Running Injury Prevention

It has been shown that 30-79% of runners sustain running-related injuries. Causes of injury are variable, but the majority of running injuries are related to overuse (up to 65% of running injuries annually). Those with the highest risk of injury have limited or no running experience. Male and female runners generally have different risks with the sport. The knee and shin are the most common areas of injury in endurance athletes. This is associated with the repetitive impact forces in the lower body.

Possible causes of overuse injuries include: muscle weakness, faulty mechanics, muscle tightness, improper warm-up, nutrition deficiencies, psychological factors, and improper footwear. Though this handout focuses on proper stretching techniques before and after running, there are several other prevention strategies to consider before beginning a workout routine.

REDUCE THE RISK OF INJURY BY FOLLOWING A PREVENTION PLAN

- **Shoes:** Have a shoe fitting performed by a professional at a reputable shoe store. Based upon findings, choose a shoe that focuses on motion control, stability, or neutral fitting.

- **Warm-Up:** Inactive muscles are at risk of stretching too far or tearing. Jog easy for five minutes to increase your heart rate slightly and break into a light sweat. This helps increase blood flow to the muscles and warms them up. Stretching after a warm-up or cool-down period helps to maintain and/or promote range of motion, especially after injury. (See Stretching Exercises below).

- **Cool-Down:** After running, stretch while the muscles/tendons are still warm. This helps improve flexibility over time. Do 2-3 repetitions of 15-30 seconds of each stretch.

- **Progress:** Increase frequency, duration, distance, or intensity no more than ten percent a week. Gradually increase exercise frequency or duration in the weeks or months following the start of an exercise program to no more than 6 days of running per week

- **Cross-train:** Beginners should run no more than 3 times per week with cross training separating running days and one full day of rest per week. Cross training should include non-impact activity like cycling and swimming.

- **Balance:** Running and cardio activities should be balanced with strengthening 2-3 times per week and stretching 5-7 times per week.

STRETCHING EXERCISES – loosen tight muscles and decrease your risk of injury.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Stretch to the point of a gentle pull and hold for 15-30 seconds.</th>
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<tbody>
<tr>
<td>Frequency</td>
<td>Do 2-3 repetitions for a set, and perform at least one set daily while the muscles are warm.</td>
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**Gastrocnemius Stretch**
- Stand with your feet pointed forward
- Keep your heels down and back leg straight.
- Slowly bend the front leg until you feel a gentle upper calf stretch in the back leg.

**Soleus Stretch**
- Stand with your feet pointed forward and heels down.
- Slowly bend the back knee until you feel a lower calf or heel stretch in that leg.
Toe Drag (Tibialis Anterior)
- Take a step forward.
- With the back foot, drag your toes along the ground and hold in that position until you feel a stretch.

Lunge Stretch (Hip Flexors)
- Kneel on the leg that you’re going to stretch.
- Squeeze your buttocks, and shift your hips forward until you feel a stretch along the front of your thigh.
- Don’t lean over or twist your hips.

Standing Quad Stretch
- Stand with one hand on an object to balance.
- Bend the knee you want to stretch until you can hold onto the ankle with your hand.
- Gently pull up and back until you feel a stretch in the front of the thigh.

Runner’s Stretch (Hamstrings)
- Sit with one leg outstretched and the other fully bent with foot placed on inner thigh.
- Slowly bend trunk forward over outstretched leg until you feel a stretch along the back of your thigh.

Standing Hip Stretch
- Stand next to the wall with the leg you want to stretch closest to the wall and arm straight out.
- Cross the outside leg over and lean your hip into the wall keeping your arm straight.

Butterfly Stretch (Groin)
- Sit with your back straight and knees bent.
- Place the soles of your feet together and push your knees toward the floor until a stretch is felt in inner thighs.

References

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: Dial-A-Nurse at 333-2700

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: http://www.mckinley.illinois.edu