

The following article has been sourced from a document by Jane Killion, Director of the new film, “Puppy Culture – the Critical First 12 weeks that can shape your Puppy’s Future”. We believe that it offers all puppy owners an insight into the growth of their puppy and how to protect them in their first critical 18 months of life. It should be noted that the information provided is for guidance purposes only. For further information please see their website: www.puppyculture.com.

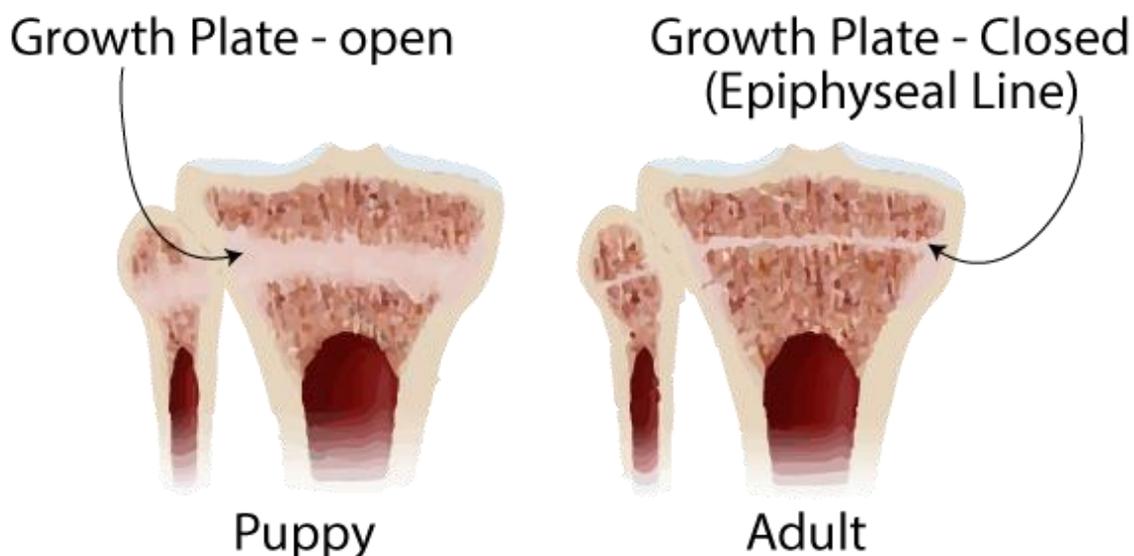
Age Appropriate Exercise Guidelines

There’s an idea that’s caught on like wildfire that exercise is some kind panacea that will solve all behaviour problems. Not only is this not true, it is led by a dangerous trend of owners pushing their puppies to inappropriate levels of exercise. So let’s look at the Whys and How’s of appropriate exercise for puppies.

Exercise that’s not appropriate for a puppy’s age and development can cause significant and irreversible damage. What would be a simple sprain in an adult dog could leave a puppy with a misshapen or shortened limb, so this is a subject that should be taken seriously.

Understanding Puppy’s Body

No Bones About It Puppies Aren’t Miniature Dogs



The first consideration with puppy exercise is something called “growth plates”. Growth plates are soft areas that sit at the ends of the long bones in puppies and young dogs. They contain rapidly dividing cells that allow bones to become longer until the end of puberty. Growth plates gradually thin as hormonal changes approaching puberty signal the growth plates to close. In puppies, this closure is normally completed by approximately 18 months.

