

## 14 Tips to Prevent Musculoskeletal Disorders (MSDs)

It's no mystery why dental hygienists tend to suffer musculoskeletal disorders (MSDs). Their work requires bending, stretching and forceful repetitive movements that place them at high risk of injury. The good news for dental workers is that they can take simple steps to reduce the risk of MSDs. After years of research, Zenith has found that dental professionals who follow these 14 tips can work more effectively while reducing the risk factors that lead to MSDs.

1. Use "neutral" hand postures when possible. Avoid bent hand/wrist positions that place extra stress on muscles, nerves and tendons.
2. Wear gloves that do not resist your hands' natural movements. Gloves that fit a bit loosely may be better than tight ones. Consider using right- and left-fitting gloves instead of ambidextrous types.
3. Use ultrasonic scaling devices when appropriate, especially for heavy, tenacious calculus deposits. This minimizes repetitive stress on the fingers, hand and wrist.
4. Move around the patient every few minutes so that you don't remain in a static position for too long--alternate standing and sitting when possible.
5. Use sharp instruments. An instrument with a sharp cutting edge decreases the number of strokes required to remove deposits, reduces the pressure you need to apply against the tooth and offers a more relaxed grasp and controlled stroke. Sharpen instruments often.
6. Minimize fatigue by choosing the right instruments. Solid-core instruments tend to increase hand fatigue compared to lighter hollow-handle instruments. Small-diameter handles decrease control and increase muscle fatigue while large-diameter handles maximize control and reduce muscle cramping. Knurled or textured handles maximize control and decrease hand fatigue.
7. Use task chairs that provide the best access to the patient's mouth. A good chair:
  - allows you to sit close to the patient's head or straddle the headrest when sitting behind the patient;
  - adjusts up or down to allow your thighs to be relatively horizontal with both feet flat on the floor;
  - has a footrest, such as a metal ring around the chair legs; and provides armrests for elbow support that do not block access to the patient.
8. Only use the force necessary to accomplish the task. Use mechanical equipment that's in good working order and that's regularly lubricated so that you can activate controls with minimal effort.
9. Schedule enough time between patients for your muscles and tendons to recover from stress. Spread out difficult or heavy-calculus patients so they're not scheduled back-to-back.
10. Take frequent rest breaks, particularly if experiencing fatigue, soreness or pain. Whenever possible, use the "other" hand or try a different, less fatiguing procedure.

11. Patient education is an important element of your MSD prevention plan. Encourage patients to return for frequent cleanings. This reduces the strenuous work needed to treat excessive calculus buildup. Educating patients also gives you a chance to rest your hands and wrists during scaling procedures.
12. Think holistically. MSDs can result from diabetes, rheumatoid arthritis or previous trauma. By eliminating or reducing repetitive hand/wrist movements off the job (such as knitting, tennis, typing or writing), you can cut down on work-related MSD injuries.
13. Control sources of mental stress as much as possible. Professional counseling or stress management workshops may help.
14. Engage in physical conditioning to build endurance, reduce body tension and improve the body's ability to regenerate. Aerobics, stretching, yoga and even brief hand/wrist exercises during scaling procedures can help prevent serious problems.

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