



## Getting out the Cobwebs

### Warm up, stretching and good body mechanics help prevent injuries

As the weather gets warmer, people start tackling their “spring cleaning” and participating in outdoor activities. While these activities may provide a great deal of personal benefit, both physical and mental, it is important to remember they also are a potential for injury. Rather than risk injury, keep these tips in mind as prevention is the best medicine.

#### Stay Hydrated

Many forget, or don't realize, that staying hydrated is very important to prevent injury. The human body needs water to function properly and, as people perform more strenuous activities like cleaning out the garage/house, lawn care/gardening, and other home projects, the risk of dehydration becomes greater, especially as the temperature increases. Signs and symptoms of dehydration include, but are not limited to, headache, dizziness, loss of coordination, muscle fatigue and a decrease in physical and mental performance. As muscles get tired, they are at a higher risk of becoming injured, strained or “pulled.”



Staying hydrated is crucial to feeling good and working or exercising injury-free. Alternatively, it is important not to drink too much water—no more than one quart per hour of fluid—as this can result in over-hydration (hyponatremia) and be very dangerous.

#### Warm Up

The human body is similar to an automobile in that it runs better after a brief five to 10 minute warm-up so injuries are less likely to occur when people warm up before performing strenuous activities. Performing the warm-up exercises in this program before beginning strenuous activities can help prevent injuries such as:

- Rotator cuff strain or tear
- Low back strains
- Achilles tendon strain or tear
- Hamstring strains or tears
- Other sprains and strains

Even better, incorporate the exercises and stretches on the following pages into a regular exercise routine to avoid injury because unexpected tasks or opportunities may occur at any time.

# Warm-Up

## Arm Pendulums

(aka Codman's Exercise)

Sets	Time	Rest
2-3	30 seconds to 1 minute per arm	20 to 30 seconds



1. Spread feet apart and bend slightly at the waist, letting one arm dangle freely while supporting yourself on a table or counter with the other arm.
2. Gently sway your hips from side to side allowing your body's momentum to assist in the swinging the dangling arm.
3. Swing the dangling arm for 30 seconds to one minute, then change arms.
4. Repeat until two to three sets are completed.

**This exercise helps warm-up the shoulder.**

# Warm-Up

## Pec Doorway Stretch

Reps	Time	Rest
2 to 3	10 to 30 seconds	25 to 30 seconds



1. Stand on one side of a doorway on the side without the door.
2. With your arms bent, raise them until they are parallel to the floor resting your hands, forearms and elbows on the surrounding wall or door frame.
3. Without moving your arms, take one step into the doorway and hold that position for 10 to 30 seconds, (you should feel your chest muscles stretch) then step back to your starting position. Care should be taken not to continue if there is pain.
4. Repeat until two to three repetitions are completed.

**This exercise stretches the chest and its muscles and assists with posture and preventing strains.**

# Warm-Up

## Back Extensions

(Three options–A, B or C)

Sets	Time	Rest
3 to 5	5 to 10 seconds	20 to 30 seconds



- A. Stand with your feet apart and place the palms of your hands flat against the lower part of your back. Lean back and use your hands as counter-pressure on your pelvis to keep from falling backwards. Hold for a maximum of five to 10 seconds, then return to your starting position. For a better stretch, “flip” your hands so your thumbs point down and your palms flat against your lower back. Repeat three to five times.
- B. On the floor, lay on your stomach with your arms bent at your side and toes pointed at the floor. Leaving your arms bent, push your shoulders up as high as possible using your hands for balance. Hold for a maximum of five to 10 seconds and slowly return to your starting position. Repeat three to five times.
- C. On the floor, lay on your stomach with your arms bent at your side, palms flat and toes pointed at the floor. Using your hands, push your shoulders up as high as possible. Hold for five to 10 seconds max, then slowly return to your starting position. Repeat three to five times.

**This exercise helps prevent disc injuries and keeps the spine mobile.**

# Warm-Up

## Hamstring Stretch

Sets	Time	Rest
2 each leg	10 to 20 seconds	20 to 30 seconds



1. Stand with your feet shoulder width apart, back straight and hand on something for support and balance—wall, table or chair.
2. Gently swing one leg forward and backwards with toes pointed up and knee straight until a small stretch is felt along the back of the leg above and possibly below your extended knee.
3. Continue to swing the leg for 10 to 20 seconds maintaining your posture and position.
4. Repeat with the opposite leg. **Care should be taken not to swing too hard to cause an injury.**

**This exercise stretches hamstring muscles in the back of the legs and helps prevent strains.**



# Warm-Up

## Heel Cord Stair Stretch

Sets	Time	Rest
2	10 to 30 seconds	60 seconds



1. Stand on the bottom step of a staircase and hold the handrail with one hand.
2. Slowly, slide one foot back until your heel hangs off the edge of the stair.
3. Gently let your hanging heel drop below the edge of the stair until a stretch is felt in the calf. Hold for 10 to 30 seconds. To prevent injury, **DO NOT** bounce and **DO NOT** force the stretch.
4. Repeat two times, then change legs.

**This exercise helps stretch the Achilles tendons and may help prevent tendonitis and strains (tears).**

# Body Mechanics

## Lifting from the Ground

## Setting on the Ground



**Proper form**



**Improper form**

- When lifting from the ground, face the object with your feet pointed forward and about shoulder-width apart. Keep your back straight and bend at the knees pointing your hips backwards.
- Use your knees and legs to raise you back to a standing position. **DO NOT pull the object with your back.**
- Lifting something from the ground with your back bending from the hips can lead to serious pain and injury.
- To place a heavy object on the ground, from a standing position bend your knees and let your legs and knees lower you, in the same manner as above, but reversed.

