

Crate rest for dogs: Advice for vets

Marianne Dorn BVM&S PGCert SART MIRVAP MRCVS; May 2016

How can we protect healing tissues and orthopaedic implants throughout recovery? Following surgery or injury, prevention of over-exuberant activity in the recuperating dog is key to successful recovery.

Key Points

- 1) Owners need to be given **clear dos and don'ts** regarding appropriate activities for their recovering pet.
- 2) Dogs restricted to a "lead-walking regime" usually need careful **adjustment of their indoor and garden activities** in order to prevent running, jumping and slipping.
- 3) Marked exercise restriction ("**crate rest**") is often necessary and can be achieved. However, this is challenging for owners and dogs.
- 4) **Attention to detail is key to recovery** during exercise restriction. Advice needs to be tailored to the patient, owner and home surroundings, and therefore tends to be best given during a veterinary home visit.

Step one: Set clear activity guidelines for the patient

Following injury or surgery, owners need clear guidelines as to what activities are, and are not, allowed. Safety is key, especially during recovery from a fracture, osteotomy or spinal injury or surgery. As a minimum, dogs that have been discharged from hospital will need to get outside for toileting. Depending on the animal's route outdoors, speed of travel and the means of restraint, toilet breaks may result in over-activity if owners have not been given enough guidance.

Owners need advice on whether their dog is safe to do specific activities including the following: walking slowly, walking fast, trotting, running, moving up or down slopes, sitting straight, standing with all four paws on the ground, stepping over kerbs or doorsteps, turning tightly, standing up on their hind legs or going up or down sets of steps.

Following orthopaedic surgery, excess activity will overload tissues and may contribute to complications such as seromas, implant failure and tendon inflammation (Bergh & Peirone 2012). For both orthopaedic and neurological cases, early attempts at over-activity trains unhealthy lopsided movement patterns which become habitual and very difficult to resolve. This is the likely outcome of allowing a dog to move rapidly with the damaged limb held off the floor. However, appropriate strengthening of muscle, tendon and bone occur in response to loading (Khan & Scott 2009; Smith-Adaline et al 1994; Turner 2006). Healthy movement and weight-bearing should therefore be encouraged as soon as tissues are strong enough to withstand this.

After cruciate surgery (e.g. TPLO or TTA), the canine patient needs careful restriction until repeat x-rays demonstrate that bony healing has occurred. These patients are generally safe to walk and stand quietly on the operated leg immediately after surgery. However, they must be restricted to non-slip flooring only, and running, jumping, ball play and playing with other dogs are not allowed for about 6 weeks post-op. Trotting on level ground, and walking up and down stairs, are introduced gradually and only under veterinary instruction.

Step two: Choose between room restriction and crate rest

Room restriction

It's often difficult to limit a dog's activity to walking and standing, especially if the client's house is partly open-plan. If advising an owner to restrict their pet to a carpeted room throughout recovery, be aware that most young or excitable individuals will run around in this confined space, and do check that the animal will not be jumping on or off sofas, chairs or windowsills.

Smaller breeds (terriers, Cocker Spaniels, Shi Tzus etc.) typically choose to get about by trotting and running rather than walking. If trotting is to be avoided during recovery for smaller breeds, then crate restriction is generally the preferred option.

Crate rest

If used well, the crate is simply a recovery tool to prevent running, jumping and dangerous falls.

A pen or crate is a useful solution so long as we remember that:

- For success, the pen/crate should be introduced carefully so that the animal accepts it.
- The owner must take their dog out of the crate frequently for prescribed exercise. This helps to reduce boredom and provides the loading required for recovery of muscle, tendon and bone.
- There are a few safety and welfare considerations.

For most orthopaedic and neurological cases, it is beneficial for the animal to get up very frequently during the day, to attempt to stand on all four legs and to walk a little. This goes for cruciate ligament recovery and for many cases of intervertebral disc disease. The recovery crate should not enforce hours on end in a tightly-curved lying position as this is expected to result in stiffness.

Step three: Advise on choosing a crate

At the very least, the crate or pen needs to be big enough for the animal to lie fully stretched out, to get up and to turn around comfortably. If lidded, there must be plenty of head clearance to enable the animal to stand normally and to sit up straight.

