

Injury Prevention

Every year millions of Americans are injured during physical activity. Injuries can affect our bones, joints, muscles, soft tissue (ligaments, tendons, cartilage), posture and even mood. According to the definition of an injury we are fully responsible for every injury we sustain aside from someone else causing it. If our muscle-skeletal system were a separate entity from us they could theoretically bring up charges against us because we violated their rights (forced them into exercises they can't perform properly) and broke the laws of the human body.

The above statement may sound a bit facetious but in reality we always end up losing the case and our bodies usually put us on probation for some time. Our body is constantly reminding us about it's limitations with signs such as pain tightness/stiffness, lack of motion and inflammation. The problem is that we misconstrue what our body is telling us. Our attitude towards our well being is usually confused in the sense that we can't understand how a little pain here and there can manifest itself into a serious issue. You hear it all the time in the gym and the conversation goes as follows:

- 1) "My shoulder hurts when I bench press"
- 2) "I can't bench press for a while because I hurt my shoulder"
- 3)"I stopped bench pressing for a while and started back up again, but my shoulder still hurts"
- 4)"I had a MRI done and I need shoulder surgery"
- 5)"It hurts my knees when I squat..."



By now everyone can see the pattern. The irony is that the majority of us do not heed the warnings our bodies give us.



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A solution is needed to stop the vicious cycle of pain- injury- chronic injury-surgery.

The solution is simple: The participant must

1) Get a full biomechanical assessment of their body in which posture, range of motion (ROM) and body type, frame and even muscle fiber type are all assessed. Everybody doesn't possess the same combination of the above mentioned traits which leaves a wide variety on what the human body can achieve physically and even aesthetically. This also creates a set of muscle-skeletal laws that will be completely unique for every individual.

2) Maintain the integrity of the Muscle-Skeletal system.

Muscles are responsible for creating motion by contracting concentrically (shortening), eccentrically (lengthening), isometrically (holding tension with no motion to stabilize. Muscles lose their ability to do these things when they are stressed, traumatized, injured, and even if there is an electrolyte imbalance. This causes muscles to become neuromuscularly weak/inhibited (they don't fire). Once muscle inhibition/weakness kicks in, the body begins to compensate leaving the person susceptible to postural changes, pain, lack of motion and diminished quality of motion, and of course injury.

3) Create comprehensive and strategic workout/maintenance plan that allows the body to achieve optimal performance, resulting in:

- increased functional capacity
- decreased postural issues
- decreased joint pain
- increased strength, power and endurance
- changing the participants body composition towards a more aesthetically pleasing form.

A great method of implementing the above solution would be introducing Muscle Activation Techniques (MAT) into the participant's routine. MAT is a biomechanics based modality aimed at restoring the integrity of the Muscle-Skeletal system. MAT utilizes a ROM assessment to locate asymmetries in motion between right and left segments of the body. Muscles of the asymmetry are then tested using a neuro-response test. If a weakness/inhibition is discovered, a palpation will be administered to activate the muscle. Once the muscle is fully activated, ROM and Stability are restored. This is all done without stretching the tight muscles in the limb. For example: picture a person with extremely tight hamstrings and lower back pain (very common issue). Instead of forcefully trying to get his hamstrings to loosen up with stretching, MAT takes the direct opposite approach. The participants Quadriceps, hip flexors and abdominal muscles would be analyzed for weakness. Upon fixing any of the potential weaknesses, the patient's ROM and stability will vastly improve displacing pressure off the lower back.

I hope this has provided some insight into injuries and how to avoid them in the future. For any questions or to set up an MAT appointment please contact me.