Avoiding Back Pain: Correct Muscle Activation

Strength training, stretching, and intentional movements can help veterinary team members prevent a common workplace injury.

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The back is a common area of discomfort among the entire population. Thirty-nine percent of adults in the United States have reportedly experienced back pain,¹ and estimates suggest that up to 84% of the population will suffer from it at some point in their lifetime.² However, veterinary professionals may be at an increased risk for occupational injuries, including those involving the back, given the physical requirements of the role.³ Although it is impossible to eliminate these hazardous situations altogether, you can take action to decrease your risk of back pain. Discover how to achieve this through intentional activation and stretching of the appropriate muscle groups.

WHY DOES MY BACK HURT?

Although back discomfort can result from a number of scenarios, the unpredictable nature of patient care and restraint tends to leave veterinary nurses’ backs vulnerable to harm. The American Veterinary Medical Association lists awkward postures and forceful exertions as risk factors for musculoskeletal injury within the veterinary workplace.⁴ Even with use of chemical restraint, patients may react to sensory stimulation and require abrupt manual control.⁵ These scenarios can involve erratic twisting movements, leading to muscle or tendon tears, overstretched ligaments, or more severe damage for the practitioner. Additionally, poor lifting technique puts strain on the back.⁶ Bending over at the waist and allowing the spine to round creates stress on both the supporting structures and intervertebral discs. Whether you’re bending over to pick up a patient, bag of kibble, or box of inventory, a single occurrence of improper lifting can result in acute pain or trauma.

STRENGTH TRAINING EXERCISES

Working to strengthen the muscles that make up the back and core can reduce your risk of injuries.⁷ Perform one or both movements daily. Be sure to confirm with your physician that these exercises are safe for you to perform and seek medical attention should you experience pain.

Bird-Dog
● Begin in a tabletop position with your hands and knees planted firmly on the ground. Ensure that your wrists are directly below shoulders and knees directly
below hips. The spine and neck should maintain a neutral position.
- Engage your abdominal and back muscles as you slowly lift your left arm and right leg. Keep your hips and shoulders parallel to the ground.
- Extend both the arm and leg simultaneously until they align with your spine—be careful to avoid overextending.
- Hold this pose for no more than 8 seconds, then gently return to the starting position and repeat on the other side. Complete 10 to 20 total repetitions.

Superman
- Begin in a prone position with your arms extended overhead.
- Keeping your neck in line with the spine, engage your entire trunk as you lift your legs and arms off the ground, no more than 6 inches.
- Hold for 5 seconds, then slowly release. Repeat 5 to 10 times.

Regression: Lift opposite arm and leg while keeping the other limbs in contact with the floor. Alternate sides.
Additional regression: Perform in a standing position. Raise 1 arm overhead, then extend the opposite leg gently behind you. Alternate sides. Use a wall for balance as needed.

STRETCHING MOVEMENTS
Improving the range of motion and flexibility of these muscles is equally as important as strengthening them. Those veterinary nurses who do not work directly with patients can also benefit greatly from stretching.7

Cat-Cow
- Begin on all fours in a tabletop position with your shoulders directly over the wrists and hips stacked over your knees. Your neck and spine should begin in a neutral position.
- Inhale as you slowly tilt your pelvis upward, drop your belly toward the ground, and gaze slightly at the ceiling. This is the “cow” pose.
- Then slowly exhale as you tuck your pelvis under, gently round the back, and finally bring your chin toward your chest. This is the “cat” pose.
- Rather than pausing in each pose, slowly continue moving between the postures. Repeat this sequence for 5 to 8 cycles.8

Regression: Perform from a seated position. Open your chest, roll your shoulders back, and gaze at the ceiling as you inhale, then round the back and tuck your chin down through the exhale.
Additional regression: Perform in a standing position with feet shoulder-width apart and knees bent slightly.

SPECIAL CONSIDERATIONS IN THE VETERINARY PRACTICE
A strong back isn’t all it takes to avoid back pain. There are also simple techniques you should implement every day to further minimize your risk for injury.

Brace your core. Anytime you lift or restrain, it is important to brace your core. To simulate this feeling,
imagine that someone is about to punch you in the stomach. Your initial reaction should be to engage all the muscles within your trunk. By doing so, you essentially create a natural support brace to stabilize the torso which, in turn, protects your back. This powerful activation of the abdominal muscles (particularly the obliques, which wrap around your torso) is precisely how you should feel while completing any vulnerable tasks.

Lift with your legs. You’ve likely heard this phrase time and time again, but the muscles that make up your legs are far stronger than those in your back. Proper lifting technique is crucial to injury prevention, so keep these points in mind.

- Squat down to lift rather than bending over at the waist.
- Engage your core and maintain a neutral spine.
- Keep the object close to your body.
- Exhale during the lift.
- Never twist while lifting.

Whenever possible, enlist a partner to help lift a patient or other heavy object. Distributing the weight between 2 people will work to lessen the load on each party. Better yet, request that your practice invest in lift tables to minimize lifting risks.

HAVE YOUR PATIENT’S BACK BY PROTECTING YOURS

If the supporting muscles surrounding the spine and those that wrap around the torso are not activated while performing most veterinary nursing tasks, injury can occur. Protecting your body can prevent back pain and allow you to comfortably get back to doing what you love—caring for your patients.

References


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Since entering the veterinary field in 2009, Saleema has held a variety of roles and positions. This diverse experience led to the discovery of her true passions for patient care, education, and mentoring. Saleema is currently part of the Boehringer Ingelheim Tech Champion team, delivering continuing education presentations to veterinary nurses. Saleema lives out her passion for fitness as a certified personal fitness trainer and group fitness instructor.