The patient will spend many hours in the crate so it needs to be as pleasant a space as possible, typically containing a large soft bed, draught-blocking blankets, food, water and toys.

Some crates come with a plastic or metal base. This needs to be either replaced or covered with less slick material in order to make the crate suitable for the recovering neurological or orthopaedic patient. Rubber matting covered with a tactile, deep-pile material (e.g. Vetbed or Astroturf) is ideal because these surfaces offer traction. Clinical experience strongly suggests that such flooring encourages animals to place their paws in a more coordinated way and reduces the risk of trauma caused by slipping paws. Smooth surfaces such as tiles, metal, newspaper, linoleum, wood, laminate or plastic sheeting are unsuitable because they do not provide enough grip.

Many owners are physically unable to get down onto the floor to reach into a crate and lift their pet out. If the dog is to step in and out of the crate without being lifted, then be sure that the exit does not have an awkward raised step and that surrounding flooring is non-slip. Rubber-backed runners may need to be placed from the crate's door to the exit of the home to provide a safe route for toilet-breaks.

An open-topped pen enables the owner to lift their small dog in and out more easily. However, unless we can be absolutely sure that the pet will not attempt to jump out, a lidded crate is necessary.

Step four: Offer advice on using the crate

Dogs typically get excited as they leave the crate and are often quick to barge out of the door as soon as it is opened. This is when accidents could easily happen. Owners need to have a safe and quick way to restrain their dog. Collar-restraint and slip-leads are contra-indicated for many conditions, but it is often helpful to leave a well-fitting harness on the crated dog. Its top strap acts as a safety "grab-handle".

It is best to introduce the crate gradually over a few days if possible (RSPCA 2016), for example prior to elective surgery. Owners need to be positive and relaxed about the crating situation as the animal will otherwise pick up on their anxiety. Ideally, the dog should be offered food, toys, and its usual bedding within the crate, initially with the door left ajar, until it is relaxed enough to rest inside.

The number of hours that it is okay to leave the animal unattended varies from case to case. A dog on crate rest needs frequent owner interaction for welfare reasons. For at least the first few days, owners can expect to be required at home with their crated pet for most of the day. Even once the animal is used to the crate, he or she should not be left alone in there for hours on end while the owner goes to work.

The restricted pet during recovery

For successful recovery, do take the time to discuss in advance with owners exactly what is required of them. In most cases, the owner must have their hand on the top of the animal's harness, or have the pet on a short lead, from the moment that the animal leaves the recovery room or crate to when it goes back in. ***This is a huge lifestyle change for both dog and owner, and will be best accepted if explained clearly and in good time.***

For both dog and owner, the change of routine that comes with crate-rest can feel like an upheaval. Toileting routines and the use of daytime resting places are two issues that often result in poor owner compliance. Optimizing safety and appropriate activity levels are key to the animal's successful recovery, and attention to detail in managing the animal's post-operative regime is therefore essential.

Typical questions from owners of dogs on crate rest include the following:

- My pet is suffering from boredom – what can I do about this?
- How much can my dog do outside the crate?
- Can my dog be taken out of the crate to sit on the sofa with me?

Answers vary depending on the specific case, and a veterinary home visit is very useful in sorting out these issues.

Reducing boredom for the dog on crate-rest

Owners can start to address boredom in the following ways:

- **Provide a variety of toys.** Recovering animals are usually on a measured diet to prevent weight gain, and their entire ration can be fed in food-dispensing toys if this helps to keep the dog occupied.
- Some owners find it helpful to **move the crate** to new parts of the house or even outdoors for a short time on a mild day, as long as this does not cause over-excitement.
- **Physiotherapy exercises** help to reduce boredom by providing a good opportunity for focused interaction between owner and dog, or between therapist and dog. Such exercises also benefit physical recovery, e.g. the benefit of physiotherapy to surgical outcome has been demonstrated following CCL surgery (Marsolais et al 2002). Accidents, overloading and distress are all possible if physiotherapy exercises are chosen or performed incorrectly. Therefore, referral to an experienced canine physiotherapist is essential if any exercises are to be included in the recovery programme. Don't leave your patient's owner to find a "standard" recovery programme online as this may well be inappropriate for their pet. Exercises must be prescribed to suit the specific dog depending on conformation, stage of recovery, temperament, etc. If the owner is to assist their dog with these exercises, then be sure that their dog's physiotherapist will teach them a safe and precise way to do this.
- Owner and dog can also play various **games**, particularly those involving **sniffing out an object** or **recognising an item by name**. Some familiar games and tricks are contraindicated post-surgically, so this needs to be considered on a case by case basis.

