APPLIED PHYSIOLOGY

HYPO AND HYPER MUSCLE TESTING

by
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It is nice to get a chance to reach out to all of you and share some of the new concepts that have been developed at my research laboratory in Arizona. One of the earlier discoveries I made several years ago was that each muscle can be tested for its hypo- and hyper-active conditions with simple manual muscle testing. This discussion was presented at the 1984 annual meeting in San Diego, California. Unfortunately the amount of information to be covered was not consistent with the time available, and too many new concepts were presented all at once. After looking at the marvelous article on facilitation by Gordon Stokes and Daniel Whiteside in the October-November 1984 issue of the In Touch for Health magazine, I have decided to give the information to you in bite-sized pieces rather than all at one time. In this article I will be discussing the hypo condition and the hyper condition for any given muscle.

To make a long story short we activate not only the Golgi tendon organs (GTO) and the spindle cells in the belly of the muscle whenever we muscle test, but also other sensors (or proprioceptors) are brought into play: the Pacinian corpuscles, the Ruffini end organs, and the Golgi organs in the joint. These proprioceptors send signals to the spinal column and the central nervous system and then on to the brain from each given muscle and corresponding joint structures. The brain's response is sent to the central nervous system and then back to the muscle and to all corresponding antagonist muscles to make a change. The details are quite complicated. Rather than getting into alot of medical terminology at this time, trust that this process does happen. And when I say trust, I assume that you trust that the GTO and spindle cell technique discovered by Dr. George Goodheart does exist and works on the same principle. (It is this discovery that originated the science of Applied Kinesiology.)

To go further we already know from Touch for Health that in the process of testing a muscle we put a muscle in its contracted state. We put the limb into such a position that the muscle is contracted and not twisted so that the fibers are as even as they possibly can be. When the muscle does not hold its locking position it is said to be hypo, "weak", or "underenergy". This concept is basic to muscle testing. This is the process we know as manual muscle testing. It is taught in Touch for Health, the International College of Applied Kinesiology, and "Muscles, Testing, and Function" by Kendall and McCreary.

The new Applied Physiology concept that we present here is that the muscle is not tested just from contraction towards extension. We also test the muscle from extension towards contraction with the muscle now extended to near its fullest with all its fibers as close to alignment as possible without many of the fibers being twisted. This is the opposite condition to conventional manual muscle testing. In the usual muscle testing theory we understand that we are not testing the muscle that has been extended because we can only test the muscle in its contracted state. This is true, but the muscle in its extended state is still isolated. I interject this thought at this point: it is the proprioception of the isolated muscle that sends signals to the central nervous system, to the brain, and back from the brain to the central nervous system and to the antagonist muscles. Now testing the extended muscle from extension back towards contraction is in reality testing the antagonist muscles as a group. In some instances it is a direct antagonist, such as adductors to gluteus medius, hamstrings to quadriceps, biceps to triceps. But in many other instances we are bringing into line groups of muscles. For example when we test the pectoralis major clavicular (PMC) in extension back towards contraction, the antagonist muscle group includes the latissimus dorsi, supraspinatus, subscapularis, and all other muscles attaching to the opposite side of the humerus from where the PMC muscle inserts onto the humerus. In a normal or homeostatic condition, the antagonist muscles individually or as a group should

lock, i.e. test "strong". If they do not lock and test "weak", then we say that the isolated muscle being tested in extension towards contraction is hyper.

For example, let's test a muscle, say the biceps, that has a single direct antagonist, in this case the triceps. We extend the biceps so that the arm is at approximately a 160-degree angle (we don't want to lock the joint since we would not get a true indication from the triceps muscle). Now we test the biceps from extension towards contraction, which is the same as testing the triceps from contraction towards extension. If the test indicates a "weak" or unlocked triceps, we then say that the triceps appears as hypo, but we can also say that the biceps are hyper.

