

To Stretch or Not to Stretch?

Recommendations promoting a stretching program change from year to year and expert to expert. In the past, stretching has been advocated as an essential part of a workplace fitness program and a way to decrease injury risk, prevent soreness, and improve performance. From an injury prevention perspective, there is much debate about the benefits of stretching. However, there is evidence that properly stretching will increase the muscles' range of motion.

Stretch for Static Work, Not Dynamic Work

- Perform stretching exercises if your work tasks are more static in nature, such as office work. Because there are very few changes in body position and this lack of movement can lead to muscle pain and strain, stretching can be beneficial.
- Do not perform stretching exercises if your work is more dynamic, such as lifting, carrying, or pushing and pulling.



Regardless of static or dynamic work, there seems to be agreement that stretching does not prevent injury. The focus on improving worker health should be through controlling risk by using engineering controls—changing tool design, using mechanical devices to assist in lifting, changing workstation layout, etc.—to eliminate or modify the risky hazardous tasks performed.

Stretching and Warming Up are Not the Same

Stretching. The best time to stretch a muscle is after a warm-up. Stretching a cold muscle can increase the risk of injury from pulls and tears. Some general guidelines include:

- Range of motion can be increased by a single 15- to 30-second stretch for each muscle group per day. However, some people require a longer duration or more repetitions. The optimal duration and frequency for stretching may vary by muscle group.



- The long-term effects of stretching show that, after 6 weeks, those who stretch for 30 seconds per muscle each day increased their range of motion much more than those who stretched 15 seconds per muscle each day. However, no additional increase was seen in the group that stretched for 60 seconds.
- To get the most from your stretching, customize your routine to fit your needs. One way to do this is to stretch until you feel slight pulling but no pain. As you hold the stretch, your muscle will relax. As you feel less tension, you can increase the stretch again until you feel the same slight pull. Hold this position until you feel no further increase.
- Most experts believe bouncing during a stretch is dangerous because your muscle may reflexively contract if restretched quickly following a short relaxation period. These kinds of contractions can increase the risk of injury.
- Stretching should not hurt. If you feel pain, take the stretch easier, breathe deeply, and relax.

Warming Up. Warming up is typically performed before a dynamic activity to prepare the muscles and joints for more intense activity. A proper warm-up can increase the blood flow to the working muscle resulting in decreased muscle stiffness, less risk of injury, and improved performance. Typical warm-up activities are 5-10 minutes of jogging; dynamic stretches such as shoulder circles, side bends, and arm swings; and event specific activities that mimic the tasks that will be performed. The benefits of a proper warm-up include:

- Muscle temperature increases within muscles that are used during a warm-up routine. A warmed muscle both contracts more forcefully and relaxes more quickly. In this way, both speed and strength can be enhanced. Also, the probability of overstretching a muscle and causing injury is far less.
- Body temperature increases and improves muscle elasticity, also reducing the risk of strains.
- Blood temperature increases as it travels through the muscles and, as blood temperature rises, the amount of oxygen it can hold becomes reduced. This means a slightly greater volume of oxygen is made available to the working muscles, enhancing endurance and performance.
- Range of motion around a joint is improved and increased.

Keep in mind that the perfect warm-up is a very individual process that can only come with practice, experimentation, and experience. Try warming up in various ways, at various intensities, until you find what works best for you.



Soldiers from Fort Meade warm-up prior to the installation's "Year of the NCO" run.