

# Summary of the Free motion elbow supports clinical studies

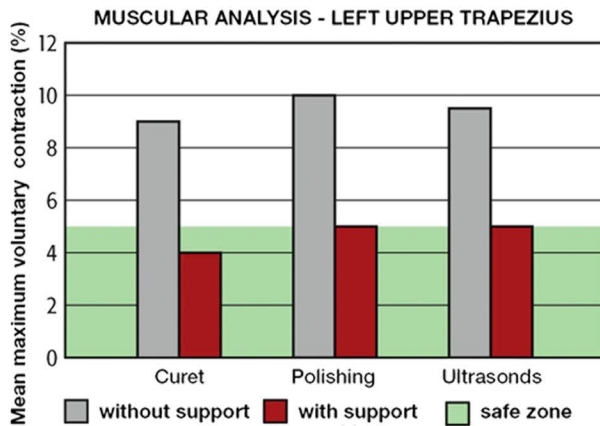
Conference summary Prevention of MSD in dental clinic,  
ASSTSAS - Quebec dental day, 2002 may

Dental work requires precise and controlled movements, often causing the body to adopt static and awkward positions which can strain the neck, back and shoulder muscles. Over a certain period of time, an inadequate posture can cause discomfort, pain and many illnesses (tendinitis, bursitis, etc.)

The clinical studies have demonstrated that the use of the Free motion elbow supports by dental hygienists significantly reduced the intensity of muscular contractions in the arms and shoulders. By helping dental hygienists realize they were always working with their arms in the air, the use of gel padded mobile elbow supports also helped them adopt a more comfortable and secure work posture.

Even when the arms appear to be relaxed along the body, shoulder and upper back muscles must contract in order to maintain the stability required by the precise work of the hands. The Free motion elbow supports provide adequate support to the arms while providing full range horizontal motion. Since the shape of the elbow is moulded by the soft cushion, the support system easily follows the user's movements.

## Average percentage of maximum voluntary contraction (MVC) with and without Free motion elbow supports for the upper trapezius muscles



Clinical studies performed by ASSTSAS (Association for health and safety in the workplace, social affairs sector), UQAM (Quebec University in Montreal) and IRSST (Work place health and safety research institute).

Studies on posture have shown that Posiflex not only supports the arms, but also promotes the adoption of safer and healthier work positions. For example, by using the support for the left trapezius, muscle stress is reduced by approximately 50%.

The average motor unit potential (MUP) of the upper trapezius muscles with and without Free motion elbow supports. The safe limit MUP limit is 5%; the elbow rests make it possible to achieve, or come very close to this limit.