

# How to Lift 5 Gallon Water Bottles Safely

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Five-gallon, water bottles can cause damage to the spine if lifted improperly.

One gallon of water weighs approximately 8.33 lbs. Therefore, lifting 5 gallons of water is equivalent to lifting more than 40 lbs. According to Cornell University's ergonomics department, lifting a 30-lb. container can exert a total compressive force of 2,214-lbs.-per-inch on the muscles of the upper body. The clockwise and counterclockwise motions involved in lifting and lowering heavy objects can result in disabling, lower-back injuries due to resultant changes in spine geometry. To prevent spine damage, Cornell recommends body positions that lessen force on the back by transferring weight bearing to the legs.

## Instructions

- 1 Spread both of your feet out to the width of your shoulders. Plant your feet firmly on the ground so that any weight lifted will be evenly distributed between the soles of the feet. This will also ensure that your center of gravity is centralized in the abdominal cavity.

**2** Suck in your stomach to tighten the abdominal cavity muscles. Keep your back as straight as possible by tucking your chin in, so your head and neck follow the straight line of the back. Squat close to the 5-gallon, water bottle. Squatting causes the knees to bend, forcing the legs to absorb most of the shock from the lift.

**3** Grip the water bottle with the palms of both hands, as opposed to just using your fingertips, and drag the bottle close to you while holding your elbows close to your body. This action will keep your body weight centered. Upon the first lift, the weight of the bottle will bear on your hips and thighs instead of your spine when this position is maintained.

**4** Straighten the legs and suck your stomach in while lifting the bottle. This will balance the shoulders and chest over the lower spine, protecting lumbar vertebrae. Keep the bottle under your field of vision, to prevent slips and falls. If you have to turn with the bottle in hand, turn your entire body, feet first, to prevent twisting of the spine.

**5** Keep a firm grip on the bottle until you have reached your destination. Spread your feet apart again to shoulder width and tighten your abdominal muscles. Keep your spine as straight as possible to set the load down. These actions will maintain your center of gravity and allow the lower body to absorb the shock of positioning the 5-gallon load.