

Stretching is the first line of defense
against workplace injuries—and it feels great.

STRETCHING Toward a Safer Workplace

BY KRISTEN CHIPMAN

A LOT OF EMPHASIS is put on reducing workplace injuries in the steel industry—and rightfully so.

However, the most prevalent injuries aren't the dramatic ones like falls or ill-fated run-ins with materials or equipment—but rather are related to the relatively more low-profile areas of soft tissue injuries or musculoskeletal disorders (MSDs).

MSDs are disorders that affect the muscles, tendons, ligaments, joints, cartilage, nerves, blood vessels and spinal discs. Factors that increase the likelihood of MSDs are force, repetition, vibration, contact stress, posture, static positions and the environment. All of these risk factors are common in the steel industry.

But in most cases, these types of injuries are preventable. A small change in habit can make a large change in regards to MSD injuries. Stretching, short rest breaks, work rotation—even a few deep breaths and good foot placement—can all impact soft tissue injuries.



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Stretching for just a few minutes before work is one of the best ways to reduce the risk of these soft tissue injuries. Just as athletes need to stretch and warm up prior to participating in their sport, the same is true for a steel worker as well. Cold joints, tendons and muscles are more likely to get strained, and stretching gets our team members warmed up and ready to work safely.

Other benefits of pre-work stretching are:

- Raising the heart rate (the body is prepared for physical exertion)
- Speeding up nerve impulses (reflexes are enhanced)
- Reducing muscle tension while reducing the risk of injury—particularly to connective tissues, like tendons
- Increasing flexibility and joint mobility and sending oxygenated blood to the muscle groups

At Cianbro Fabrication and Coating Corporation, we stretch twice a day: once at the beginning of the shift and again after the lunch break. These stretches take just a few minutes each time, but it also allows us to get the crews together in one place (which we also use for quick safety talks). Another benefit is the opportunity to assess workers fitness for duty at the beginning of each shift; identifying soft tissue injuries early is another way to lessen the impact of these injuries for the worker.

To assist you in your own stretching endeavors, OSHA has established a set of ergonomic guidelines. These voluntary guidelines can help employers identify ergonomic hazards in their workplaces and implement feasible measures to control those hazards. They are not specific to the steel industry; much of the information in these guidelines applies across many industries.

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STRETCHES



1 Chin Tuck:
Place one finger on your chin & push your head straight back. Do not put your chin to your chest. Keep it up in the neutral position. Feel a stretch up the back of your neck. Hold for **10 seconds** & relax.



2 Head Tilt Right/Left:
Tilt head to side keeping shoulders horizontal & nose to the front. Lift opposite arm up & 45° away from your side while pushing the palm down & pulling the fingers up. Opposite hand will be on shoulder of arm being stretched. Hold for **10 seconds** & switch.



3 Shoulder Rolls:
5 slow shoulder rolls to the front & 5 to the back. Keep your arms down & roll your shoulders.

Shoulder Stretch:
Pull your arm across your body holding it in place with the opposite arm at the elbow as you look over the shoulder of the arm that is being pulled across your body. Make sure to keep your shoulders horizontal. Hold for **10 seconds** & switch.



Triceps Stretch:
Put your arm over head and pull down on your elbow with the opposite hand as you place your fingers between your shoulder blades. Hold for **10 seconds** & switch.



Upper Back Stretch:
Clasp your hands, intertwining your fingers, & push your arms straight out in front of you, palms are away from you. Push your belly to your spine & separate your shoulder blades. Hold for **10 seconds**.



7 Lateral Stretch:
Place one hand on your hip & the other arm overhead. Reach with the arm over your head & lean toward the hip being held. Keep your head up, hold for **10 seconds** & switch.



8 Hamstring Stretch:
Stand with your feet shoulder-width apart. Put one heel forward & put your hands on the opposite leg just above the knee. Your knee should be slightly bent. Push your buttocks back. Hold for **10 seconds** & switch.



