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Strains, Sprains, and Pain in Veterinary Professionals: Top 6 Repetitive Stress Injuries and Strategies for Preventing Them

Veterinary professionals of all ages and in all roles run the risk of repetitive stress injuries. This article discusses the most common injuries, based on workers' compensation claim data, and strategies for preventing strains, sprains, and pain.

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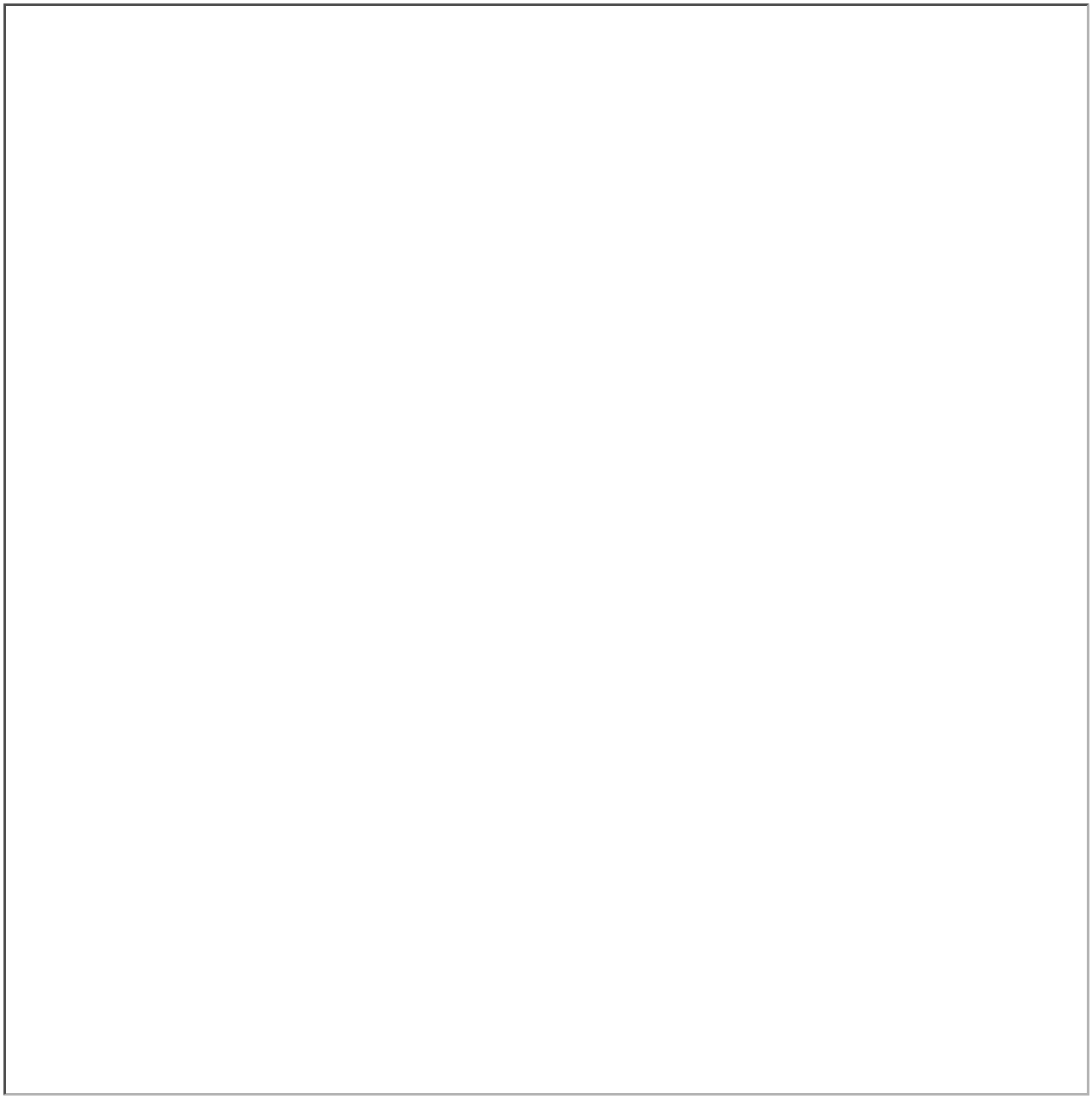

Veterinary professionals of all ages and in all roles run the risk of repetitive stress injuries.

by Roxanne Hawn

Barb Kieffer worked in various veterinary practices for a total of 25 years—first as a veterinary assistant until repetitive stress injuries required a move to the front desk, where she then developed neck issues from answering phones. She estimates that her injuries represent 50% of her decision to leave the veterinary profession.

Kneeling to help restrain patients resulted in Kieffer's serious prepatellar bursitis, which required surgery in 2017. She also developed a toe-joint injury from how she bore weight on the foot while kneeling with one leg down and one leg bent. She avoided toe-joint replacement surgery by giving up her role in direct patient care. Now in her 50s, Kieffer works as a bookkeeper for a nonveterinary small business in Colorado.

