

The Scotland-born Dr. Tony Cambridge is an orthopedic specialist and an expert in joint reconstruction at Veterinary Surgical Specialists in Tustin, CA. Staff writer Matt Katz talked with him about his experiences in veterinary orthopedic care and where he sees it going in future.

Over the last 20 years, you've practiced veterinary medicine in England, Scotland, **New Zealand and the United States. What are** the most significant advances in veterinary orthopedic care you've seen over that time?

I think probably the most significant advances have been in joint replacement and joint reconstruction. Previously, when we would have a compromised joint, an injured patient often would not go back to full use of the limb. An influx of both orthopedic science and clinical hardware has allowed us to reconstruct complex injuries, often allowing a full functional recovery. This has been a huge development.

I think that people have increased demand of their veterinarians. They know things are possible for themselves, and they want that for their pets. I hear patients say they are prepared to sacrifice vacations, a new car, and even re-mortgage their home to fix a pet.

What's the most preventable form of orthopedic trauma you see in your practice?

We see injuries to dogs' knees, which you might think of as performance or sport-related injuries. We have dog beaches in California, and many cities provide dog parks where dogs can run crazy and wild and have a great time! But there's another side to that. The cruciate ligament can be injured because the dog is overweight and/or out of condition, and then suddenly goes out and chases a football and finds himself injured. Reducing body weight and maintaining a regular exercise program for your pet can avoid this in some instances.

Rottweilers, Labradors, Golden Retrievers and Mastiff breeds commonly have cruciate ligament tears, which is the equivalent of the ACL in humans. Prevention is possible for a portion of that group. We need to control both their activity and their nutrition. We don't want them to get too big too quickly, or let them exercise to the point of exhaustion.

As an expert in joint reconstruction, what are some veterinary breakthroughs your patients can expect in the near future?

Total hip replacement has been possible for many years in veterinary medicine, going back to the 1990s, but we've evolved our techniques with non-cemented implants, where the bone actually grows into the implant. We can now replace a joint in a dog at six months of age and expect it to last their lifetime, whereas before when implants were cemented they would loosen over time and potentially need a revision surgery. Knee replacement and elbow replacement are probably the latest and most significant advancement. A lot of dogs have

devastating joint injuries, and in the next five to ten years, I think we're going to see joint replacement become the standard option for our patients. It's an exciting time for the field of veterinary orthopedics and our patients who are reaping the benefits.

Do you keep up on the latest developments in human medicine in order to find clues about what's next in veterinary medicine?

Yes, I do, but sometimes its actually the other way around. Almost all human implants begin in dogs because dogs are the testing models in the experimental phases. So we know that some animal implants available today were actually conceived before the human implants.

How has pet insurance changed outcomes for your patients?

One of the reasons I'm a strong advocate for Petplan is that they will compensate owners for treatment of all conditions that are developmental or inherited and will fund joint replacement for degenerative disorders. Most companies will decline those claims or restrict the level of reimbursement. That's why I'm such a crusader for Petplan insurance. If an owner comes to me with Petplan pet insurance that really does influence what they're prepared or able to afford to do for their pet. It takes a big financial burden away from them and we can treat their pet in the best possible way.

What are your thoughts on joint or bone health supplements for your patients?

There's a very close similarity between how we manage arthritic disorders in humans and how we manage them in our pets. In fact, many supplements we give our pets are the same as the ones we take, and they're just as valuable to our pets. There are clinical-based studies that show certain supplements are positive for both the health of joints and the control of cartilage degeneration.

If you have a dog that has early diagnoses of an orthopedic disorder, then I recommend using a joint supplement throughout their life.

What advice would you offer new puppy parents to help their pup prevent joint and bone conditions later in life?

Get a good comprehensive veterinary exam. If I could see a patient before a condition gets too severe, I might be able to help with a specific treatment. Sometimes it's too late to avoid the condition, and we have to deal with the consequences. I'd also recommend taking out pet insurance. It really helps to have financial support.





offerings from an orthopedic surgeon

Dr. Tony Cambridge, BVMS DACVS, of Veterinary Surgical Specialists of Orange County, CA, shares three fascinating tales of hereditary orthopedic disease, from tears to triumph.

