

Summary of the Posiflex 8 clinical studies

Article summary Pain associated with the work of dental assistants dentaires : causes and solutions, *Journal of the Canadian Dental Assistants' Association, ASSTSAS - volume 49, 2008 Nov*

Being able to work pain-free is a real challenge for dental assistants. This article will attempt to explain some of the causes of this pain and also provide information about new support features for dental assistant stools designed to reduce work-related pain. Users were recently surveyed to investigate the effectiveness of this new stool.

The Association for health and safety (ASSTSAS) has been studying musculoskeletal disorders (MSDs) in dental clinics since 1977. Ergonomic studies were conducted, leading to the publication of *Work-Related MSDs in Dental Clinics*, in 2002, revised in 2009. In 2006, ASSTSAS asked Posiflex to develop a fixed, wider version of their elbow rests that would provide enough support for the assistant when working facing the patient (without having to twist her back). The Posiflex 8, a stool featuring a "wide figure 8-shaped elbow rests and torso support". In 2008, ASSTSAS contacted many of the dental clinics that had purchased the new stool and asked the assistants to fill out a questionnaire about its use.

The purpose of the study was to identify changes made with the use of the stool with a wide figure 8 elbow and torso support by assistants who were accustomed to using a stool with a narrow torso support. The respondents were asked to indicate how long it took before they observed an improvement or deterioration in their symptoms. The average time required for changes to occur was 5 weeks.

Problem situation

The dental assistant has to hold the instruments (suction, air-water syringe, light, etc.) accurately and without moving to avoid getting in the dentist's way. This means that she has to contract her shoulders and upper back. This stool has a narrow torso support and no lumbar support.



Solution: Assistant's stool with wide figure 8 elbow and torso support plus lumbar support

A wide figure 8 elbow and torso support provides support for the assistant's elbows and allows her to get closer to the patient for better visibility into the oral cavity. It is recognized that lumbar support is important for reducing static contractions of the lower and upper back muscles (Hardage, 1984).



Frequent back and arm pain

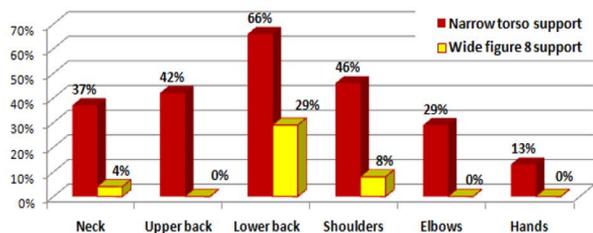


Figure 9. Percentage of assistants with pain quite often or all the time in the back and arms with the old stool with a "narrow torso support" compared to the new stool with "wide figure 8 support" (24 subjects).

Study summary

The purpose of developing this new "wide figure 8 elbows and torso support" was to reduce the static positions required to hold instruments accurately, without moving. With the wider support, three-quarters of the assistants were able to support both elbows. Lower back pain was significantly reduced (from 66% to 29%). However, while this chair was designed to work facing the patient, 42% of the assistants continued to work with their back twisted. It is therefore surprising that 91% still saw an improvement in their symptoms. The optimal forward facing position requires cooperation from the dentist, who could also benefit from this change in positioning the patient.