

Ten quick fixes to save your knees and joints

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Because of the compressive forces and types of muscle contractions involved, running can be very hard on your body. If you are a large or heavy set person; harder still. If you plan on running long term, there are some basic rules that will keep you striding long term.

1. Take at least one or two rest days per week. This means no impact giving your joints a rest from the pounding forces that running produces. Less experienced runners may need two or three rest days per week. Remember that you are weaker after a workout and only get stronger through proper recovery. Try to circumvent this process and injury becomes likely. He (or she) who recovers first wins.

2. Perform no more than one or two "break through" or high-intensity interval workouts per week. Speed work puts more stress on the body, and requires more recovery time. This type of work must be performed prescriptively and carefully. Try to schedule your speed work or interval workouts the day prior to a rest or recovery day.

3. Train in two- to three-day cycles, with a rest or recovery workout in between cycles. This allows your body to adapt to the stress of training. Some athletes will need more rest and less training, especially as intensity increases. A rest or recovery workout is best scheduled after an increase in weekly mileage.

4. Change your shoes out frequently. A good rule of thumb is at least three times per year for a high-volume runner. You may want to write the date you purchased your shoes in permanent ink on your shoes for reference. Buying shoes is expensive, but so is your insurance deductible.

5. Take the supplements Chondroitin Sulfate and Glucosamine. I don't recommend a lot of supplements, but this combination has shown promise in clinical studies, and in control groups of people suffering from knee pain. One works as an anti-inflammatory (Chondroitin); the other helps regenerate cartilage (Glucosamine). I know of several orthopedic surgeons who are recommending the supplement to their patients. It's definitely worth a try.

6. Increase your volume of endurance training by less than 10 percent per week. Bringing your mileage up too quickly is a sure fire way to promote injury. Your body adapts to stress (training), compensates for it, and builds or gets stronger. If you put too much stress on your body, it can't compensate and breaks down further instead of getting stronger.

7. Listen to your body. In my experience your body gives you an indication that you are about to sustain an overuse injury. This may be in the form of a slight or nagging pain. Stop training at this point and you will more than likely be all right after a bit of rest. If you try to push through the pain you may end up with a more serious injury. If you are exceptionally tired during a run and your legs feel leaded, take a day off.

8. Periodize your training. Periodization means training in specific cycles that move towards a goal (race). Your training moves from the general to the specific and from low intensity to higher intensity as you approach your peak. This means performing your most intense work late in the season near your goal race or peak, not year round which degrades performance and may lead to injury.

Establish a 12- to 16-week base period in which you keep your intensity low, heart rate aerobic, and concentrate on strength and technique. Have a licensed running coach work with you on an annual training plan for your season.

9. Perform strength exercises to keep your knees strong and stable, prevent muscle imbalances and improve performance. One of the more common overuse injuries is "runner's knee." This can be caused by a patella tracking problem, much like a tire that is out of alignment. By keeping your quadriceps strong you can prevent this condition. If you are an endurance runner you don't need to overwork these muscles or use a lot of weight, but light strength work performed correctly can help prevent injury.

10. Cross train. One of the benefits that multi-sport athletes have over runners is that they are able to perform swim and cycling workouts in between run workouts. This helps reduce the stress caused by the pounding of running, but the athlete still receives the aerobic benefit of training. Cross training is good for active recovery which helps speed the recovery process.

If you use a heart rate monitor you can stay in the same heart rate zone as your run workout. Swimming, cycling, using the stepper, elliptical trainer, or even hiking are all good examples of cross-training workouts.

[Matt Russ](#) has coached and trained athletes for over 10 years around the country and internationally. He currently holds licenses by USAT, USATF, and is an Expert level USAC coach. Matt has coached athletes for CTS (Carmichael Training Systems), and is an Ultrafit Associate. Visit www.thesportfactory.com for more information.