

# MOBILITY VS FLEXIBILITY VS YOGA VS STRETCHING

By Paul Roberts

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## Sand & Steel Method

- Measure mobility and static motor control.
- Mobilize and strengthen using the best method available

*Abstract: I am assuming you are already convinced on the importance of exercise. And if you scroll down a bit, I will break down the differences between mobility, flexibility, yoga, and stretching in careful detail. Without sufficient mobility you cannot be all that you wish to be. This applies whether your chosen craft is golf, strength training, CrossFit, or endurance running. You are not as efficient as a runner, you are more likely to get injured as a golfer, you are slower in CrossFit than you ought to be, and as a power lifter your recovery times are slower.*

***Mobility is critical for all sports and physical activities. Period.***

Here's the Fantasy:

So you know your mobility is not as good as it could be. You may think that you are just tight and you were just born that way. After all, you've been that way your whole life. That's just how you are – and you can't change it, don't need to change it. I'm sure you know someone (probably a woman) who is super bendy and flexible, and barely works at it. That's how it is.

**REALITY-CHECK. *I am here to tell you in black and white that you can improve your mobility and flexibility with diagnostic tools and program.*** While it's true that not everyone will be able to one day deadlift 600 pounds (I can't) and not everyone can run a 4 hour marathon (I can't do that either) ... not everyone can do exceedingly challenging poses like [Bhujapidasana](#) (Shoulder-Pressing Pose - I can do that one), [Svarga Dvijasana](#) (Bird of Paradise – definitely not possible for me – probably ever), or my personal favorite [Eka Pada Koundinyanasana](#) (it's my favorite because I can do it ☺.) **You can get better at flexibility – much better.** And here's the best part – **I am a strength athlete not a yogi ... and my mobility when I started this journey was terrible.**

## Hate Yoga Classes?

Like most group classes, unless the class is specifically scaled to your level ... it's not going to be very helpful.

I trust that you have figured out that mobility is a key to getting stronger, better, faster – and yes, yoga is a tool to that end. Yoga is also a method of developing core strength and flexibility. And if your goal is to do exceedingly difficult poses like the ones above... then yes yoga is the way to go.

But if your goal is to improve your mobility so you can be better at your sport (and that may be CrossFit or Obstacle Course Racing), yoga should only be one arrow in your quiver mobility tools. Much like barbells (weight-lifting) are not the only tool you can use to get

stronger.<sup>1</sup> Within these tools are dozens of different specialty techniques of using these tools from the CrossFit method, to the Westside method, the RKC method, etc. Yoga is much the same.

## Nuts and Bolts of Mobility Training

Mobility is a hot topic because CrossFit has introduced complex movements to the masses that require mobility to perform correctly without injury. Kelly Starrett is one of many pioneers in the field of mobility and has achieved a great deal of fame through his blog MWOD and affiliation with CrossFit. But what is mobility, and how does it differ from flexibility, stretching, and yoga?

Mobilization is “a movement-based integrated full-body approach that addresses all the elements that



limit movement and performance including short and tight muscles, soft tissue restriction, joint capsule restriction, motor control problems, joint range of motion dysfunction, and neural dynamic issues. In short, mobilization is a tool to globally address movement and performance problems.” Kelly Starrett on Mobility. In the SFMA and FMS space, Gray Cook talks about 4 progressions of movement in his “Move Well. Move Often” motif.

## Is Gray Cook’s Definition of Mobility the Same as Kelly Starrett’s? Are they even compatible?

Both Cook and Starrett would agree that optimal performance occurs when the muscles and tendons around a joint allow for a proper degree of moment with sufficient control in all stages of that movement. So if mobility basically means the ability to move bones with respect to a joint... how is that any different than flexibility? That’s like asking is strength training that much different than power training? They connote different aspects of training depending on their purpose (e.g. strength training would connote getting stronger at any exercise, while power lifting is generally limited to bench, squat, and deadlifts – but as any serious power lifter knows – you have to get the whole body strong to keep the bones in proper alignment.)

When we talk about mobility, we are generally referring to one having sufficient range of motion for a particular exercise. One needs sufficient mobility in their hips to properly do squats (if that’s a shock to you read [Mark Rippetoe’s book starting strength Ch 1.](#)) Or more generally, one might say that doing squats properly requires a requisite amount of flexibility. So, flexibility generally relates to the relative ease and degree bones can move with respect to one another based on the tightness of the related

<sup>1</sup> Kettles, TRX Suspension Trainers, Dumbbells, Sleds, and many more tools are available.

muscle groups ... while mobility generally refers to the requisite flexibility specific joints and muscles need to have to perform their intended function (e.g. a squat.)