As a veterinarian, there are some disorders that are so strongly associated with a breed that my mind jumps to them automatically: German Shepherds and hip dysplasia, Cavaliers and heart disease, Dobermanns and blood clotting disorders. In this particular case the relevant couplet is Dachshunds and disc disease.

Intervertebral disc disease (IVDD) is a hereditary condition which affects many "chondrodystrophic" dogs (regular or even long bodies with short legs) and results in painful and sometimes debilitating disease caused by a failing disc pressing on the spinal cord. While several breeds such as Bassett hounds and Corgis are

affected, Dachshunds are actually ten times more likely to experience IVDD than all other breeds combined. In fact, in one study of 654 dogs affected by disc disease, 72% of them were Dachshunds.

iaeger's story

Jaeger was a two year old Dachshund who found himself unable to get up to greet his people one morning. Thanks to the family's vet, he quickly found his way to my exam room. Like

so many before him, Jaeger had sustained what appeared to be a severe spinal cord injury; his back legs were paralyzed and more worrying, he could not even feel a very firm squ eeze of his toes. This absence of deep pain is the last sensation to be lost when the spine is injured and the first to return as it recovers. Despite the severity of the injury, we informed the owners that if we acted quickly to diagnose his condition, identify the location of the problem and operate to relieve compression, he still had a good chance of making a full recovery.

The estimated costs for Jaeger's case were substantial. The cost of the MRI we recommended to identify the injury, plus the neurosurgical procedure, postoperative nursing care and physical therapy would come to at least \$4,500. Not surprisingly, this sum was far more than his family had expected.

I left them to have a family conference. The two young sons were crying, Mom and



Dad were distraught and concerned about the financial burden. It is at times like this that I wish all Dachshunds came with a small barrel attached to their collar labeled "Open In Case Of Emergency," with a

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Petplan insurance policy inside. Fortunately for Jaeger, he had a personality that you would have sold your house for, and the family came close: they canceled a planned vacation and the boys said they would forgo Christmas and birthday presents for as long as was necessary to give Jaeger a chance.

Given the green light, we moved quickly. The MR scan confirmed our suspicion and showed a damaged disc in the middle of his back. Jaeger was prepped for

surgery and taken into the operating room. His procedure, while technically demanding, is routine for most surgical specialists due to the frequency with which we see it. Surgery went according to plan: the affected area of the spinal cord was decompressed, a morphine patch was applied and he was moved quickly to the recovery area.

> In surgery there is no greater angst than that of waiting for a paralyzed patient to show signs of recovery. Equally, there is no greater joy than seeing a patient recover the use of their limbs and regain their freedom and independence. Jaeger made us wait less than a week before he was not only walking, but trying to run. He took another month to make a complete recovery and, by then, other than a strange hair cut, there was little evidence that he had ever been paralyzed.

molly's story

For Molly, a young, rapidly-growing Irish Wolfhound, the hardwood floors in her house were constantly challenging her sense of coordination. This juvenile awkwardness frequently sent her skiing across the room with little or no idea of her final destination. On one such occasion she suffered a lasting injury; a trip to her regular vet after an off-piste, living-room skiing accident diagnosed a complete dislocation of her hip.

Unfortunately, many medium and large-breed dogs suffer from a congenital condition called hip dysplasia: the hip joint develops abnormally and the shape of the joint makes it easier for the hip to move around (causing

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pain and eventually arthritis) or, in severe cases like Molly's, dislocate entirely. In Molly's case the changes had left the "cup" or acetabulum of the hip a little shallow and more likely to allow a dislocation of the "ball" or femoral head. While Molly's vet had tried to relocate the hip back into the joint and support it with a bandage, the hip often dislocates again, as it did in Molly's case. At this time she was referred to me.

Often, when a dislocated hip cannot be maintained with rest, appropriate medication and

> bandage support, it can be successfully repaired surgically. With Molly, the identification of hip dysplasia led to a significant concern for both short and long term. We discussed the options and felt that Molly would be best served by surgical reduction (or "relocation") of the hip and stabilization with a "hip toggle" procedure. This essentially creates a new ligament to keep the femoral head in the hip socket. A total hip joint replacement was considered but with the associated cost and potential complications it seemed something best held in reserve. Costs were a substantial concern in Molly's case.