# Body Mechanics

## Lifting Heavy Objects without Twisting



**Proper form**



**Improper form**

- When lifting from the ground, face the object with your feet pointed forward and about shoulder-width apart. **DO NOT put one foot in front of the other so your hips are not facing the object to be lifted. A twisted stance puts the spine in compromised positions, stability may be lost and makes your more susceptible to injury.**
- Keep your back straight and bend at the knees pointing your hips backwards.
- Use your knees and legs to raise you back to a standing position. **DO NOT pull the object with your back.**
- Lifting something from the ground with your back bending from the hips can lead to serious pain and injury.
- To place a heavy object on the ground, from a standing position bend your knees and let your legs and knees lower you, in the same manner as above, but reversed.



# Body Mechanics

## Walking while Carrying Something Heavy



**Proper form**



**Improper form**

- If you have to carry something heavy and you cannot use a cart or wheel barrow, make sure to keep the object as close to your body as possible and at chest level.
- Carrying something heavy too low or too far from your body puts your back, neck, arms and legs at serious risk of injury.
- **Make sure you know the weight limit of how much you can carry. Remember, it is better to ask for help than end up with an injury.**

# Body Mechanics

## Shoveling

**Proper form**



**Improper form**



- Regardless what you shovel--snow, dirt, mulch, etc.,—**LET THE TOOL DO THE JOB.**
- Make sure to keep your back straight and use your foot and leg to push a shovel into the ground—**NOT** your arms.
- Bend your knees to get down lower and push up with your knees/legs to lift the dirt/snow from the ground.
- **DO NOT** keep your back in a bent position while lifting because this can injure your back.
- Make sure you have the right tool for the right job.
- If what you are shoveling is heavy, take smaller amounts and use a cart or wheelbarrow to move it.

## Sports Medicine, Injury Prevention Expertise Provided by Team Chudik

The goal of Dr. Steven Chudik and his OTRF health performance team is to provide you with reliable , research-based information to help prevent injuries and perform at your best. This program was created for anyone tackling a chore around the house that you maybe haven't done for awhile, or a work task that requires lifting, carrying and/or reaching to help ensure you "get out the cobwebs" before you start. To maximize the benefit of this program, it is important to follow the recommended number of sets and repetitions while maintaining proper form at all times. Failure to do so could result in an injury. To see and download OTRF's other injury prevention programs for various sports, visit [otrfund.org](http://otrfund.org) and click on Sports Performance Programs at the top of the home page. For printed copies, please email us at [contactus@chudikmd.com/](mailto:contactus@chudikmd.com/).

### About OTRF

Steven Chudik, orthopaedic surgeon and sports medicine physician with the Steven Chudik Shoulder and Knee Injury Clinic, founded the Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation (OTRF) in 2007. OTRF is a nonprofit, 501(c)(3) organization dedicated to funding research and education for the purpose of keeping people active and healthy. Dr. Chudik continually receives requests from patients, athletic trainers and clinicians for up-to-date medical information and unbiased research on injury prevention. To fulfill these requests, OTRF produces and distributes an E-newsletter, shares information about health performance-related issues like nutrition and fitness, hosts athletic training educational programs, conducts seminars for healthcare providers and the community and funds unbiased research and development particularly in emerging areas such as arthroscopic and minimally invasive surgery. However, none of this is possible without ongoing financial support. We are extremely grateful to all those who have contributed in the past. Many of the donations came from patients or their family members who benefited from Dr. Chudik's orthopaedic and sports medicine expertise. If you are interested in helping OTRF fund education and research programs, please visit [otrfund.org/](http://otrfund.org/).



#### **Steven C. Chudik, MD**

Board-certified physician in orthopaedics and sports medicine with the Steven Chudik Shoulder and Knee Injury Clinic, Dr. Chudik is the founder and president of the Orthopaedic Sports Medicine Teaching and Research Foundation OTRF) and an associate professor at Loyola School of Medicine.



#### **Christopher Carlson, PT, MPT OTRF Editor & Author**

As a licensed physical therapist Chris sees and treats injuries of all types. However, for the past 12 years his focus has been in outpatient orthopaedics. Chris also is a clinic director overseeing patient care and daily business operations.



#### **Keith Tesch, CSCS, CNT OTRF Exercise Consultant**

For more than ten years, Keith has been in the fitness industry working as a personal trainer and sports performance specialist, a position he currently holds. During the past five years, his focus has been helping individuals regain their strength and range of motion.



#### **James Wolf, PT, DPT, OCS OTRF Consultant**

A licensed physical therapist and board-certified orthopaedic clinical specialist, James holds a doctor of physical therapy degree from Northwestern University. In his current position, he treats a variety of orthopaedic patients including competitive and recreational athletes.

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## Important Notice

Not all exercises are suitable for everyone. Consult your physician before beginning this or any other exercise program. Also, always warm up for several minutes before beginning a workout and **NEVER** exercise beyond the level at which you feel comfortable. If at any time you feel you are exercising beyond your current fitness abilities, or feel discomfort, discontinue exercise immediately and reconsider your participation in this program.

The Getting out the Cobwebs stretching and body mechanics program provided in this publication should not be attempted by anyone who does not meet minimum fitness requirements, or who has a history of hip, knee, ankle, shoulder, elbow, wrist or spinal (neck or back) problems. **THIS WARNING IS NOT TO BE DISCOUNTED.** There are many other fitness alternatives if you have weaknesses, or are prone to injuries. The user assumes all risks of injury in the use of this program.

## Sports Medicine Injury Clinic

**Monday Evenings**  
**Call 630-324-0402**  
*Ask for Dr. Chudik*

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Orthopaedic Surgery & Sports Medicine  
Teaching & Research Foundation  
1010 Executive Court, Suite 250  
Westmont, IL 60559

[otrfund.org](http://otrfund.org)