**So do all of these famous athletic trainers develop mobility in the same way?** Not at all.

In the FMS and the Movement Book, Cook largely focuses on very specific stretches and less specific self-actuated myofascial release techniques (e.g. rolling) to improve mobility.<sup>2</sup> Whereas Kelly Starrett provides eight different modalities to improve mobility. At first glance, this would imply that the MWOD is more encompassing than FMS. That would be true if it were not for the fact that the FMS has a much more developed systematic approach for determining what to work on first (the Corrective Strategy Algorithm) and the FMS also focuses on static motor control and dynamic motor control (FMS touches on strength training, but it barely brushes the surface of that topic.) MWOD and Supple Leopard focus a lot on proper technique of CrossFit movements (but not nearly to the depth that companies like CrossFit, Westside and Starting Strength do), proper alignment, and of course improving mobility. Does Kelly even care about static motor control and dynamic motor control? Of course he does, but he doesn't emphasize it the same way that Cook does. Cook also sees the value of slide surface therapy, but sees screening and static motor control as points to emphasize.

## EIGHT MODALITIES OF MOBILITY

- 1) Distraction on your shoulder or hip - same as flossing
- 2) Distraction on wrist or ankle
  - a. E.g. Chicken wing Shoulder opener distraction with band
- 3) Force your into position and internal and external rotation
- 4) Flexion Gapping (use a towel or Voodoo band)
- 5) Mashing or myofascial release sliding surface
- 6) Stretching passive and PNF
- 7) Pressure wave - uses a ball to create pressure waves through muscle going as deep as possible
- 8) Tack and twist.

*From the Supple Leopard*

## Mobility and Flexibility Defined

**Flexibility Defined:** Relative ease and degree bones can move with respect to one another based on the tightness of the related muscle groups.

**Mobility Defined:** the requisite flexibility that specific joints and muscles need to have to perform their intended function.

Notice how neither definition discusses strength in the core, hips, back, shoulders, etc. Many, let's say "uninformed coaches" lump aspects like body control and core strength into mobility because they are "important" to proper movement. They are important for proper movement – but they aren't mobility and they aren't trained via mobility techniques.

Improving them requires separate and distinct therapeutic methods (and there plenty of them.) Yoga

<sup>2</sup> To his credit those stretches are very effective and some of them quite unique.

does a half-way decent job of improving both (less so in a class setting), but falls flat when it comes to building strength. And that's OK ... you don't need to limit yourself to just dumbbells if you want to get stronger right?

## Mobility Versus Stretching

So where does stretching fall in? Stretching (a verb) and stretch (verb or noun) has six major styles:

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***Stretching (defined):*** the practice of applying force by way of

*(a) gravity as used in passive stretching (e.g. a ragdoll stretch),*

*(b) momentum as used in ballistic stretching (e.g. the pectoral muscles cause the arms to swing in and the momentum of the hand and arm bones causes a stretch to the back as experienced in a hugger stretch),*

*(c) divergent musculoskeletal force (the shoulder apply pressure to the calves in the downdog stretch),*

*(d) convergent musculoskeletal force such as experienced when a person squeezes their groins muscles to increase the stretch from the seated butterfly stretch,*

*(e) another person applying force in the direction of the stretch (e.g. a partner assisted toe touch), and/or*

*(f) prop providing force by limiting motion (such as an incline board calf stretch) or by applying force in the direct of the motion (using a weight plate to enhance force on a toe touch.)*

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### MAJOR MODALITIES OF STRETCHING

- a) Passive (e.g. rag doll)
- b) Ballistic (e.g. huggers)
- c) Static (e.g. downdog)
- d) Proprioceptive neuromuscular facilitation (PNF) (e.g. Butterfly)
- e) Partner assisted (e.g. a partner assisted toe touch)
- f) Prop assisted angle
- g) Prop assisted force

Paul Roberts on Stretching

What is best form of stretching? Each method (e.g. form) may be better or worse for certain types of stretches. Most stretches can be performed using multiple methods. For example: let's take the static toe touch.

- a) Passive: You bend down and gravity from your arms and head causes you to stretch your hamstrings
- b) Ballistic: you use momentum to get into a lower position (how much momentum should be used is a topic for another article)
- c) Static: you use your core to pull yourself lower
- d) PNR: you squeeze your quads or hamstrings before entering the toe touch
- e) Partner assisted: someone pushes on your back
- f) Prop assisted angle: you put your toes on a 2x4 to increase your feet's doriflexion
- g) Prop assisted force: you hold a weight plate to pull yourself deeper into the stretch.

## Understanding the Sand & Steel Mobility Program

Do we use Yoga? Yes. Do we use MWOD techniques? Yes. Do we use MAT techniques? Yes. Do we use the Functional Movement Screen (FMS)? Yes.

Conventional wisdom say you can't combine these radically different techniques (FMS and Yoga) – I say why the hell not.

**There was a time (maybe 10 years ago) where the idea of combining snatches, burpees, and muscle-ups in a single workout was absolutely ridiculous. Snatches are Olympic lifting, burpees originated from us armed forces during WWII, and muscle-ups are gymnastics movement. Well today – you wouldn't think it so ridiculous – thanks in no small part to Greg Glassman.**

At Sand & Steel we use a multi-prong approach to helping you improve mobility:

- Mobility Screen: We use a mobility screen derived from the amazing FMS and Cynthia Norkin's work on Joint Measurement to benchmark your mobility.
- Stretching: Once we have found the areas of limitation, we utilize various stretching methodologies (such a Bob Anderson's Stretching and Kit Laughin's work).
- Mobility and soft tissue work: such as the MWOD methods, MAT, and trigger point, and the corrective exercises techniques taught by Gray Cook in the FMS II.
- Core work through: TRX Suspension Training and Rip training and Gymnastics.
- Static Motor Control work using: yoga, exercise tubing, and bands as taught by Gray Cook, National Counsel of Strength and Fitness, NASM, and other personal training standards.

