



Maria L. Mountain, MSc
Revolution Conditioning
www.revolutionconditioning.com

**STAY IN PLAY:
IS YOUR WORKOUT
INJURING YOU?**

Goals for today...

- ⦿ Common exercises you may be doing right now that are leading to an injury.
 - Ab Crunches
 - Lunges
 - Lat Pulldown
 - Seated Row
 - Squats
- ⦿ Provide you with some options you can try tomorrow.



Why do ab crunches?

- Six pack abs?
- Strong core?
- Strengthen your back?
- Smaller waist?
- Chiseled abs?



Why do ab crunches?

- ⦿ Six pack abs? Fat is problem.
- ⦿ Strong core? Not functional.
- ⦿ Strengthen your back? Does not.
- ⦿ Smaller waist? Body shape +/- fat.

So why do so many trainers have you do crunches?

- ⦿ They are busy trying to make you tired, not better.
- ⦿ They don't want to tell you that you are too fat.
- ⦿ They don't know any better.
- ⦿ They are putting you at risk of a disc injury to your back.

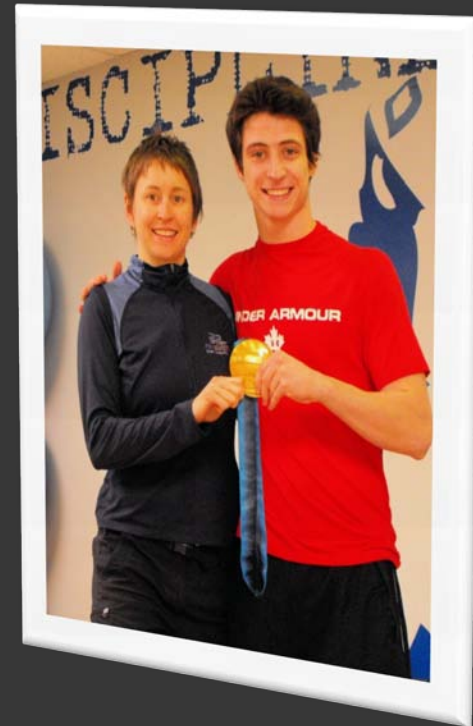


But I do 500 crunches a day!

- Dr. Stuart McGill is a spine biomechanist, he studies the load tolerances of the spine.
- Disc injuries are overuse injuries associated with repetitive flexion.
- Sitting around all day with crappy posture contributes as well.

Risk:Reward Analysis

- ⦿ I do not have my top level athletes crunch anymore and they are still able to play pro sports and win Olympic gold.
- ⦿ Do you really need to crunch?
- ⦿ In what sport or daily activity do you use your abdominals in that way?
 - Getting out of bed maybe!



Not just crunches

- Ball crunches
- Hanging leg raises
- Crunch machines
- Leg throws
- Russian twists

Alternatives

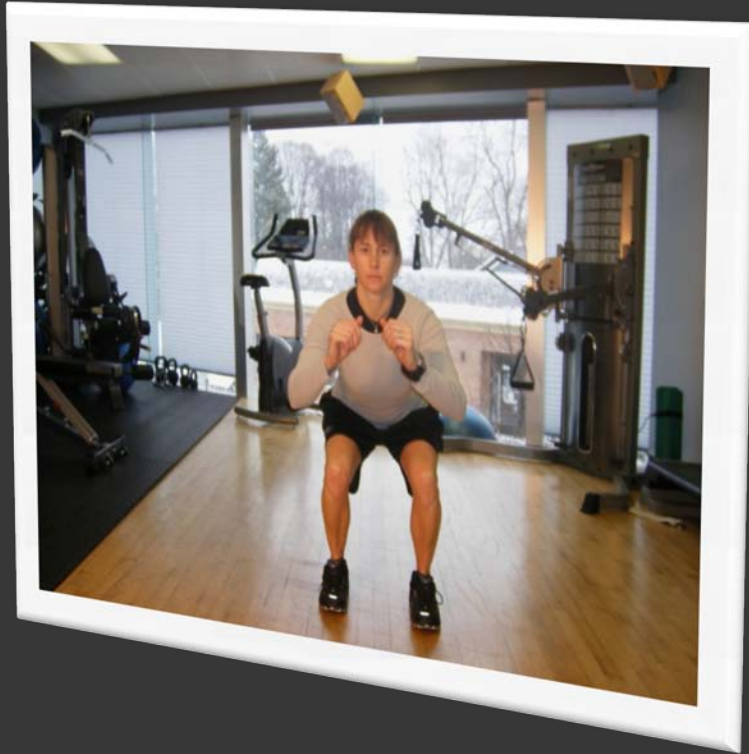
- McGill crunch
- Plank – front & side – w partner taps
- Stability Ball Roll Out
- Partner Resisted Stabilization
- Bungee Squat w Rotary Pull



Lunges – Squats - Jumps

- ⦿ Stand in front of a mirror or partner.
- ⦿ Jump up and down five times – look at the knees.
- ⦿ What happens to the knees as you jump?