Doctors have already diagnosed Jessica Kania, DVM, with arthritis in a couple of different places in her feet. She is 29 years old and a few years into her veterinary career. "The arthritis seems to be developing because I squat

down a lot and try to get on the floor with dogs," she said.

A practitioner working outside Chicago, Kania got help from a podiatrist who recommended buying a specific brand of athletic shoe, replacing them every six to eight months, and asking a local running store to scan her feet to help choose some over-the-counter orthotics. "I thought, 'Maybe this is kind of hokey,'" Kania said, "but they did it, and I had to get two different orthotics. I spent probably $350 total, but it ended up working. I put them on, and I have no pain anymore."

To further protect her metatarsophalangeal joint, Kania added, she tries to squat with more weight on her heels and to be more mindful of when she positions her feet in ways that overextend the joint.

Veterinary professionals of all ages and in all roles run the risk of repetitive stress injuries. Here are the most common injuries, based on workers' compensation claim data, and strategies for preventing strains, sprains, and pain from common veterinary tasks.

Top 6 Repetitive Stress Injuries

Patients cause most workers' compensation claims (70%–75%) in the veterinary profession. Yet strains and sprains, including those classified as overuse injuries, cost much more.

"When you're thinking of a workers' compensation claim," explained Scott Simpson, risk consultant with HUB International, "there are essentially two things you want to look at: how often does it happen and how much does it hurt?"

Based on four years of data (2015–2018), strains and sprains rank second in employee injuries in veterinary medicine and accounted for 8% of total claims, but they represented 26.9% of total incurred costs.

"Over a four-year period, that's just over 1,000 [strains and sprains] claims at an average cost of $9,167 per claim," Simpson said. "Strains don't necessarily happen a lot, but when [they] do happen, it's typically bad. It costs us a lot of money. It's three times more expensive."

Simpson added that back and neck injuries account for 36.9% of strain and sprain claims, including those from acute injuries. These injuries cost an average of $10,898.

For context, HUB's primary carrier reports an average of 3,200 claims per year and an average of $8.8 million total incurred costs. The expense of injuries includes not only treatment but also the costs of a team member's time away from work, such as paying others additional hours or hiring temporary workers and short-term disability payments, all of which get held in reserve.

Prevention Strategies

When visiting practices about injury prevention, consultants like Simpson recommend team training, such as partnering to lift patients and supplies, as well as controls such as automatic lift tables.

Physicians often refer patients with overuse injuries to physical therapists,

so physical therapists with additional certifications to do rehabilitation work on veterinary patients such as dogs and horses bring a greater sense of the injury risks and prevention challenges veterinary professionals face.

Top 6 Strains and Sprains from Overuse in Veterinary Practice	**Claim Distribution (How Often)**	**Incurred Distribution (How Costly)**
1. Overuse or overexertion not otherwise classified	6.5%	9.6%
2. Overuse—lifting objects	6.8%	6.5%
3. Repetitive motion not otherwise classified	2.0%	3.0%
4. Overuse—pushing or pulling objects	1.4%	1.8%
5. Overuse—handling or throwing objects	1.2%	0.5%
6. Cumulative trauma—back	0.1%	0.0%

Source: HUB International (workers' compensation data, 2015–2018).

"Somewhere along the line, and I see this in veterinary medicine across the board, we feel that we need to sacrifice our body for the good of the patient. We're down on the floor. We're trying to create a fear-free experience for the patient—a lot of times to our own detriment," said Debbie Gross Torraca, DPT, MSPT, CCRP, founder of Wizard of Paws Physical Rehabilitation for Animals in Connecticut.

Being pregnant with her second child became a turning point, Torraca said. "I couldn't physically get on and off the floor, and I thought, 'Why am I doing this?'"

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—SCOTT SIMPSON, HUB INTERNATIONAL

Examination Height and Position

Ideally, get patients at least up to the level of your pelvis to avoid bending over or reaching up too much.

High-low examination tables that lower for patient loading and raise for better veterinary team access, as well as wide exam-room benches that keep everyone up off the floor can help, but Jenna Encheff, PT, PhD, CMPT, CERP, interim director of the Doctor of Physical Therapy Program at Trine University in Indiana, cautions about sitting—even though it seems to be less stress and strain on the body.

"Sitting is harder on your back than standing because you're putting more pressure through the discs because of the posture," she said. "A lot of low-back injuries are due to a combination of compression with twist or torsion, so if you're sitting, that's one strike, then twisting, and if you have to lift any weight, that's definitely not a good position."

Therefore, Encheff offers these injury-prevention tips to use whether standing or sitting while providing direct patient assessment or care:

- Square yourself up to the animal to avoid twisting or weird angles.
- If standing, stagger your feet in a lunge-like position to provide a better base of support.
- Keep your back flat and your chin tucked if you're leaning at all toward the patient.