In short: we find out where your mobility is weak and we utilize the best techniques tools to mobilize those areas and then we fortify them with neurological control and muscle memory. Once you are moving well – then we can make you really strong.

### So What Does Yoga Offer to the Table?

Yoga uses various poses and transitions to: help the body improve neurological control of muscles, withstand the force of gravity in various positions, control and utilize proper breathing to maximize the impact of stretching, improve balance through forcing the body to stabilize itself in various poses (e.g. a warrior III pose), apply various stretching techniques (downdog and chair pose.) Yoga utilizes some stretching technique, but most popular forms (iyengar, bikram, ashtanga, vinyasa, hatha, etc.) don't use all of them in all their variants. In many ways yoga is the sequencing of movements to challenge balance, "MOBILITY," static motor control, and dynamic motor control – these are known as flows.

If you've read the [Movement Book from Gray Cook](#), you know that tightness/stiffness and pain are generally caused by the lack of recruitment in other muscle groups. A sore back may have a non-functioning pelvic floor or abdominal section to blame.

## So How do you Fix Deactivated Muscles?

Deactivated muscles can be treated through Correctional Exercises (FMS Level II, NASM Correctional Exercises, etc.) and/or Muscle Activation Techniques by Greg Roskopf.

In the FMS, we used the corrective strategy algorithm to determine the areas to mobilize and/or strengthen first and go down the chain from simpler to more complex movement patterns. In MAT, we look for asymmetrical movements and range of motion limitations. We test the strength of small isolated movements, we apply isometric training to weakened muscles, and then retest. Both methods work, and both have a number of followers. Neither of these is discussed in particular in the MWOD, but yoga can help on these in a very indirect way. By taking the body through a number of unloaded but slowly progressing posture, weakened areas can be strengthened organically. Group classes in Yoga (which are unfortunate impact of economics) won't be nearly as effective, because the teacher cannot effectively scale the movements to the needs of the student.

## How do We Improve Flexibility e.g. Range of Motion?

There are 3 general techniques soft tissue work, stretching, and joint mobilization.

- I) Self-myofascial release (SMFR) - foam rollers, massage sticks, theracanes, and lacrosse balls (MWOD discussed in detail and has invented several amazing pieces of equipment)
- II) Stretching. I recommend Rob Anderson's Stretching or Kit Laughin's book Stretching & Flexibility – Supple Leopard doesn't go into much detail here. There are of course numerous experts on stretching especially when you consider that yoga includes a good amount of stretching technique.<sup>3</sup>
- III) Joint Mobilization techniques including: Muscle Activation Techniques, Active Release Technique (A.R.T.), Rolfing, Structural Integration Therapy, Dry Needling (using needles to activate muscles), Acupuncture, and Trigger Point Therapy. Many of these techniques fall under the umbrella of physical therapy, but they are all individually branded techniques that fitness professionals, chiropractors, and physical therapists use to help people move better. Which is the best? It depends on what's wrong, why you have pain or motion limitation, and the skill of the practitioner.

## Understanding your primary mobilization care provider and

### How to choose the best one

Inevitably the person you see for your mobility limitation or injury is going to use the lens of the methods he or she is trained in to help you. Example: if your back hurts and you see a general medical

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<sup>3</sup> Understanding which methods of stretching are best in which application has been the study of numerous university studies and often depend on the person as well. Much as there are numerous ways to do a curl, there numerous way to effect a stretch. When one adds in variables such as modifications (e.g. crossed leg toe touch or seated toe touch), duration, impact from breathing, ordering, frequency, and volume, the answer as to which method of stretching becomes much more difficult to determine.

physician – they’ll proscribe muscle relaxants and anti-inflammatories and or an MRI, because that what they know how to do. A chiropractor might adjust your hips so to reduce strain on your back. A personal trainer might strengthen your core to reduce work your back has to perform. A physical therapist will likely find more targeted exercises to help strengthen the core the personal trainer, but not be able to take the training as far (but they’ll be better at starting engagement.) But what if that physical therapist also know MAT and FMS? They may find those tools to be a better fit than the classes they took, so there is an overlap. And is the personal trainer who uses MAT better than the chiropractor or physical therapist? Maybe and maybe not. Ultimately it depends on how intelligent and talented that individual is, how much experience they have, and how much time they dedicate to studying their craft.

### **Noteworthy Blog Articles**

<https://www.unm.edu/~lkravitz/Article%20folder/flextrain.html>

<https://therussells.crossfit.com/2014/09/26/the-flexible-definition-of-mobility/>

<http://manflowyoga.com/flexibility-vs-mobility/>