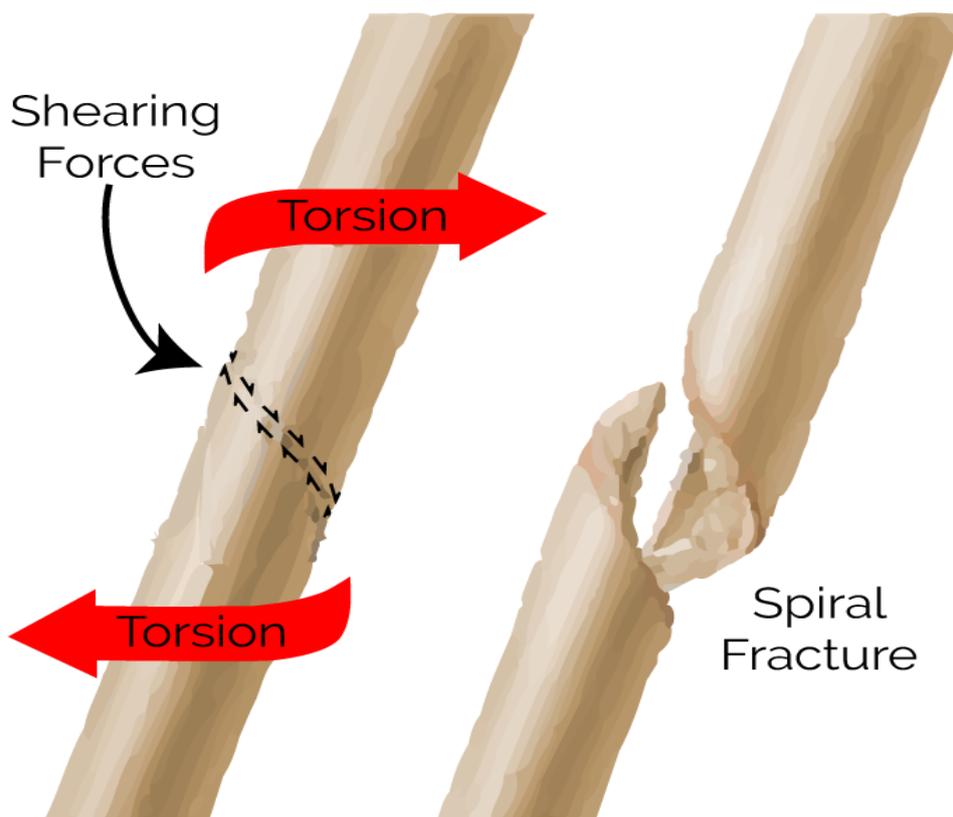
Until the growth plates close, they are soft and vulnerable to injury. After sexual maturity, the growth plates calcify and the rapid cell division ends. The growth plate becomes a stable, inactive part of the bone, now known as the epiphyseal line.

A dog's bones are held together with muscles, tendons, and ligaments – soft tissue. In an adult dog, if a joint experiences a stress such as bending the wrong way or rotating too much, the bones will hold firm and a soft tissue will be pulled, resulting in a sprain. In a puppy, however, his muscles, ligaments and tendons are stronger than his growth plates, so instead of a simple, his growth plate is liable to be injured – the puppy's own soft tissue can pull apart his growth plate.

Why does this matter so much?

Unlike a sprain, injuries to the growth plate may not heal properly or not heal in time for the puppy to grow up straight and strong. Injury to a growth plate can result in a misshapen or shortened limb with, in turn, can create an incorrect angle to a joint which can make the puppy more prone to yet more injuries when he grows up.

Puppies Are Soft Core



In addition to having soft growth plates at the end of long bones, a puppy's bones in general are "softer". Dogs, like people, do not reach their maximum bone density until after puberty.

Spiral fractures of the tibia (lower leg bone) are very common in puppies – 50% of all fractures occur in puppies under 1 year of age. A spiral fracture is where the bottom of the bone twists in one direction and the top half twists in the other.

This kind of juvenile injury is known as “Toddler Fracture” in humans, and it is thought to be caused by the fact that the outside, fibrous layer of the bone (periosteum) is relatively strong in relation to the elastic bone inside. So any exercise that puts torque (twists) on a bone puts the puppy at risk for a fracture.

Puppies Are In It For The Short Run

Puppies do not have the cardiovascular system for endurance. Furthermore, until they mature, they are probably not able to build much endurance no matter how much they exercise.

In human children, sustained exercise only increases aerobic capacity by up to 10%. In adults, that kind of exercise can increase aerobic capacity by up to 30%. Long walks and exercise sessions increase risk of injury and yield few benefits for puppies, so endurance training is better left until the puppies have grown up.

Puppies naturally exercise in small bursts of activity, not sustained walks.

Bubble Puppies Don't Build Bones

After reading about growth plates and toddler fractures, you may find yourself clutching your puppy, afraid to let him move lest he breaks a limb. Relax, not only is appropriate exercise not dangerous for your puppy, exercise has been shown to increase bone density, exercise has been shown to increase bone density in children. Furthermore, those children who exercise where a shopping 50% less likely to fracture a bone. There is every reason to believe the same holds true for dogs, so appropriate exercise is key to building strong bones in your puppy preventing adult fractures. So let's talk about guidelines for puppy exercise.

GUIDELINES FOR PUPPY EXERCISE

Repetition Is Your Enemy

Self-Directed Play is an overriding rule for any puppy under 18 months. The majority of his exercise should be free play, exploring, and noodling around. If he shows any fatigue, flops down, refuses to walk, you should listen to him and let him rest.

Probably the biggest cause of growth plate and soft tissue injury is repetitive exercise with a young puppy. So, until he is about 18 months, long hikes and walks are out and lots of free-play sessions are in.

Never underestimate the value of a good digging session. Consider digging up a soft patch in a corner of your garden and burying “doggy treasure” in it – great natural exercise for your puppy.

