Chairside Stretching

The key to injury prevention lies not in a single pill, pair of loupes, or daily abdominal exercise, but in identifying and addressing multiple key risk factors. The following risk factors can lead to work-related pain:

- Prolonged, awkward postures
- Forceful, repetitive movements
- Muscle imbalances
- Improper positioning of operator or patient
- Operatory layout
- Lack of magnification
- Poor or improper adjustment of ergonomic equipment
- Infrequent breaks
- Poor flexibility
- Weak postural muscles
- Stress

Of these risk factors, prolonged, awkward posture is the greatest culprit for the demise of hygienist’s musculoskeletal health. The body is designed to tolerate brief awkward postures, such as arms elevated and

dentists.

The culprits

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Of these risk factors, prolonged, awkward posture is the greatest culprit for the demise of hygienist’s musculoskeletal health. The body is designed to tolerate brief awkward postures, such as arms elevated and
head forward. It is not designed to hold these awkward postures for several minutes at a time throughout the day, as many hygienists do.

Prolonged, awkward postures

Neutral posture of the spine, shoulders, arms, and hands should be your first line of defense against work-related pain. Maintaining this posture throughout the day requires strong stabilizing muscles of the trunk and shoulder girdle. (However, strengthening the wrong muscles can cause far more problems than not strengthening at all.) If posture deviates from neutral, the muscles must contract harder to maintain working posture. As these postural muscles become fatigued, slouched posture often results, causing muscle compensation and subsequent pain. An abundance of literature is available on proper operator posture, positioning, and magnification. However, there are few resources on correct strengthening for dental professionals (see author’s biographical information).

You should make every effort to preserve the three primary curves of your spine (cervical, thoracic and lumbar) when you are operating (see figure 1). Have a colleague assess your posture from the side. You should be able to draw a straight line through your ears, shoulders and hips. However, in the operatory it is nearly impossible to keep your head in a neutral posture all the time. Magnification can help decrease forward head tilt and enhance visibility of the oral cavity.

Even with the best ergonomic equipment and postural/positioning intentions, you may still find yourself in awkward postures. These postures often involve forward bending and twisting of the head, neck, and trunk (see figure 2) or prolonged elevation of one or both arms and shoulders. Over time, muscle imbalances (tightness in one group of muscles and weakness in the opposing group) can develop and lead to a plethora of musculoskeletal pain syndromes. Additionally, sustained muscle contractions can cause ischemia and the development of “tender spots,” or trigger points, in these tight muscles — even in a “perfect” posture, more than half of...