

**Offseason Training for Runners: Why gluteal exercises are not enough**

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October marks the beginning of the running offseason. While some lament the cooler temperatures and frozen precipitation, many of us are dreaming of skiing through deep powder over the next several months. The offseason, however, is the time period during which the foundation of your 2018 running season is built. Offseason cross training, mixed with selective running, represents a therapeutic physical and mental break from long miles and needed preparation for the coming year.

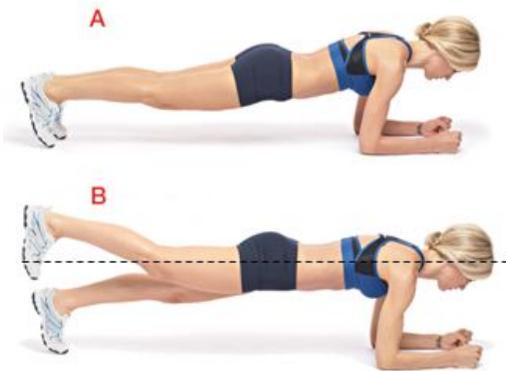
Western Montana provides ample outdoor cross training opportunities. If your 2018 running goals include a 10k PR, then short interval running, track workouts, and alpine skiing will meet your needs. If your goals include achieving success in an ultra distance trail run, then Nordic skiing, ski mountaineering will compliment your winter running program. While the intensity and duration will vary based on one's goals and abilities, below are a few areas an effective offseason running program should include:

**Injury Risk Reduction:**

The best predictor of future running injury is the presence of a past running injury. The most obvious cause of running overuse injuries is too much volume or load to the system too quickly. Simple solution: gradually increase running mileage and intensity and allow for adequate recovery. Running training programs and racing goals, however, complicate the simplicity of injury preventions. Understanding a few facts regarding how our bodies move is an important first step in understanding and avoiding injuries due to compensatory movement imbalances we may not realize we have.



Skeletal muscle can be divided in to two groups representing their primary function: Stabilizers and Mobilizers. **Stabilizing muscles** allow us to maintain the posture necessary for movement. Diminished stabilizing muscle activation leads to movement imbalances and overuse injuries in the lower extremities. Stabilizing muscles (which all runners should work to strengthen) include the gluteus medius, transversus abdominus (lower abs), obliques, lower trapezius, serratus anterior, multifidus (deep low back muscles), rotator cuff, and deep neck flexors. **Mobilizing muscles** are more familiar to us as they are responsible for moving our extremities: Quadriceps, hamstrings, gastrocnemius, hip flexors, adductors, rectus abdominus (six pack muscle), erector spinae, and latissimus dorsi. In the presence of muscle shortening (secondary to frequent sitting, postural tightness), prior injury, weakness, or repetitive motion activities (involved in single-sport training such as running) stabilizing muscles are inhibited unbeknownst to the individual. For example, in the lower extremities, the stabilizing glutes and abdominals are often inhibited and overpowered by the hamstrings, hip flexors and quadriceps.



A movement imbalance example common in both recreational and competitive athletes is that of hip extension. The ideal muscle firing pattern for proper hip extension is stabilization of the low back with the multifidus and transversus abdominus, extension of the leg with the gluteus maximus, and secondary assistance with the hamstring. A common compensatory movement imbalance for hip extension is contraction of the erector spinae and hip flexors, extension of the leg with the hamstring, and little or no contraction of the gluteus maximus. If such a compensatory hip extension movement pattern is not changed through training, even the most progressive strengthening

program will not protect a person from injury or allow him or her to return to running following an injury.

### **Aerobic Engine:**

Cardiovascular fitness requires consistent work. Experience has taught me that maintaining a base level of cardiovascular fitness in the offseason reduces the need to play “fitness catch-up” in preparation for spring running races. Building your aerobic engine to carry you up climbs both short and long requires specified training. High intensity intervals are never fun, but mixing up the means by which you subject yourself to intervals reduces burn-out. Nordic skiing intervals, skinning (backcountry or ski mountaineering set-up) intervals, power hiking intervals, and cyclocross racing are great ways to disguise intervals in a fun and novel activity. One to two running or snow hiking interval workouts can also be during the offseason if you prefer to stick with running.

### **Mobility:**

Consider joint and tissue (muscle, tendon, fascia) mobility as the key to reduce some of the compensatory movement patterns discussed above. Flexibility is often synonymous with extreme stretching. While many of us are inherently “tight,” it is important to distinguish between tight muscles and stiff joints. Joint which lack the necessary mobility (range of motion) for healthy movement are subjected to increased impact loading while running. The offseason is a great time to have your stiff knee, hip, or ankle evaluated by a physician and by a physical therapist to improve joint function. Be proactive with joint stiffness now to avoid cartilage damage and chronic joint-related issues later. Running through joint pain is never a good idea.



### **Intensity:**

While offseason cross training and exercise should be fun, intensity should be added on a weekly basis to build strength and power. As athletes age, the importance of workout intensity increases.

Most athletes over age forty gravitate towards long, ultra endurance sports and races. While it is true that longer events suit our highly trained endurance engines well, training with intensity will build muscle strength and muscle performance. Regularly-scheduled (2-3 times per week) plyometric and interval workouts will build some speed in your legs for whatever cross training activity you choose. Short hills will seem easier to run up in the spring as well.

### **Fun Meter:**

Enjoy your off season! Branch out and try new activities. Missoula is fortunate to be a mecca for outdoor winter recreation and a hub for excellent fitness establishments and gyms. Consult a professional for assistance in setting up a balanced off season program to suit your 2018 goals AND to recover-rebuild from your 2017 running season.

Don't waste your off season training time by strengthening compensatory movement patterns which lead to a decline in performance and possible injury. Get the most out of your training through an effective physical therapy consultation. The physical therapy staff understand compensatory movement patterns which lead to movement imbalances and injury. For more information, call or email the Sapphire Physical Therapy staff. Make 2018 the year you run, train, and compete without pain or limitations.



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