



Defining functional training begins by you listening to your body and understanding the 10 Rules of Function.

By Dave Schmitz

"Some times to help in defining function you need to become a body part and listen to what it is thinking as it goes through life."

That said....Did you ever wonder what your foot thinks when it hits the ground? I suspect not. Well if the foot could speak it would probably say something like....

"Man, I hate it when I have to hit into the ground. Fortunately, I have a big heel and a big toe bone that can take the hit. I am also glad my heel rotates (everts for you foot specialist) because that allows me to flatten out which allow my hip muscles to lengthen (load), and cushion the shock (decelerate).

But that is strange because my lower leg bone rotates inward (tibia internal rotation) with me and don't look now but here comes the knee inward (knee internal rotation) too. Whow.. Here comes the thigh bone rolling in (femoral internal rotation) also. Well no surprise, here comes the hip rotating in also (hip internal rotation) and that wakes up the butt muscles because they started hollering(reacting), back down to the foot something about don't worry little guys (referring to the knee, ankle and lower leg) I just got the message and I will slow you down(decelerate)."

Interestingly they do that right about the same time the rest of the body comes over top of me (Mid stance) and I think I just heard my opposite side foot go flying by me saying.... Man, I hate it when I have to hit into the ground"

....Well if you think I have gone absolutely goofy, you may be right but in function that is exactly what is occurring and I don't know about you but I never read that in any of my biomechanics books.

Instead the functional training was discussed in term of how the foot functioned by itself. However what about the knee bending or the hip straightening and rotating?

So defining functional training starts by looking at how you are going to get all your body's joints and muscle to start communicating together. That is what I call the rules of function.

So what are these 10 Rules that define functional training??

Rule #1

All movement begins by loading in the opposite direction

In order for you to jump you must squat first. In order for you to throw you must wind up first. In order for you to run you must first lunge down. What does this say about function...In order for you or anyone to explode you must first load. Loading is Rule #1 when it comes to defining functional training because no movement occurs unless you load first. Loading means lengthening out the muscle which in turn lets them know it's time to react.

Rule #2

Muscles React they don't contract

Muscles are not very bright and they don't think for themselves. They simply react to what ever their environment throws at them. If I tried to push you over what would you do? If I threw a water balloon at you what would you do? If I was trying to tackle you in a football game what would you do? Answer to all 3 situations would be the same. You would ask you muscles and joints to react. Defining functional training means training your muscle to instinctively react not just consciously contract.

Rule #3

Function is Integrated not Isolated Movement

The actions of lifting, walking, hiking, carrying, reaching, pushing or pulling are performed by multiple joints and muscles working together as a result of optimal communication. Training functional movements elevates the sensitivity of the body's transmitters known as proprioceptors which in turn allows all these joints and muscles to work faster, quicker and smoother. Working each muscle or joint individually like most weight machines do, decreases and slows down the nervous system's (the communication center) sensitivity and response time.

Rule #4

Functional movement requires the use of multiple joints

Pick up something off the floor and notice how many joints are moving. Training should emphasize the use of more than one joint moving at a time to be functional. A squat and reach will have much more impact on ones ability to pick something up or a sprinters ability to run faster than a leg extension machine.

Rule #5

Functional movement is multi-planer

We are not meant to move in only one direction which is what many weight machines require us to do. Instead we have the ability to move straight ahead, go left and right and to rotate. Our training should enhance this ability and emphasize our ability to move powerfully in all planes.

Rule #6

Function movement is a series of counter balance reactions

Multi-plane movement results in arms and legs moving simultaneously in order to counter balance for each other. This counter balance keeps our center of gravity over our base of support. As a senior citizen this keeps us from falling and as an athlete this allows us to jump higher and change directions quickly.

Rule #7

All movement in function is Core Training

What attaches your arms to your legs??? You're Trunk. Therefore anytime you have arms and legs moving simultaneously you must have core or trunk muscle activation. Developing a strong trunk does not take doing a million sit-ups. Instead just start training function and you turn on your trunk with every single exercise.

Rule #8

Most Function movement is done on one limb at a time

Most ground based sports skills require us to function on 1 leg at a time. Most of us also perform various tasks throughout the day with only one hand, like brushing your teeth or on one leg, like walking. As a result, single limb training like single leg squats, lunges or standing single arm resistive band pushes can be a highly effective way to build strength and coordination.

Rule #9

Function is reciprocal.

In running and walking, arm and legs move reciprocally to help create the counter balance discussed earlier. This reciprocal movement also lengthens trunk muscles which we know creates loading. Most machines can not simulate reciprocal movement and therefore train non-reciprocal movement. Reciprocal training also requires rhythm, coordination and balance in order for the body to remain upright, avoiding falling or awkward movements that lead to injury

Rule #10

The Rule of Specificity...Is it movement or speed specific???

In general we all function the same when it comes to the movements we need to be able to do, regardless if we are playing in a football game or working in the yard. As a result our exercise programs will appear similar. However, athletics vs. daily activities is done at much higher speeds with much greater forces. Therefore specificity of training may be more about what speeds rather than weights you are going to train at.

About the author

Dave Schmitz is a Physical Therapist who developed a systematic resistance band training (**RBT**) approach to enhance functional strength and power. Since 1996 as Director and Founder of **PERFORMAX – Performance Training, LLC**, Dave has continued to develop innovative functionally based training RBT programs.

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