Relaxation time

Many dogs and owners expect to sit together at some point each day. This can be a quiet, stress-relieving time both for patient and owner, and a pleasant part of the daily routine. However, things easily go wrong if the dog is let out of its crate to relax. Having been cooped up, a dog may catch its owner unawares by rushing about the room unexpectedly. Some pets are also surprisingly quick in their attempts to jump onto the sofa, especially if this has been their accustomed resting place.

In many cases, the owner can be advised on a safe way to sit with their crate-rested pet during the recovery period: The dog must be wearing a well-fitting harness, and the owner should hold this securely at all times. If the owner moves away for a few moments (e.g. to fetch something or to make a cup of tea) then they must put their pet back into its crate. I advise these safety precautions even if the dog is just to sit on the *floor* with their owner.

Some owners expect to sit with their recovering pet on the sofa. I find that many continue to do this if scant advice has been given. Sofa use needs to be talked through very carefully, because jumping down or falling from a raised surface must of course be avoided at all costs. A home visit is helpful when advising about this. Depending on the dog's size and temperament and on how sensible and attentive the owner is, it is occasionally possible to teach owners a safe way to lift their pet and sit with it on the sofa using a harness as described above. If in doubt, then it is best to advise against any sofa use until full recovery.

How will canine patients get outdoors for toileting?

Many owners are used to letting their dog off-lead into the garden to toilet, and they therefore find it difficult to comprehend any change to this routine. **If running is contraindicated, then make it very clear to owners: “Always keep your animal on a short lead outdoors, even for toileting.”**

Furthermore, most homes have stepped access to the garden or pavement, and many modern doorways have a raised threshold which is awkward for short-legged breeds. The standard post-op advice, “no stairs”, sometimes needs more explanation. A veterinary house visit is very useful before instructing the owner, because appropriate guidelines need to be specific to the patient, the means of restraint and to the doorway involved.

If flooring near the exit door is non-slip, if owner and dog are fairly sensible, and if the step from house to garden is shallow enough not to cause excess limb loading or range of movement, then the owner can be shown how to walk their dog safely in and out of the house on a short lead.

In other cases, the animal should be lifted from its crate, carried outdoors and placed on a flat area of ground for toileting. This advice is suitable for smaller dog breeds during at least the first 4 weeks of surgical or conservative management of cranial cruciate ligament disease. It is also appropriate in many neurological cases, e.g. paraparesis caused by intervertebral disc disease.

References

- Bergh, M. S., & Peirone, B. (2012). Complications of tibial plateau levelling osteotomy in dogs. *Veterinary and Comparative Orthopaedics and Traumatology*, 25(5), 349.
- Khan, K. M., & Scott, A. (2009). Mechanotherapy: how physical therapists' prescription of exercise promotes tissue repair. *British journal of sports medicine*, 43(4), 247-252.
- Marsolais, G. S., Dvorak, G., & Conzemius, M. G. (2002). Effects of postoperative rehabilitation on limb function after cranial cruciate ligament repair in dogs. *Journal of the American Veterinary Medical Association*, 220(9), 1325-1330.
- RSPCA (2016) Dog crates: a step by step guide, available at <http://www.rspca.org.uk/adviceandwelfare/pets/dogs/environment/crates> accessed 18 May 2016.
- Smith-Adaline, E. A., Volkman, S. K., Ignelzi, M. A., Slade, J., Platte, S., & Goldstein, S. A. (2004). Mechanical environment alters tissue formation patterns during fracture repair. *Journal of orthopaedic research*, 22(5), 1079-1085.
- Turner, C. H. (2006). Bone strength: current concepts. *Annals of the New York Academy of Sciences*, 1068(1), 429-446.