



Providing an optimum exercise experience for ALL members

All the FIT that's news to print

November 2010

Is Your Workout Working You Into an Injury?

How could a tennis player's sore shoulder be related to her gait? How could a lower back pain relate to biceps curls? The answers lie in some understanding of how the body works.

Let's look at what happens during a well-executed tennis serve. Its speed is not the product of just a powerful arm. In fact the speed of the serve starts with the foot exerting great force against the ground.

Following Newton's law of action and reaction, that force now travels up the body - ground to legs to hips to trunk to shoulder to arms to wrist to racquet to ball. At each stage the body twists and moves to deliver maximum force to the ball. The same chain could be applied to lifting a package and putting it on a shelf.

So we see that there is a whole chain of muscles contracting, stretching in what superficially seems to be an arm action.

Now let's suppose that our tennis server rolls her foot too much when she walks. Over time this could lead to compensating muscle action in the legs and other muscles up the chain resulting in muscle **"imbalances"**. Our athlete is now has an inefficient "chain" from the ground to the ball during her serve. Trying to get as much speed as possible, she now tries to use her shoulder to compensate. Voila – shoulder injury.

The biceps- curl/back- pain link is a wonderful example of how the body doesn't understand "training". It only understands "task". Imagine a young man who wants to increase the strength and size of his biceps. To do this, he curls heavy weights. As his arms tire, his body recognizes that the biceps are in trouble. The body's thinking goes like this: "Here he goes again, trying to move a heavy weight without using all the muscles available - - and not using momentum! C'mon lower back muscles! Bend forward then up! Give those biceps some help! Quick! Now! They need help!" The result can be strained back muscles.

Both examples show that focusing only on the obvious muscle to improve performance can lead to injury. A better strategy would be to recognize the interdependence of our body parts and follow several basic rules:

1. Exercise the whole muscle chain from the ground up
2. Exercise muscles in more than one direction if the joints permit
3. Stretch and increase flexibility throughout the chain
4. The core contributes to almost every human motion. Exercise it. *The core is all the muscles that support the spine from hips to neck.*
5. When isolating one muscle group. Brace (tense) the core throughout the exercise

Most important: if any of the above is unclear or you have questions, ask the ORC trainers. It is their business.

By: Paul Meldrum, Personal Trainer

ELIMINATOR CHALLENGE UPDATE!

Watch out for teams of 6 members working out to win the most weight. The eliminator challenge is in full swing with trainer led workouts, nutrition workshops, body fat % weigh-ins, trainer email support and lots of weight loss. With 16 teams this year, the workouts will be tough and fun. More updates to come for leading team in weight loss, and top male and female fat losers.

FIT TIPS!

Circuits.: One mistake that people make is to do multiple sets of the same exercise without rest between the sets. This doesn't allow your muscles to recover and it's a waste of your workout. But instead of doing a set, resting, and then doing your second set, it's more effective to move on to multiple exercises in a circuit, so that you don't rest between exercises but do rest each muscle group. This will give you a good cardio workout while you do your strength training.

PUSH UPS

#1 Place your hands just below your shoulders (inline) and take a wider stance than your shoulder width.

#2 Feet together, body completely straight from head to heels.

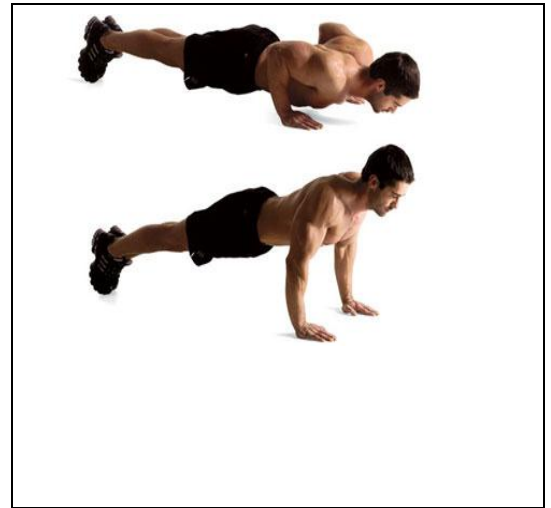
#3 Lower your body to a 90 degree angle in your elbows or lower while keeping your head looking up/in front of your body.

#4 Keep your full body alignment and push your body up.

#5 Breathe in on the way down and breathe out on the way up.

#6 When it gets tough doing the push ups from your toes, lower your knees to the ground and continue.

#7 **More difficult push ups – feet on a medicine ball, feet on a stability ball, feet on a bench, hands on a Bosu, hands on a balance boards...**



FIT TIPS!

Compound exercises

Instead of isolating your muscles with exercises such as the bicep curl, you can maximize the time you spend in a workout by doing exercises that work out multiple muscle groups at once.

With just a few exercises, you could get a full-body workout.

Another benefit is that your muscles are working together as they do in the real world, rather than alone.

Some great compound exercises include squats, deadlifts, good mornings, lunges, pushups, bench presses, military presses, rows, pullups, dips, and more.