

# HOW TO USE BIOFEEDBACK TESTING

One of the core tenets of the Gym Movement Protocol is that your body gives you signals and sensations that lead you, if you'll only pay attention. Using your intuition, or your "gut feeling," is one way of doing this, but using something more quantifiable allows you to complete the feedback loop and inform that gut intuition in a measurable way.

We use a technique called Biofeedback Testing to help determine what is good or

bad for your body at any given moment. Biofeedback just means measuring a signal, or state, of your body and responding to it. Most people know that heart rate can be measured, and that it tells us something about what is going on with your body. Just as telling is blood pressure. A doctor can measure your blood pressure to get a pretty good idea of the state of your cardiovascular health.

There are other, less well-known signals that can also be measured:

- **Heart Rate Variability** – Measuring the difference between the gaps in your heartbeat is a relatively new, high-tech marker of health. In critical care situations, HRV can be used to measure and predict the state of the patient. On the other end of the spectrum, athletes at the highest levels of sport are using HRV to fine-tune their training and recovery.
- **Finger-Tapping Tests** – The rate at which someone is able to tap her finger on an electronic counter can be used to gauge the state of the central nervous system (CNS). Higher tapping rates indicate greater arousal and readiness.
- **Eye Blink Rates** – A completely passive test, observing low spontaneous eye blinks has been correlated with various negative health states. In one interesting study, it was observed that low eye-blink rates in infants was correlated to iron deficiency.
- **Grip Strength** – Changes in max grip strength are a well-known indicator of state, often used by chiropractors. Famous Russian strength coach Pavel Tsatsouline wrote about using a grip dynamometer to measure the state of the CNS in his book *Easy Strength*.
- **Range of Motion (ROM)** – Changes in ROM are a highly reliable indicator of the body's state. In exercise studies, changes in range of motion are often used to determine what effect a particular protocol elicited. Generally speaking, greater ROM is better.

We use range of motion testing as our main biofeedback test because changes in ROM can be measured easily and instantaneously with no special equipment. We use biofeedback testing via ROM as a green light OR a red light. If a person's range of motion increases after doing an exercise, that exercise is good for them in that moment. If it decreases, it's probably best to do something else that day.

ROM testing is straightforward. Simply measure any range of motion that you

can easily observe a change in. You can use any joint as a universal test (i.e., you don't have to use an upper body ROM test to measure an upper body lift — the results of any ROM test apply to the entire body). Most people have great success with the toe touch test, stopping at the *very first sign of tension* in the legs or anywhere else in the body.

If you prefer a visual demonstration, check out [this short video](#) I filmed to walk you through the process.

## To perform a biofeedback test using a toe touch range of motion

1. Place your feet together in a way that you can repeat easily every time.
2. Put your hands on your thighs and slowly bend forward, stopping at the very first sign of tension anywhere in your body.
3. Note the position of your fingertips on your legs, shoes, or the ground.
4. Next, perform a few repetitions of the movement you want to test, such as a one-arm row. Using weight is not necessary to test the movement.
5. Again place your feet together in the same position as before and slide your hands down your legs, stopping at the first sign of tension.
6. If your range of motion is **greater** than before, that movement tests well. If your range of motion is **less** than before, you should avoid that movement for the moment.

Having taught this procedure to hundreds and hundreds of people at The **Movement Minneapolis**, I have picked up a few key things through experience:

- Study yourself. Some people see very large changes in their ROM, while with others it is much smaller and more subtle. It is really important to “listen to your body” to note where the first sign of tension is.
- Substitute the test, if you need to. About 9 out of 10 people are sensitive enough to their own range of motion for this to be useful right away. If you can't detect a change in your ROM, you can use something like a grip dynamometer to measure grip strength.

- ⊕ **Bad joints or typically painful movements are a good indicator.** People who have a very limited range of motion in a particular joint have good luck using that as their test. For example, if you cannot easily or without pain raise your arm out to the side above 90 degrees, but after performing a movement that tests well you can raise it well above 90 degrees, you know that the movement tested well.

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## HOW TO GET MORE SENSITIVE TO RANGE OF MOTION:

**OPTION 1:** Use a grip dynamometer to correlate your grip strength to range of motion. When your grip strength is up (a good test) your range of motion will also increase slightly. When your grip strength is down (a bad test) your range of motion will decrease. Knowing what to look for can help you understand where the change is.

**OPTION 2:** Generally, you want to look for the first sign of tension to note your ROM. However, for people who can't decipher where the very first sign of tension is, you can use "end" ROM. Simply stretch as far as your body will let you (still, without forcing it) and note the position. If you're very flexible (and you're using the toe-touch test) it helps to stand on a box so that you can reach farther than the ground would let you.

# From Here on Out, Test Everything

There are many fitness concepts that you can think your way through. This is not one of them. Testing is something that will turn your training upside-down, telling you sometimes surprising things that will help you tune into your body. But the magic occurs only by taking action. Everything that follows in the Gym Movement eCourse is built on this foundation of testing.

Begin by testing the movements in your current practice. The question to ask is, "Does this test well for me today?" If something doesn't test well, don't do it. The fact that the testing works, and that doing what tests best will benefit you in the long run, is the only thing I will ever ask you to take on faith from me – everything else can be evaluated later if you agree to that premise.

If you want to start small, working one Gym Movement concept into your training at a time, just test your movements doing those that test well and skipping those that don't.

If you want to take things one step closer to the pure Gym Movement Protocol, you can also test your working sets. *This*

*means you will not determine how many sets and reps you will do ahead of time, but rather perform however many reps you can before you begin to slow down. After performing a set, test again. If your range of motion is worse, you are done with the exercise for the day. You may only do a set or two, and that's just fine.*

## Your Experiment

**Your instructions: Test all your movements before doing them, skipping those that don't test well. Optionally, test after every set, stopping when it no longer tests well.**

**Your question: "Does this test well for me today?"**

For now, I'm just going to ask you to skip anything that does not test well. Later in the course we are going to discuss in great detail how to deal with things that don't test well, but for now I want you to understand that you will make more progress by **not** doing things that don't test well.