

# *What inroad are you traveling?*

By Ron Sowers

I would like to discuss some issues, issues that when considered might very well explain points such as strength and size gains, and their relationships.

The title "What inroad are you traveling?" is in reference to WHICH of the body's systems are being stressed during a workout or even a particular set during a workout.

We know from the G.A.S. theory, that our bodies adapt to the stress applied to them, and they adapt in a specific manner. If we train for endurance, the systems in the body that are stressed during that training will supercompensate and we will benefit by those increases in the form of more endurance. We also know that if we train for strength, the systems that are involved in strength will supercompensate and we will benefit by those increases in the form of more strength. What I want to speak of, are more specific parts of our training.

Training to failure -Was it really muscular failure?

We speak of "muscular failure" all the time. But if we really analyze some of our sets that are taken to failure, we will notice that it wasn't the muscles that were the weak link. It's very hard to perform deadlifts to "muscular failure". Cardio failure... yes, volitional failure... yes, but to continue the exercise until the muscles have failed is almost, if not completely, impossible. It's easy to do a one arm dumbbell curl to failure, our cardiovascular system can easily handle the effort, as can our CNS. Thus we are able to push the exercise until the biceps fail. However, when performing one of the big compound exercises, such as deadlifts or even squats, it's more likely that WE failed, as in our mind or CNS, or even our cardiorespiratory systems, rather than the muscles.

What does this mean then?

Going back to the G.A.S. model, we can logically say that the systems stressed the most, will be the ones stimulated the most. So these systems will be the ones that will supercompensate the most. (given proper recovery measures)

**MOST IMPORTANT POINT ON THIS:**

This could explain strength without size: If one is adding reps to their squats and is not adding size, obviously the strength of the muscle fibers was not the weak link. Something else must have been. It could be that the CNS is not adapted to putting out that level of effort. A big exercise takes a lot of output in the form of neural transmitters and electrical current from the nervous system. It may have to adapt to increase its output. Our cardio might be the lacking system, in which case, it will have to increase. I think this is very important! Knowing that the systems that are stressed the most, must also be stimulated the most, we can logically extrapolate that IF we are increasing in strength,

and not size, then **SOMETHING** beside the muscle fibers **MUST** be what is increasing! Also, this could also explain strength before size: If a different system, other than the muscle fibers is the weak link, then this system would have to increase to a level where the muscles themselves would now be the weak link, then and **ONLY** then could we expect to see hypertrophic gains. When this other system, whether it be the mind (learning to train hard and bear the pain), the CNS (being able to actually fire the muscles intensely enough) or the cardio (being fit enough to endure the metabolic by-products) has finally adapted enough, then the entire individual is now capable of putting enough stress on the muscles that they must now supercompensate.

**Specific training requirements.**

We also must consider that **HOW** we train can also determine which system is receiving the most inroad or stress. If one trains with very low reps, explosive output, all the mainstays of power lifting, the system receiving the most stress will be the CNS and PNS. The weak link, so to speak, will be how many fibers and how quickly those fibers can be recruited.

On the other side of the coin, if we train with super high reps, the cardio systems will be the ones stressed the most as the length of the set will be determined by how efficient the body is at clearing waste products and restoring energy substrates.

Now also, even though one system is the most stressed, that does not mean other systems are not stressed at all. As we know, even training with low reps or super high reps, the muscles do get **SOME** stimulation, they are just not the one stressed the most, or in the best way for hypertrophy.

**What can we do?**

1) We need to train in a known way that causes the muscles to be the weak link. They must endure the most torture (so to speak) rather than the nervous system or the cardio systems.

2) We also might **HAVE TO** endure the time it takes for these other systems to come up to par, so that we **CAN** train our muscles hard enough to illicit an adaptation.

3) And, (this one we all know too well) We need to supply the muscles with proper substrates and rest.