



HOW TO: ASSESSING BASIC AXIAL ROTATION FOR THE HIP JOINT

The last in our series of hip mobility/passive flexibility assessments is this: **AXIAL hip joint rotation**.


Listen to the instructional video carefully – I describe what axial rotation is, AND how to perform this assessment.

If you want to know MORE about WHY this is so important, take the time to read the information I've shared with you that comes after the video. I get into great detail.

To me, knowledge is power. And empowering.

If I know WHY I am doing something, then I'm much more likely to do it with enthusiasm. Don't you agree? Enjoy the learning!

Here's what your self-assessment worksheet for axial rotation looks like.

Hip Mobility Self-Assessment Worksheet for Basic Axial Rotation		
Use a sliding scale of 1 to 5 to grade YOUR degree of rotation for both sides.		
<p>* Record your assessment results below for both turning the hip inward (internal) and outward (external). * Choose the number that best represents how you feel. * NOTE: It is NORMAL to have MORE external (outward rotation) than internal (inward past 90 deg) when looking at this axial rotation motion. * The movement where you feel the least comfortable is where you have your greatest area of opportunity to improve!</p>		
	For Your Right Hip	
	Inward rotation	Outward rotation
	1 - I have lots of freedom to move here.	
	2	
	3 - I feel moderately restricted here.	
	4	
	5 - I am very limited in rotation in this direction!	
	For Your Left Hip	
	Inward rotation	Outward rotation
	1 - I have lots of freedom to move here.	
	2	
3 - I feel moderately restricted here.		
4		
5 - I am very limited in rotation in this direction!		

Interested in learning more? Keep reading!

It goes without saying that some of us, more than others, have “areas of opportunity” for improving flexibility of certain connective tissues around certain joints, particularly of the hips (rotation, flexion, and extension).

And even those of us (me not counted among this illustrious group I might add!) 😊 with a fairly large amount of passive hip flexibility/mobility could always use improved **CONTROL** (aka strength at end ranges?) of that *passive* hip range of motion/flexibility. 😊

Hip mobility can be defined or looked at in various ways. For example, external rotation of the hip isn't just about you moving the hip externally. *It is also about the position of the femur relative to the hip joint and trunk, and a host of other things as well.*

In other words, **range of motion in any one individual joint (or even area of the body) is very specific to the angles and/or positions of the bone and other soft connective tissue surrounding those joints. The law of specificity rules.**

One area where this has become painfully obvious to me is with the common yoga pose, pigeon.

So what is the unique challenge with this “pigeon” position?

Why do some of us who have demonstrated very good external rotation of the hip joint in certain positions, have difficulty with this particular position?

Let me say first, it's a very advanced position to go into. It is not inherently “easy.” Let's put that out there first.

More specifically though, the unique challenge with this position is that it asks our hip joint to not only rotate externally, but also axially. If you're not exactly sure what “axial rotation” is as it relates to our

joints, the easiest way to “get it” is to **watch the simple video** that I grabbed off of youtube, where a gym rat demos axial rotation of the arm bone (humerus).

Just so you know...

In the mobility training area of this program, we'll get into the specifics of HOW to train axial rotation, not just with this assessment position but also in “pigeon pose.”

Avoid the temptation to go and check that out now. Stay focused. Don't put the cart before the horse!

Assess first. Then train. Then re-assess.

Pigeon also requires (relatively speaking of course) that the axial rotation happens with our thigh bone (femur) positioned perpendicular to our pelvis.

And therein lies the challenge. That type of external rotation combined with axial rotation (of the hip joint) with the thigh bone positioned in that way, is a motion many of us don't possess to the degree that we ought to.

Many of you might be asking, why?

Why don't we “have it” to the degree we ought to? And why do we need it at all? 😊

Great questions! Let's see how we can address them one at a time.

1. Why don't we “have it”? Or better put perhaps, why is this particular motion more challenging for more people, on average?

The simplest answer that I have right now (I'm sure I'll learn more as time goes on and as a result, will have better answers in the future I hope!)...is that we don't have it **because we don't ever access it or**

use it. It's that simple. This is a motion (of the hip) that is completely opposite of how we typically move, and especially, how we typically sit: at our desks – in our cars – on our bikes. Etc..

We don't have it because we don't use it.

2. Why do we need it? Well, that's a slightly more challenging question to answer. But I'll give it a go.

You are all (perhaps painfully) 😊 aware of how much emphasis I place on motor control and movement "patterns" – on performing basic stability "skills" as correctly as possible...

...so that "correct" patterns can be developed at a basic level, first, and then progressively demonstrated at increasingly higher levels of complexity and dynamic load.

