

## Neutral Spine

Neutral spine is the natural position of the spine when all 3 curves of the spine -- cervical (neck), thoracic (middle) and lumbar (lower) -- are present and in good alignment. The neutral spine position can also be thought of as the alignment in which a spine tolerates back discomfort the best. The position can vary from person to person and, in some cases, can vary over time depending on changes in the spine and the surrounding structures.

## Neutral Spine Position

Although many individuals have a “tolerance range”, that is, variances from absolute neutral position for the least spine discomfort, depending on the nature of the spinal stress, there is generally a limited range of lumbar motion in which the patient may safely move. Patients need to become skilled at placing their lumbar spine in a single position when there are significant forces on the spine. Significant forces are:

- Prolonged positioning (e.g. sitting, standing, lying)
- Major movements of the body (e.g. getting out of bed, getting down and up from the floor)
- Movements requiring force (e.g. lifting, reaching, pushing)

The amount of muscle effort needed to maintain neutral spine depends upon the amount of force acting on that spine. Maintaining neutral spine position while standing or walking at an easy pace may take very little effort. When properly placed sitting in neutral need not require any active abdominal contraction. Heavy work, lifting, contact sports may, at times, require maximal abdominal contraction to brace the spine. In order for neutral spine positioning in daily activities to be practical and efficient individuals must learn to use only the amount of muscle effort needed in a given situation. Lack of flexibility in the hip, hamstring, leg and back muscles may make maintenance of the neutral spine difficult or impossible.

## Neutral Spine - Proper Lifting / Lowering Techniques

- Take a wide stance
- Use your stomach muscles
- Use smooth, even motions when lifting
- Keep load close to your body
- Use your legs to push up and lift the load
- Do not use your upper body or back to lift!
- Lift the load close to your body and straighten your legs.
- Stand up straight before walking with the load
- Move your feet instead of twisting your body
- Lower the load to the ground by bending your knees, not your back
- Keep the load close to your body
- Never bend your upper body or back
- Keep your hands and feet clear

### DO NOT:

- Lift while reaching or stretching
- Lift from an uncomfortable posture
- Fight to recover a dropped object (let it go)!
- Twist and lift
- Lift with one hand (unbalanced)
- Lift loads across obstacles



To learn more on how we can help you with Neutral Spine Safety and Lifting Techniques for you or a family member, please give our office a call and ask for one of our Physical Therapist. Steve Coppola and Meghan Sirois are available at our Concord office, Kristin “KK” Helling at our Tilton office, Steve Gordon at our Candia location, George Sparrow in the Concord Center and Thomas Naro in Farmington.