- Be prepared for any sudden jerks, especially with larger patients.

Surgery and Procedure Positions

Even with adjustable-height surgery or dental procedure tables, Encheff suggests taking a wider side-to-side stance to lower yourself so that you're leaning over less. She explains that you don't want to be hunched over or overextended. Make a neutral spine position your goal.

Encheff recommends testing your body awareness by arching back as far as you can, then tucking your behind under as much as you can. "A neutral spine is kind of that midpoint between the two extremes," she said. "We call this a slightly lordotic back."

Since surgical and other clinical procedures require precision and visual focus, it's almost impossible not to hold your head and neck in a forward position. Frequent breaks to do specific stretches can help (discussed later in the article).

Lifting Protocols and Limits

Set patient-lifting rules that state that patients over a certain weight require two people to lift, and patients over another, higher weight require three people to lift.

Practices may also choose to set specific teamwork protocols based on what various clinical situations require, including fully awake patients, fully sedated patients, patients needing restraint for certain procedures, patient temperament or mobility, and so on.

Antifatigue Mats

Mats designed to lessen the strain of standing can also be used to create more ergonomic positions for kneeling. The mats provide padding for the knee itself and enough elevation to take some of the pressure off the feet, which may help prevent hallux rigidus in the metatarsophalangeal joint (big-toe joint).

Encheff developed hallux rigidus herself. She said, "What I got to help with mine are some orthotics that were custom made and have a more rigid piece under my toes. It prevents me from going into excessive extension."

Braces

For certain repetitive stresses, braces that keep the joint of concern in a neutral position can help. However, they can be cumbersome and limiting during performance of the tasks that likely caused the overuse injury in the first place. That's why physicians and physical therapists often suggest wearing braces for sleeping or during nonwork hours to give joints time to rest. For example, for hands fatigued by handling and using surgical or dental tools, bedtime use of a carpal tunnel wrist brace may help.

Torraca said that needing a brace doesn't necessarily mean that the injury is too far gone to the point where surgery is needed, but "it definitely means needing a break or a job modification."

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Ergonomic Tools and Well-Maintained Tools

Smaller hand tools, especially those that vibrate, create challenges to hand structures. If possible, purchase tools that offer ergonomic adaptations. Kania also recommends regularly sharpening tools such as dental elevators so that less hand torque is needed.

Strengthening

Healthy diets, fitness, and strength also play a role in overuse injury prevention. Larger practices with big teams and space sometimes host regular exercise classes onsite, including yoga or pilates.

“Every Tuesday and every Friday at my office, I have a pilates instructor come in and teach a one-hour class,” Torraca said.

Memberships to local gyms or recreational centers give practices another option for encouraging fitness.

Fitness recommendations remain awash with information about developing a strong core, but that means a lot more than doing sit-ups. “The core is actually so much more than that,” explained Encheff. “It’s your deep abdominal muscles. It’s your spine muscles. It’s your scapular muscles, and it’s your deep pelvic floor muscles. So, there are like 20 different muscles at the core. The general public thinks they only need to do sit-ups and crunches and not everything else to strengthen the core.”

Encheff added that strong scapular muscles and scapular positioning allow the arms and hands to work effectively. “That’s part of the core people forget,” she said. “We consider the shoulder girdle part of the core.”

Strong quads and glutes also provide needed stability and power for veterinary team members.

Planned Stretching Breaks

“The American College of Sports Medicine typically recommends taking a break from activity every 30 to 45 minutes and stretching,” Torraca said.

Even with time pressures, take a moment between patients or procedures to walk around a little and stretch. Helpful stretches represent the opposite of the working motion. As an example, syringes often require a flexed hand position, so on days heavy with vaccinations or blood draws, Torraca says to stretch wrists and fingers into an extension position.

Encheff recommends doing 5 to 10 of the following stretches to offset the strains of common body positions required by veterinary medicine:

- Chin tucks that pull your chin back and down toward the chest, elongating the cervical spine
- Lower-back stretches that arch areas of strain
- Scapular retractions that pinch the shoulder blades together

Bodies as Valued Tools

Torraca tells her team, “You’re my most valuable equipment, if you will, in the office, so don’t put yourself in an unsafe situation. If you don’t feel you can do it, we can figure something out.”

A wake-up call so early in her veterinary career made Kania more mindful about the strain of veterinary tasks and how individual the results can be for different people depending on height and other factors. Rather tall herself, she notices when shorter teammates end up standing on their toes to reach things or do certain tasks.

Awareness and cooperation go a long way toward preventing injuries. It isn’t just situations where team members might realize they simply cannot lift, move, or control a patient or heavy box or equipment. It’s knowing that even if an individual *can* handle the task alone, they stop and ask whether they *should*.