



## Upper Arlington Preventative Primary Care

### To Reduce Back Pain Lower Your Stress

*Steven T. Devor, Ph.D., FACSM*

*Exercise Physiology, Upper Arlington Preventative Primary Care*

Chronic, and sometimes debilitating, back pain is a complex medical condition that involves far more than just the physical structures surrounding the spine. It also involves the mind. If you experience severe back pain that simply will not go away despite treatment, the most recent guidelines on treating lower back pain from the American Pain Society recommend that you address your mind as well as your body.

How is it that your mind can have an influence on back pain? One reason is that psychological distress has been linked to a greater likelihood of both developing back pain and experiencing a slow recovery from a back injury. For example, in a Swedish study, people who tended to “catastrophize” (meaning they assumed the worst in any given situation) had significantly worse back pain. And in a study conducted in the United States, people who reported higher levels of anger and psychological distress also reported higher levels of chronic back pain.

These and other findings underscore the need for an integrated, multidimensional or holistic, view of back pain. There needs to be a recognition that the physical pain we feel involves much more than simply the muscles and bones that comprise your back.

Most people are familiar with the “fight-or-flight” response. When confronted by a threat – whether it is physical or emotional, real or even imagined - the powerful hormone adrenaline is released into your bloodstream. This in turn triggers a complex cascade of reactions, leading to a state of hyper-alertness.

Being hyper-alert in a truly stressful or unsafe situation is not generally a problem. The difficulty comes when this heightened state of “red alert” in your body becomes our default setting due to daily stress. We know that stress is an inescapable fact of modern life. We also now recognize that if we are hyper-aware of, and hyper-responsive to, the multitude of stressors we face on a daily level we start to “burn out” and become susceptible to a number of ailments, including depression and heart disease. On the musculoskeletal level, the fight-or-flight response causes muscles to tense in preparation for action. If this response is not deactivated, muscles can go into painful spasms.

While stress-relaxation techniques cannot on their own make a tense situation disappear, they can help you consciously release any muscle tension you may have accumulated in anticipation of or in response to the situation.

Here are some techniques to consider for help with relaxation and potentially back pain relief:

1. **Breathing exercises.** One breathing technique that can quiet the fight-or-flight response is known as “1:2 breathing.” Try a pattern of inhaling to the count of three and exhaling to the count of six. Repeat this pattern five times with your eyes closed.
2. **Body scan.** Begin by either lying or sitting down. Do several cycles of 1:2 breathing. Once you feel relaxed, conduct a full mental sweep of your body, as though you were undergoing a deliberate and complete X-ray, from your feet to your head. Go slowly but steadily, noting any areas of tightness or tension. Once you have finished the scan, return to those tight or tense areas and let your attention linger there. Consciously “breathe into” those areas for several breathing cycles and imagine the muscles relaxing. The body scan takes time, but if done on a regular basis, it can help you become aware of the early warning signs of an impending back pain attack. In particular, it can help you become aware of your individual “signal spots,” those places that hurt when your back first begins acting up before a full-blown attack strikes you. You can then take action, pacing yourself appropriately.
3. **Meditation.** This practice has been found to reduce stress and counteract the fight-or-flight response. One meditation technique is known as “taking the one chair.” Imagine yourself in a room in which there is only a single chair. Sit on the chair and observe your thoughts and emotions pass in front of you. Remember that you are occupying the only chair in the room, so your thoughts have no place to rest. Allow them to come and go without getting caught up in them, then watch them as they glide out of the room. The key is to not dwell, let things go as they enter your mind.
4. **Exercise.** Exercise (particularly more meditative types of exercise such as yoga, walking, or Tai Chi) is also a potent stress reducer. Be sure to ask your doctor for guidelines relevant to your individual condition, just in case you should steer clear of a particular type of exercise.