

**ERGONOMICS**

Working together to prevent the team from injury requires creating feasible solutions.

**MEET THE AUTHOR**

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Benita Altier is a Licensed Veterinary Technician (LVT) and Veterinary Technician Specialist (VTS) in Dentistry. She has worked in the profession since 1988 in both general small animal practices and at an equine and llama neonatal referral hospital. Through her business, Pawsitive Dental Education, she has been bringing professional dental instruction to veterinary hospitals and conferences across the US and Canada since 2008. Benita enjoys motivating and encouraging other veterinary professionals to do their very best and learn something new every day. Advocating for the oral health of pets and prevention of oral pain in animals is her passion. She currently resides in the state of Washington.

Ergonomics for Veterinary Dentistry Professionals and Patients

Work-related musculoskeletal disorders (WMSD) are occurring daily in our veterinary profession.^{2,3} According to the American Veterinary Medical Association's (AVMA's) *Introduction to Ergonomics*, it's likely these types of work-related injuries cause physical and economic hardships on personnel and veterinary practices.

WMSDs may be preventable and risks factors minimized if veterinary professionals evaluate their working environment through a method referred to as **Participatory Ergonomics**.^{2,3}

ERGONOMICS AND VETERINARY DENTAL WORK

What is ergonomics and, specifically, how does it relate to the practice of professional veterinary dentistry? The term *ergonomics* means “the laws of work.” Ergonomics research focuses on how the human body and mind function in response to the equipment and technology we use in the workplace and adaptation disparities regarding all of the elements of our working environment.¹

The AVMA’s Ergonomics Task Force identified risk factors associated with common WMSDs: awkward postures, high-hand force, highly repetitive motions, repeated impact, frequent or awkward lifting and moderate to high hand-arm vibration.²

VETERINARY DENTISTRY TYPICALLY INVOLVES:

- Lifting heavy patients above waist height
- Standing or sitting for long periods of time in awkward postures
- Pinch-grasp force while using hand and power instrumentation
- Utilizing vibrating ultrasonic instrumentation
- Highly repetitive motions
- Awkward reaching for equipment and instruments
- Inability to adjust patient to operator
- Inability to sit with neutral spinal position
- Lengthy procedure times
- Poor lighting and magnification

Participatory Ergonomics requires each team member to get involved in recognizing risks and creating clear solutions.^{3,4,6-8} In preparation for creating an ergonomic work environment for the veterinary dentistry team, here are some action steps the team can take to improve their overall physical and mental wellbeing.

ACTION ITEMS

Gather the information in this list and prepare to make a difference.

- Take several photographs of you and your team working in the dental operator.
- Obtain a short video during a dental procedure.
- Create a list of the equipment that is required to be in your dental operator.
- List items that do not need to be around the dental table.
- What side of the dental table do you have your dental unit and instruments on?
- What light source do you use to illuminate the oral cavity while working?
- Describe the chair you have to sit on.
- How many hours per day are you engaged in the practice of dentistry?
- How do you hold the instruments you use?
- Write a description of the handles on your hand and power instruments; what are the diameter, texture and weight of the handles?
- Scheduling of patients and your time, how could that be done differently to minimize risks of WMSD?

In Part 2 of this article, which will be highlighted in the Fall 2018 issue, I’ll provide guidance on how we can begin to adjust the work environment by employing **Participatory Ergonomics** to prevent WMSDs specifically related to the practice of veterinary dentistry. **TVN**

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