9 Quad Stretch:
Assume staggered stance while keeping torso vertical. Anchor ball of foot of back leg to ground / floor; keep knee directly over ankle on front leg. Shift hips slightly forward & drop body weight down just slightly. Hold for **10 seconds** & switch.

Wrist Extension:
Put one arm out straight in front of you with the palm facing upwards. Apply pressure with the opposite hand to the palm until you feel a light stretch. Hold for **10 seconds** & switch.



Forearm Stretch:
Put both arms out straight in front of you and lock your elbows. Clench your fists & bend your wrists down at a 90° angle. Rotate your wrists 45° laterally. Hold for **10 seconds**.



Finger Stretch:
Hold both arms straight out in front of you with your palms facing down. Spread fingers apart for **10 seconds**.



Stretches do not cause injuries when instructions are followed but can bring to light soft tissues that are not functioning maximally as a result of other injury forces. Often a gradual introduction of the stretch is all that is necessary to resolve these issues. If discomfort persists, tell your safety specialist. That way you can be evaluated for the root cause of your discomfort. As with any exercise activity, when beginning the stretch regimen, do not overdo until you have had a chance to see how the stretches affect you. As always, if any stretch causes continued discomfort, you should avoid it.

Stretching is helpful for workers of all ages but is especially beneficial for aging workers. Having a structured stretching program educates workers on how to stretch different areas of their bodies. Many workers can and will use these learned

techniques to stretch at other times of the day, as needed, and with any luck will also take these stretching practices home with them, subsequently helping to prevent non-work-related injuries as well.

Key Components	Stretching Helps To:	Why Is Stretching Important?:
<ul style="list-style-type: none"> • Take your time: Stretch slowly & smoothly, never bounce. • Do each stretch gently: Maintain normal breathing during each movement. • You should not feel pain while stretching: If any stretch causes continued discomfort, you should avoid it. • Do not rush through stretches. • Focus attention on the muscle being stretched; try to limit movement in other parts of the body. 	<ul style="list-style-type: none"> • Relax your mind & “tune up” your body. • Increase flexibility & improve range of motion for joints. • Prevent injury during work, exercise & daily activity. • Prepare the muscles for more vigorous activity. • Develop “Body Awareness”. • Promote circulation. • Relieve tension & stress. • Promote recovery from “overuse” from repetitive motion. 	<ul style="list-style-type: none"> • As you age overtime muscles are used repetitively at home or at work, muscles tighten & overall flexibility can be minimized. • When moving around your muscles contract & drill into each other. This movement burns energy, builds up waste by-products, increases pressure & tightness in the muscle, making it more likely to snap like a twig. • By not stretching this can put a halt to active lifestyles, promote injury & even hinder normal motions. • A regular stretching program can help lengthen your muscles & restore normal function by increasing blood flow to the muscles, bringing nourishment ridding the body of by-products

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Here are a few things to remember for a successful stretching program:

- Assign a leader who believes in the benefits of the process
- Do stretches correctly
- Complete the same stretches every time
- Focus on the muscle group being used
- Do not bounce during stretching
- Hold stretches for a minimum of 10 seconds

According to a Congressional testimony (in 2000) from Charles N. Jeffress, assistant secretary for occupational safety and health with the U.S. Department of Labor, to the Subcommittee on Employment, Safety and Training of the Senate Health, Education, Labor and Pensions Committee: “Work-related musculoskeletal disorders are the most

widespread occupational health hazard facing our nation today. Nearly two million workers suffer work-related musculoskeletal disorders every year, and about 600,000 lose time from work as a result. Although the median number of lost workdays associated with these incidents is seven days, the most severe injuries can put people out of work for months and even permanently disable them. In addition, \$1 of every \$3 spent on workers’ compensation stems from insufficient ergonomic protection. The direct costs attributable to MSDs are \$15 to \$20 billion per year, with total annual costs reaching \$45 to \$54 billion.”

If stretching can prevent even a small percentage of these injuries, they may just be the most productive safety practice you can implement in terms of reduced pain and injury—and lost productivity. ■