BURRRR! It’s freezing outside and the streets and sidewalks are covered with snow and ice. Unfortunately, Mother Nature has been playing a cruel practical joke on all of us who were hoping to be making progress with our training for the Pittsburgh Marathon, which is now less than 4 months away. However, there is no need to throw in the towel. You can still safely and effectively train for the race despite the inclement weather.

The most obvious strategy to combat the frigid temperatures is to retreat indoors. On extremely cold days or when the outdoor running surfaces are just too slippery to navigate safely, consider a workout on a treadmill. Treadmills allow you to run in a controlled environment where you can precisely vary both the speed and incline of your run. However, it is important to remember that running on a treadmill is biomechanically different from running outdoors. If you are not used to running on a treadmill, it may feel a bit awkward at first and possibly leave you feeling a little more sore than usual. Additionally, since you do not have to overcome the wind resistance associated with outdoor running, you will need to put the treadmill at a 1-2% incline to simulate the energy expenditure of a run performed outside.

Other indoor training options include cross training on an elliptical trainer, stair-climbing machine, stationary bike, or running or swimming in a pool. Pool running is the most running-specific type of cross-training, but the other forms of exercise can provide you with an excellent cardiovascular workout as well and allow you to at least maintain, if not improve, your endurance while awaiting your return to the outdoors.

If you do not have access to indoor exercise equipment or a pool or if you simply want to brave the elements, safe winter running can be still be achieved with the proper clothing and planning. A few good rules to follow include:

1. **Dress in layers.** Begin with a thin layer of synthetic material such as polypropylene that wicks sweat away from your body. Avoid cotton since it retains moisture and will stay wet next to your skin. The next layer should be made from an insulating material such as fleece. Finally, an outer breathable, waterproof layer, such as a Gore-Tex jacket will help protect you against precipitation and wind.

2. **Protect your extremities.** Your face, fingers, and toes are the parts of your body that are most susceptible to frostbite. Early signs of frostbite include initial pain and redness of the affected skin followed by a loss of sensation, a change in skin color to white or grayish-yellow, and the development of a firm or waxy texture to the skin.

3. **Cover your head.** 20-30% of your body heat can be lost through your head. The lower the temperature, the higher percentage of heat lost via the head.
4. Don’t overdress. When you start your run you should actually feel a bit chilled. Exercise generates a significant amount of heat. Once you have warmed-up on your run, you may feel like it is 20-30 degrees warmer than it really is outside.

5. Drink plenty of fluids. Although you may feel less thirsty and not be quite as aware of how much you are sweating, it can be just as easy to become dehydrated running in the cold as it is in the heat.

6. Start into the wind. If it's a windy day, begin your run into the wind so you aren’t struggling against a headwind on the way back when you may be sweaty and fatigued. This will lessen the chance that your temperature will drop and you will become hypothermic or sustain frostbite.

7. Don’t venture too far from home. Run routes that are close to where you live in case you become too cold, wet, fatigued, or injured from a slip on the ice. This way you can more quickly escape the cold conditions.

Although harsh winter weather may require you to adjust your training for the marathon, it certainly does not have to sideline you altogether. With a little knowledge, planning, and flexibility, you can continue to train safely and successfully until the first winter thaw. Good luck and stay warm and dry. See you on the roads!

Eric Anish, MD, FACP, FACSM
Associate Professor of Medicine and Orthopaedics
University of Pittsburgh School of Medicine
Team Physician, Duquesne University