But to understand this concept more fully, we are going to bring into play Dr. Goodheart's Golgi tendon technique. For a demonstration sedate the biceps by pushing on the tendons in a direction away from the belly of the muscle to create a hypo condition. You will notice now that when you test the biceps in its contacted state towards extension, the muscle will now unlock (i.e., test "weak"). Now let's put the biceps back to its homeostatic condition by tonifying it by pushing on the tendons in the opposite direction towards the belly of the muscle (or by using any other of the standard TFH techniques for strengthening a "weak" muscle). Or if there is a direct antagonist (triceps in this case), sedating this "strong" or hyper muscle works just as well. Now the biceps will again appear to be "strong" to manual muscle testing from contraction towards extension. At this point go to the extended position and test the antagonist, which is the triceps. The triceps should hold. We now have a muscle combination that tests strong from contraction towards extension and from extension towards contraction; this is a homeostatic condition, not hypo, not hyper.

(Note that in an actual therapeutic situation it is always preferable tocorrect an unbalanced condition by tonifying the "weak" muscle rather than sedating the "strong" muscle, a basic principle of TFH.)

Understanding this principle is very important because now what I would like you to do is to go back to the Golgi tendon organs and push them together, tonifying the isolated muscle and creating a hyper condition. When you test the isolated muscle from contraction towards extension, the biceps in thisd particular case, it will test "strong" or locked. If you put the biceps into an extended state and now test from extension towards contraction, you will find that the triceps, as you test, will appear to be unlocked, and of course the biceps from extension towards contraction is now unlocked. This is the opposite condition to the previous experiment; it can be corrected by the opposite procedure, sedating the isolated muscle, the biceps, or tonifying the antagonist, the triceps.

It gets a bit more complicated when testing a muscle that has a group of antagonist muscles, such as the PMC, in its extended state. As I said before, all the muscles that attach to the opposite side of the humerus are antagonists as we test the PMC from extension back towards contraction. Now when the isolated muscle, in this case the PMC, is hyper, the antagonist muscles are unlocked, "weak", or hypo as a group, even though each muscle in the group may be in a homeostatic (i.e., "balanced") state as an individual isolated muscle.

What is this telling us? This is telling us that the proprioceptors in the isolated musculature and the joint that we are working with are sending the signals to the antagonists to lock and unlock. This is exciting, dynamic. This now gives us information beyond our wildest dreams as far as muscle testing goes. We now do not have a muscle that is "on" or "off". We have a muscle that can be tested for a hypo condition, a homeostatic condition, and a hyper condition. This will show where many times the alarm point will not show. One of the reasons the alarm point may not show when a muscle is in a hyper state is that there are two hyper muscles on the same meridian, for instance a hyper PMC and neck flexor, which both fall into the stomac accupuncture meridian. Two negatives as an unlocking signal now show as a positive locking signal. When you have an even number of hypers in a circuit, the alarm point will not show an activity on that particular meridian, consequently giving us what we might think is faulty information. Actually the body

is spitting out the real information, but we have just not been intelligent enough to ask the proper question to this point in time.

What is the benefit of checking muscles for hyper as well as hypo condition? The reason is that unless the entire circuit is in balanced homeostatic condition, we cannot get accurate readings from the muscle when it is used as an indicator in muscle testing. For example, when using the Touch for Health 1 Emotional Stress Release (ESR) technique, if the indicator muscle is in an unbalanced hyper state, it may not unlock (i.e., go "weak") when the testee is experiencing emotional stress correctable using the ESR neurovascular points.

These are three of the seven possible conditions that each muscle has an opportunity be be in at any given time. I will talk to you in future articles about the remaining four conditions, the frozen hyper, the frozen hypo, the paralyzed hyper, and the paralyzed hypo.

In the courses Applied Physiology 1 and 2, each a two-day workshop, I teach not only this process but also hundreds of other fascinating questions that we have failed to learn to ask the body biocomputer. This gets us into a deeper and truer understanding of what muscle testing is all about. The science of Applied Physiology takes the information we can learn from Touch for Health, the International College of Applied Kinesiology, and any and all other applied knowledges from acupuncture to herbology to muscle testing itself, applying it and watching the results thereof, as it turns a nonfunctioning physiological condition into a functioning physiological condition.

I will be presenting Applied Physiology 1 and Applied Physiology 2 after the annual meeting in July. The four-day workshop will be very exciting and is open to all Touch for Health instructors. You can sign up for these courses through the Touch for Health Foundation.

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