

Watch Your Back:

Improving Your Posture and the Ergonomics of Clinic to Prevent Back Pain

By Dr. Cather McKay



As dermatologists we spend our days leaning over our patients performing procedures and skin exams. Poor posture and repetitive strain lead to musculoskeletal injury over time.

What causes back and neck pain?

Back pain can generally be categorized as nociceptive or neuropathic. Physical stressors or repetitive strain on muscles activate nociceptors, while damage to nerve tissue itself leads to neuropathic pain.

How can ergonomic stressors in a clinic day lead to back pain?

Dermatologists bend in many directions to see all areas of our patients' skin. During procedures, we spend long periods of time in cervical flexion looking down at our patients. Improper posture while seated, standing, or bending, leads to muscle strain and pain over time. Weak or tight muscles and poor patient positioning further contribute to these issues.

What is "proper posture?"

Good posture allows for the least amount of strain on our muscles, joints, and connective tissues. For the back, posture should maintain the spine's natural S-curve.

While standing:

- Roll the shoulders down and back, engaging the latissimus dorsi and deltoids.
- Tuck the pelvis slightly to a neutral position, elongating the lower back, and engaging the lower abdominal and gluteal muscles.
- Distribute weight evenly between both legs.
- Example Cue: “Ears above the shoulders and shoulders above the hips.”

While bending:

- Keep the above muscles engaged while hinging at the hips. Avoid rounding the upper or lower spine. To lower further, bend at the knees.

While seated:

- Maintain the spine’s natural S-curve with weight distributed equally between both hips.
- Adjust the height of your chair so that feet are flat on the floor and hips and knees are both at a 90-degree bend.
- Whether looking at a patient, computer screen, or microscope, the goal is to minimize prolonged or extreme neck flexion. Microscopes and computers can be adjusted to allow for a neutral cervical spine. For procedure-heavy practices, use of magnifying loupes help to maintain proper head and neck position.

How can I improve my posture?

1. **Strengthening and stretching** the muscles that support the spine will make it easier to maintain a proper posture. Yoga and Pilates are great ways to do both. Cardiovascular exercise and strength training are important as well. If new to a type of exercise, consider using a personal trainer or instructor who can teach you the proper form to avoid injury.
2. **Take breaks** when in the same position for prolonged periods of time. Set a reminder to stretch every few hours or between long cases.
3. **Posture training devices or clothing** do exist, however the evidence supporting their use is largely anecdotal.
4. Invest in equipment such as **adjustable chairs, exam tables, and anti-fatigue floor mats**.

How can patients be properly positioned to decrease ergonomic strain?

In a busy clinic, time may be wasted repositioning patients. Have preset table positions and/or clarify to your staff how patients should be positioned prior to your entry into the room.

For procedures, the patient should be as flat as tolerated with the surgical plane parallel to the floor. When the patient is lying flat, the topmost part of the patient (i.e. their abdomen if supine or back if prone) should be at the level of the surgical team’s waist. For team members who are shorter in height, a stool can be used to ensure the patient is at the level of their waist.

For skin exams, develop a standardized approach. Exams may include a combination of standing, seated, and supine positions for the patient to avoid hunching over to see hard-to-reach areas.

What happens if I do develop back pain?

Back pain is highly prevalent, and chances are it will happen at some point in life. Should it occur, keep moving. Inactivity exacerbates back pain. Consider seeking input of a physical therapist early. Consult a specialist such as an orthopedist for chronic back pain if pain persists after an injury or if associated with neurologic symptoms.

Habits to protect our back take time and effort, and are best learned early to decrease morbidity and disability. For more information and for exercise and stretching recommendations, visit the American Academy of Orthopaedic Surgeons' [Spine Conditioning Program](#).

Acknowledgements and References

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