypt. Int J Impot Res. 2005 Mar-Apr;17(2):180-5.	2006	Egypt	English	retrospective	young	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	75	erectile function, impairment	prevalence of in patiens <50 y 80%, in those >50 y 88%, while among controls it was 28 and 69.8%.							3	A complete health evaluation of male hemodialysis patients should include sexual functions

Reference	year	country	language	type of study	age group	dysfunction	quantification	treatment class	ATC - 2nd level	treatment substance	ATC code	dose	treatment period	patient number	treatment consequences	efficacy	side effects	randomization	dose arm 1	dose arm 2	dose arm 3	financing	study quality	remarks
2202: Rosas SE, Joffe M, Franklin E, Strom BL, Kotzker W, Brensinger C, Grossman E, Glasser D, Feldman HI. Prevalence and determinants of erectile dysfunction in hemodialysis patients. Kidney Int. 2001 Jun;59(6):2259-66.	2001	USA	English	population based cross sectional study	>18	terminal renal insuffiency, age >60	IIEF	renal dialysis		dialysis	not listed			58	prevalence of erectile dysfunction as compared to healthy men	OR 6.23 (95% CI 2.06-18.8)		no					2-	
1259: Dalal S, Gandhi VC, Yu AW, Bhate DV, Said RA, Rahman MA, Ing TS. Penile calcification in maintenance hemodialysis patients. Urology. 1992 Nov;40(5):422-4.	1992	USA	English	retrospective	middle-aged	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	32	erectile function, impairment	penile calcification in 6 of 32 patients							3	
1344: Foulks CJ, Cushner HM. Sexual dysfunction in the male dialysis patient: pathogenesis, evaluation, and therapy. Am J Kidney Dis. 1986 Oct;8(4):211-22.	1986		English	retrospective	young	terminal renal insufficiency	erectile function	renal dialysis		dialysis			continuing	n.g.	erectile function, impairment	complete impotence							3	
1455. Abdel-Hamid IA, Ereaky I, Fouda MA, Mansour OE: Role of penile vascular insufficiency in erectile dysfunction in renal transplant receipients. Int Impot Res 2002;14: 32-37	2002		English	retrospective	n.g.	terminal renal insufficiency	erection, alprostadil response	surgery		renal transplantation			continuing	54	sexual function, lowered	more pronounced in patients with vascular risk factors		no					3	
1563: Burgos FJ, Pascual J, Gomez V, Orofino L, Liano F, Ortuno J. Effect of kidney transplantation and cyclosporine treatment on male sexual performance and hormonal profile: a prospective study. Transplant Proc. 1997 Feb-Mar;29(1-2):227-8.	1997	USA	English	prospective	45 mean	terminal renal insufficiency	sexual function	surgery		renal transplantation			16m	50	erectile function, maintained	92% of patients		no					3	
1380: Mendoza C, Carreras A, Ruiz E, Ortega E, Hervas J, Osorio C. Hypothalamo-hypophyseo-gonadal axis in individuals with chronic renal insufficiency subjected to hemodialysis. Rev Esp Fisiol. 1985 Dec;41(4):443-6. Spanish	1985	Spain	Spanish	retrospective	young	terminal renal insufficiency	hormones	surgery		renal transplantation			continuous	21;15	hormone levels, alteration	FSH, LH, PRL levels higher in patients than in controls; T levels comparable		no	dialysis	healthy controls		3	3	
1275: Shamsa A, Motavalli SM, Aghdam B. Erectile function in end-stage renal disease before and after renal transplantation. Transplant Proc. 2005 Sep;37(7):3087-9. Iran	2005	Iran	English	retrospective	21-50	terminal renal insufficiency	IIEF	surgery		renal transplantation				15	erectile function, improvement	IIEF-5 improved in 11 cases, unchanged in 2 cases, worsened in 2 cases							3	
1032: Abdel-Hamid IA. Mechanisms of vasculogenic erectile dysfunction after kidney transplantation. BJU Int. 2004 Sep;94(4):497-500. Original	2004	Egypt	English	prospective	young	terminal renal insufficiency	erectile function	surgery		renal transplantation				n.g.	erectile function, impairment	due to vascular mechanisms and to cyclosporin(?)							3	