This motor control, which is also commonly referred to simply as "stability," happens primarily in the brain, and also in our joints. Contrary to some previously held beliefs, it's never only a top-down or bottom-up kind of thing.

When you are doing a very basic movement to build stability of the trunk or the hips – such as a basic bridge or clam exercise – what you are (hopefully) doing is *correctly patterning from the brain to those connective tissues and joints involved, or vice versa, from those joints and connective tissues involved, back to the brain.*

Done repeatedly, correctly, over and over again...you're creating the right kind of "wiring" that will hopefully lead to balanced stable movement, which in turn leads simply to muscles and joints doing, and being asked to do, what they are designed to do.

Simple enough, right?

There's another whole piece to this picture however, and it's critically important. Can you guess what it is?

(It's ONE reason why I place SO much emphasis on training barefooted and spending more time OUT of our shoes, barefooted).

So what is it?

Sensory input.

Let's go back to the example of doing a basic bridge or clam exercise.

As you practice that basic pattern in either of those movements (or similar movements), you're building effective ways to stabilize your trunk and core and hips, and you're building muscle strength. BUT...

...your brain and your body, while it can alter/correct movement if the desired sensation is not found and duplicate it as you are performing those exercises...

...it (your brain, your body) **does NOT shift or adapt or adjust to purely (only) motor driven movement.**

In other words...

Without the ability to effectively sense the waypoints of joint movement through a gross motor pattern, your body cannot effectively duplicate the movement. Or control it.

To put it simply, to move well, you need sensory input.

*Your brain understands movement and outcomes, and what it tries to duplicate each time you go through, **NOT ONLY** any of those exercises but **ALSO** your sports (swimming and running and cycling and...) is **based on SENSORY information, not just (or simply) motor information from our nervous system.***

*Moving through a simple bodyweight squat, or standing on a single leg, or going through the run gait cycle – all of these are processes **that your body, first and foremost, interprets and then executes from sensory information.***

What does this mean? Let's keep exploring this concept...

Let me ask this question first: When you're running on an undulating trail with rocks and roots and assorted other stuff, how does your body know how to stabilize on a single leg with each step so that you don't fall over? (Or when you're running at night, when it's dark?)

Without sensory input, our brain and body are nearly clueless as to how to move, or stabilize. Think about it this way: If you walk through a home or room you are not familiar with in the dark, you are cautious, deliberate, and take very precise steps in a certain order. Once you have lived or spent time there for a while, your speed/variability of getting from the same point A to point B in the dark varies dramatically. It's much quicker, more precise.

When talking about running on a technical or undulating trail (or even walking through a dark room)...what you are essentially discussing is **movement (or motor) variability.**

The more experienced you are with the movement in question, and the more sensory input there is, the greater the potential variability. Which is a fancy way of saying, SKILL!

Think about a basic squat as an example. A basic bodyweight squat.

Watch someone with good motor control (skill and experience) and good mobility do it, and you will see a proficient squat. This person understands the sensation of squatting.

It would stand to reason that their body attempts to produce the same outcomes each time they squat. While that is done, even under fatigue or changing conditions (an open skill) the successive squats can appear absolutely identical if you watch a video (macro level).

What actually is occurring on the micro level is a literal neurologic “dance” to achieve the same result as perfectly as possible. If we understand that position (sensation or sensory input) is the driving force, the motor pattern associated can vary greatly and still achieve the desired positions.

In a less skilled athlete’s squat, they have developed a much more cautious system while exploring these sensations, and it diminishes the (potential for) motor variability.

Most of the time in the fitness and training world (especially as it relates to training the hip girdle), **the traditional conversations revolve around macro movement/anatomy/physiology...**

...but it’s likely that **what is really making the greatest change and producing the positive outcomes we are seeking, are micro movement/anatomy/physiology events.**

So, to summarize...the reason “pigeon pose” – which is to say, external rotation + axial rotation of the hip joint – (what we are doing in THIS assessment) is important... is because **not having it means reduced sensory input in that joint, vs. having it, which means improved/increased sensory input.**

Reduced sensory input = reduced chance of improving stability and strength of the entire hip girdle.

Improved sensory input = less deterioration of hip stability and strength as we age.

Better sensory input = potential for improved motor variability and control.

You should now have a much better understanding of WHY...

- 1. We are assessing axial rotation of the hip.*
- 2. What happens (not good) if we completely lose this ability.*

When you get to the TRAINING portion of the program, we’ll examine a few ways that we can begin to train to improve it.

For now, continue to focus on your assessment.