

## IMPORTANCE OF STRENGTH TRAINING FOR RUNNERS

Building a strong foundation of core strength, balance and stability is essential for runners. Core/strength training obviously helps build strength, which helps minimize the chance of injury, improves resistance to fatigue, and improves muscular endurance. These aspects are crucial in all endurance events. The research highlighting the benefits of strength training for endurance athletes is endless.

Unfortunately many runners tend to avoid strength training for various reasons. Lack of time, afraid of “bulking up”, intimidated by the gym, assumption that just cardio will help lose weight quicker. No matter what the reason is for skipping it, the fact is that strength training done properly can and will help improve running performance!

Taking the time to add strength training to your exercise routine 2-3 days a week has several great benefits.

- **More efficient fat burning machine!** Strength training will improve your body composition by helping you maintain or increase your lean body mass and can decrease your percentage of body fat. Simply, muscle burns more calories.
- **More efficient runner!** Strength training will help you run faster, longer, and more efficiently. You'll also be able to recover faster from long runs because strength training makes your body more efficient at converting metabolic waste into energy.
- **Decrease risk of injury!** Increasing muscular strength will increase your joint stability, which reduces your risk of injury (specifically repetitive stress injuries). Running alone, will not keep your knees and hips strong enough to prevent injury. Knee and hip injuries seem to be the most prevalent in runners. Keeping the muscles surrounding these areas strong will decrease the instance of injuries.

**CORE-** The “core” is composed of several pairs of muscles that help to stabilize the spine and pelvis during functional movements. Which is what the muscles used during running rely on. This is precisely why runners must have a strong, stable base to operate in the most efficient way possible. Weakness or lack of sufficient coordination in the core musculature can lead to less-efficient movements, strain, overuse, and injury. The more strength the core muscles have, the more solid the foundation of movement through your legs. After all, the pelvis, knee, and ankle joints all work together. If the pelvis is stable, more force will be applied from the foot to the ground upon foot strike. If the pelvis lacks stability, the force is not properly accounted for, and running will apply a tremendous amount of stress to the joints. Even more so, core stability allows you to maintain posture, form and stride rate when you get tired thus allowing you to maintain pace.

**MUSCULAR POWER-** For runners, explosive power developed primarily through plyometric exercises (jumps) and sprints can help reduce ground contact time. With each stride made during running, the foot comes in contact with the ground. During this foot strike braking forces are applied (even among the best distance runners). The delay between the absorption and release of energy needs to be just right. In most athletes, this time period is far longer than desired and thus a lot of the stored energy is lost before it can be released as productive energy to move the body forward. So, imagine now that the absorption and release of this energy could be a lot more efficient by reducing the lag time between these phases. There would then be a shorter period of time spent on the ground and a greater amount of energy driving the body forward.

**ADDING CORE/STRENGTH TRAINING INTO YOUR WORKOUT REGIMEN-** Core/strength training should be gradually introduced into your training program, and should not cause excess muscular soreness or detract from weekly runs. There are many forms of periodization for strength training depending on your goals, fitness level and race season. However, for a basic core/strength training addition to your current workout regimen, you should seek to get 2-3 days of strength training in per week, 3 sets of 15-20 reps or 30-60 second holds for each exercise.

# SAMPLE FULL BODY STRENGTH WORKOUT

## 1. SQUAT WITH DUMBBELLS

1. Stand with feet shoulder-width apart and dumbbells at sides
2. Squat down like you are sitting in a chair while keeping chest up
3. Keep chest up, back flat and all the weight in your heels
4. Be sure not to let your knees come over your feet
5. Push back up to start position and repeat 15-20 times

\*Decrease difficulty- do without weights



## 2. PRONE PLANK

1. Place elbows directly under shoulders
2. Feet straight behind you with body completely parallel to ground
3. Keep abdominals, glutes tight, and back flat
4. Hold 30-60 seconds

\*Decrease difficulty- perform from knees instead of feet



## 3. PUSHUPS

1. Start in a pushup position on toes and hands
2. Keep body straight and core contracted, slowly bend elbows
3. Lowering down until your elbows and shoulders are parallel
4. Then push back up to start position and repeat 15-20 times

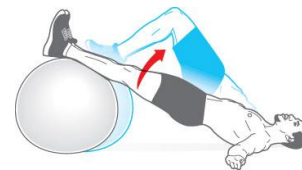
\*Decrease difficulty- perform from knees instead of feet or on a wall



## 4. HAMSTRING CURL ON BALL

1. Lay on back with ankles resting on top of stability ball
2. Contract abs and glutes to raise your hips off the floor
3. Curl your heels toward your glutes by bending your knees
4. Slowly return to the start position while maintaining the level of hips
5. Repeat 15-20 times

\*To decrease difficulty- lift hips up and down, but do not curl in or try just the hip raise without the ball



## 5. SIDE PLANK

1. Lay on side with right elbow directly under right shoulder
2. Stack left foot on top of right foot, contract oblique's
3. Push yourself up so that your hips come off of the floor as high as you can
4. Keep your body perfectly straight throughout the exercise
5. Hold for 30-60 seconds, repeat on other side.

\*Decrease difficulty- perform from knees instead of feet



## 6. BENT OVER DUMBBELL ROW

1. Stand with legs shoulder width apart and knees slightly bent
2. Bend at hips keeping back completely flat, abs contracted and dumbbells at sides
3. Hold elbows close to sides as you pull elbows straight up and squeeze shoulder blades together.
4. Then slowly lower back down to start position and repeat 15-20 times.