> > Molly's "hip toggle" procedure went very well, a large prosthetic ligament was created inside the hip joint and the hip was solid and secure at the completion of the surgery. Molly walked out of the hospital on all four limbs and, for the first time in three weeks, she was

happy. She went back to limited exercise and everyone was delighted.

Fast forward nearly a month later and the picture wasn't feasible step.

Unfortunately, Molly was not the ideal candidate for what was then our standard hip replacement surgery. Dogs of her breed, size and stage of growth that undergo this procedure often developed complications during the

Joint replacement is financially challenging to pet parents and cost is often a considerable factor, particularly for giant breeds. Being able to deliver a predictable and effective solution in return for the investment is crucial. Bearing this in mind, I encourage my clients to consider pet insurance while their pet is healthy. Once a pet shows signs of disease it's too late to get coverage for that condition. That's why I encourage pet parents to make sure that their chosen pet insurance provider covers all congenital and hereditary diseases like hip dysplasia; some companies consider the underlying disorder a developmental or inherited condition that is so common to the breed that they exclude it completely.

bunny bear's story

Bunny Bear was an adorable Shar Pei puppy. These soft, wrinkly puppies capture the hearts of many, but sadly they

often carry the genetic burden of developmental and congenital disorders. Fortunately,

Bunny Bear's difficulties were relatively simple and, in this case, surgically treatable.

At just four months of age, she showed evidence of significant patella luxation. A medial luxating patella is a dislocation of the knee cap and is an inherited condition in many small to medium breed dogs. It usually develops during puppyhood and can lead to disability in early or later life. While many people hope that their puppies will grow out of this disorder, in fact the reverse is true. Due to the pull of the patella by the muscular forces around the knee joint, once the knee cap begins to dislocate during development, the degree of luxation will usually get worse with age and increasing body weight.

Typical surgery on an adult dog usually involves a combination of techniques, but most often cutting of the tibia bone to realign the patella and then deepening the groove (or trochlea) of the femur that the knee-cap fits into. Fortunately for Bunny Bear, a less invasive technique has been pioneered that allows corrective surgery at an early age. I have been a supporter of this concept whenever possible as it allows me to correct the dislocation without cutting any bone, resulting in faster healing time and less

possible complications. Bunny Bear was fortunate to have this opportunity and surgery was scheduled. Three years later, she continues to do well with no recurrence of her knee problems.

Medial patellar luxation is an extremely common condition in many breeds including Chihuahuas, Shih Tzus, Cavalier King Charles Spaniels and many Terrier breeds (including Yorkshire and Boston Terriers). The key to being able to offer the best and most appropriate treatment is early diagnosis and, if necessary, early referral for surgery. Unfortunately, many pets suffer because owners have to treatment because of the financial cost involved. Having pet insurance in place for a young, healthy dog and choosing a company that will cover these hereditary conditions is the best plan.

The events that befell Molly, Bunny Bear and Jaeger, while unfortunate and complicated, are all too common in our

hospital. Veterinary medicine has rapidly evolved and is now on a par with human medicine in many areas. These advances allow us to treat more diseases at a higher level than ever before but, of course, come at a price many families can't afford.

Having the financial resources available to tackle these hereditary diseases dramatically changed the outcome for these patients and their long-term quality of life. The advice I give to my clients and the advice I would give to you, is to have the foresight to prepare for these situations by insuring your pets while they're healthy. Petplan offers a trustworthy guarantee of support when it's needed, regardless of the disorder -- no bones about it.







so rosy. Molly had developed lameness again and X-Rays of the joint showed that the laxity had returned. Her size and the resulting force on the joint was simply too great for the synthetic structures that had been implanted. This meant we had to consider hip replacement as the next

healing process. However, around this time, we had been contacted Having the financial

by a local orthopedic company about a novel hip replacement from Europe. This new Helica Hip seemed to offer us several potential benefits that would greatly suit Molly. After consultation with Molly's family, the Helica Hip was implanted successfully and Molly thrived. She regained full function and strength, her jubilance was restored and she continues to do very well 18 months post-op. Molly's our poster pup for the new technique.

