Meathead Anatomy

Part I: The Basics

By Coach Steve Rizzo

Ever read an article once, maybe twice, sit there for a second and think, "What the hell did I just read?" In the area of mobility, rehabilitation, and injury prevention, a lot of terms get thrown around that the average gym rat would not be exposed to, barring a few undergraduate exercise science or anatomy courses. My goal here is to provide the average lifter, athlete, and/or coach with a reference guide so that he or she can sit down and read scientific and semi-scientific articles and not have to worry about what terms like "anterolateral" or "retroversion" mean. Also, if an injury has taken place, this series can be helpful in talking with your physical therapist, chiropractor, or doctor about the best course of action to take for a full recovery. More importantly, I want to do it in the most practical way possible so that anyone can read something and immediately visualize it (or just refer back to this article). So without further ado, here's the basics of "Meathead Anatomy":

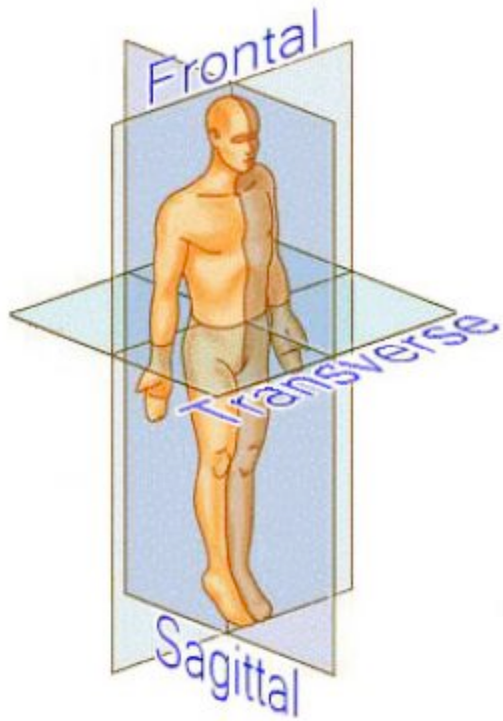
Anatomical Position

This is the reference point of the body to which all terms are relative. For right now, just take a look at this picture and know that this is the body's "natural" position:

Natural is in quotations because what person, especially gym rats and athletes, actually stand with palms facing outwards? None that I know of. But, this gives us a basis from which we can talk about movements of the body parts.

Planes of Movement

Obviously the human body can move in more than one direction. In fact, many areas of the body can move in several directions. Think of your arms in a bench press vs. a military press. In the bench press, the arms are going out in front of the body. In a military press, the arms are going above the head. These are two different planes of motion. Check out this illustration of a body in the anatomical position with the planes passing through it:



As you can see, there are three basic planes of motion: **sagittal**, **transverse** (also known as horizontal), and **frontal** (also known as coronal). In this and future articles, I will just be using the terms “transverse” and “frontal” so for now you can forget I even mentioned the others. Some examples of movements in the sagittal plane include the bench press, barbell rows, broad jumps, and lunges. Some examples of movements in the transverse plane include flyes and rear delt raises. Examples of movements in the frontal plane include shrugs, side raises, military press, pull ups, and vertical jumps.

Relative Positions

I'll keep this as simple as possible.

Lateral means away from the center line of the body. For instance, in anatomical position, the thumb is lateral to the pinky.

Medial means toward the center line of the body. So, in anatomical position, the pinky is medial to the thumb.

Superior means closer to the head. For example, the shoulder is superior to the hip.

Inferior, then, means closer to the feet. The hip is inferior to the shoulder.

Anterior means toward the front of the body, i.e.: quads.

Posterior means toward the back of the body, i.e.: hamstrings.

There are more of these relative terms, but I think that many of them just add confusion and uncertainty. For right now, lateral, medial, superior, inferior, anterior, and posterior will do the trick.

Joint Movement

When discussing a movement or exercise, the best way to describe it is by saying what the moving joints are doing.

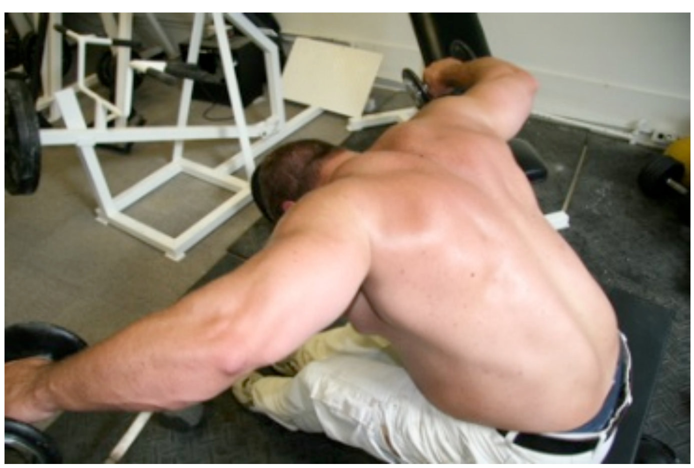
Flexion can be thought of as muscles contracting to bring two areas of the body closer together. Exercise examples are hamstring curls, hanging leg raises, and bicep curls.

Extension, on the other hand, can be thought of as muscles contracting to bring two areas of the body further apart. Some extension exercises are triceps pushdowns, reverse hypers, and good mornings.

Adduction is bringing a limb closer to the center line of the body from lateral to medial (I like to think of "**add**ing" things together). A good example is the chest flye/pec deck.

Abduction is bringing a limb away from the center line from medial to lateral (think about a limb being “**ab**sent” from the middle of the body). An example is the rear delt raise/reverse pec deck.



Internal Rotation and **External Rotation** will be covered for the shoulders and hips respectively in upcoming installments of this series.

Wrapping Up

Unfortunately, the basics are often the most boring part of this stuff. But, without a good base of knowledge it is harder to grasp more complex ideas. As I said, I intend for this to be a reference guide when reading other articles that contain some anatomical language. In the next installment you will see (in video) exactly how the shoulder moves. If you think that this information is unnecessary, wait until a client/athlete/yourself gets injured. At that point you'll realize how important it is to know how the body is meant to move. If you do think that this information is important, then this series will give you a great reference of how to bring balance to programs written for lifters/athletes/ yourself. Don't wait until you're hurt to start finding out about this stuff. Learn the basics now and prevent injury in the future.

Steve Rizzo, aka Coach Riz, is an Underground Strength Coach at The Underground Strength Gym in Edison, NJ. For more info on how to stay healthy AND get stronger make sure you check out our upcoming 'Get Healthy & Get STRONG' Seminar.

Details are HERE

'Get Healthy & Get STRONG' Seminar.