Dynamic knee alignment



- ⦿ What does it mean when the knee drifts forward during a lunge or squat?
- ⦿ What does it mean when the knees pinch inward during a squat or lunge?
- ⦿ How can you eliminate these faulty mechanical patterns.

Do the shins stay perpendicular like this?

What does it mean?

- ⦿ If your knee drifts forward you are not sitting back enough with your hips and using your glutes.
 - You are putting more compressive load on your knee cap & risk factor for ACL tear.
- ⦿ If your knees pinch inward you are not active enough or strong enough in your glute medius.
 - Also puts more compression on knee caps & risk factor for ACL tear.

Prevention

- ⦿ Don't do that!
 - Practice in front of a mirror – take the time to do it properly.
- ⦿ MiniBand step lateral
 - Hips and shoulders must stay level.
- ⦿ Are your glutes even working?
 - Glute activation.



Behind the Neck Lat Pulldown

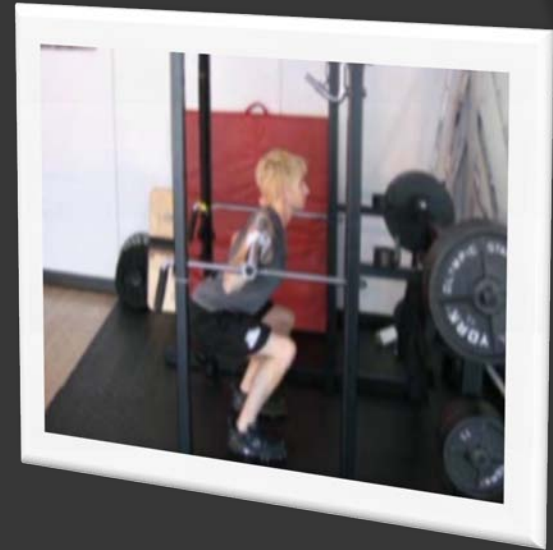
- ⦿ No advantage at all to this version.
- ⦿ EMG studies show that it gets more posterior deltoid activation – much better ways to train posterior deltoid.
- ⦿ Puts shoulder in close packed position – stressful on the shoulder.
- ⦿ **SOLUTION: Pull to the front – Chin level**

Seated Row

- ⦿ Too much shrugging going on there.
- ⦿ Think about squeezing shoulder blades down slightly and back as you row.
 - I cue athletes to think about OPENING their chest as they row.
- ⦿ Ever have shoulder pain – you should do the shoulder blade squeeze.

Squats

- ⦿ You cannot round your back as you squat.
- ⦿ If you cannot bodyweight squat to 90° with perfect technique, *then you cannot squat. Period.*
- ⦿ Your heels cannot come off the ground as you squat.
- ⦿ Practice your bodyweight squat.



Crappy squatting leads to Leg Pressing

- ⦿ People have a crappy squat or they are scared of it, so they go to the leg press.
- ⦿ Leg press loads the spine into flexion – again high forces on lumbar discs.
- ⦿ Leg press creates an imbalance between the muscles of the extremities (legs) and the torso which can lead to back, hip or hamstring injuries.

Finally!

- ⦿ Your workout program must be balanced in terms of push-pull. You cannot do 4 bench pressing exercises and only one pull. You will eventually get a shoulder injury.
- ⦿ Just because you have done it that way for years, does not mean that it is right and that it is not hurting you.

Beware

- ◎ Of fitness coaches or personal trainers who are just trying to make you tired.
 - They let you progress even though your technique is not perfect.
 - They do not take the time to teach and enforce perfect technique.
 - Give you exercises that look cool, but are not at your level – sedentary people do not need to do sprints with a parachute!



www.revolutionconditioning.com for fresh training techniques.

www.hockeytrainingpro.com for hockey specific training tips.

What questions do you
have?