Sniff ‘n Stroll

While long hikes are out, just tootling around in the backyard with you is great. If you don't have a backyard, short, rambling walks are perfect. Let your puppy sniff, explore and take it at his own pace. You can intersperse short training sessions in your walks to work on heeling/loose leash walking, but the majority of the walk should be at your puppy's own pace and at his discretion.

Speaking of hikes, if you are an outdoorsy type of person, you should bring your puppy along on hikes – its great socialization for puppies under 12 weeks, and great enrichment for older puppies. But just like when you take a small child on a walk, be prepared to carry your puppy a good portion of the way. If you are jogging or walking on a manicured trail or paved park road, consider investing in a puppy stroller to put your tyke in for most of the walk.

Trail Blazing

Kibble trails are also a great way to tire out a puppy both mentally and physically. Remember, dogs generally do not naturally go on long “marches” – they tend to noodle around and stop and sniff a lot as they go. Kibble trails allow puppies to stay outside a long time and cover a lot of ground in a very natural way.

(You can find a video on how to build a kibble trail on www.puppyculture.com/appropriate-exercise)

Play with a well-matched and gentle playmate is ideal. Size is a factor, as a very large dog, especially one that likes to play with a lot of paw whacks, can inadvertently injure a young or small breed puppy.

That being said, a gentle Wool Hound may be a better playmate than a feisty Jack Russel Terrier who likes to body slam. Keep a very careful eye out and be prepared to throw handfuls of treats down to interrupt any overly physical play. Body slams and crazy rolls are spiral fractures waiting to happen.

Soft Landings

Jumping off beds and couches are a major cause of spiral fractures in puppies –we are constantly on guard until our puppies reach two years old and keep them off furniture and beds unless we are there to help them off. We also use heavy carpet pads and carpets around all furniture and beds to cushion impact, should a young (or old) dog slip by and get up on a high piece of furniture.

You can start training in agility, but no jumping higher than wrist height until 6 months old, not jumping higher than elbow height until 18 months old.

Stairs Aren't Hip

A study of 500 Newfoundland, Labrador, and Leonberger puppies found that puppies who climbed flights of stairs daily before they were 3 months old had an increased risk of developing hip dysplasia. Although these breeds were selected for the study because of their relatively high incidence of hip dysplasia, the study seems to indicate that stairs represent a strain on any puppy's joints, so consider ramps or carrying your puppy down stairs if possible.

Although climbing flights of stairs on a daily basis represents an inappropriate strain on a puppy's joints, doing one or two not too steep steps with a non-slip surface probably does not represent any risk to the puppy and may be a nice body awareness and coordination exercise.

Interestingly, the same study found that off-leash self-directed exercise on gently rolling, varied and moderately soft ground for puppies under 3 months old decreases the risk of developing hip dysplasia, and it's important to get that exercise in early-free play after 12 weeks old, while certainly beneficial in general, was not shown to decrease the risk of hip dysplasia in the study. So, once again, self-directed play in your backyard or garden is the best exercise for young puppies.

Play Nice

Puppies often have more “will” than “way” when it comes to chasing toys and will not stop until they are literally on top of the toy, causing both heavy impact and twisting on the bones and soft tissue. We advise rolling balls or dragging toys on the round for all puppies. Tug toys should be held low and steady – don't pull up or back on your puppy's neck.

There is a handy Puppy Exercise Chart available on the following website: www.puppyculture.com/exercise-chart, or you and your puppy from 8 weeks through to adulthood.

Before you jump in, here's a few things we want you to know.

- These are guidelines based on our experience with broken toes, bones, soft tissue injuries, torn cruciate ligaments, and all other manner of exercise and play injuries in the 33 years that we've had Bull Terriers. You may find it too conservative or not conservative enough, but this is your best recommendation based on our experience and the available studies.
- These ages for growth plate closure are only generalities and will vary from puppy to puppy. There will also be a difference in recommendation based on your dog's breed – giant breed puppies' growth plates tend to close later and small breed puppy's growth plates close earlier.
- Sex hormones are what signal growth plates to close, so if your puppy was neutered before around 18 months old, he will have some delay in growth plate closure, and he will also have uneven growth in his bones resulting in joint angles that could be more liable to injury. A more conservative approach may be warranted with early spay/neutered dogs.
- There are breed-specific orthopaedic concerns which are not addressed here.
- For any dog that you wish to enrol in a strenuous performance career, we highly recommend doing x-rays to confirm growth plate closure before proceeding with any intense training.

For further information please refer to their website: www.puppyculture.com

Please see the following three pages for x-rays on the development of a puppy from 2 weeks to adulthood.

Puppy 2 weeks



- ' The X-ray of a 2 week old puppy (above) the bones have a long way to grow before they become mature bones & joints.

7 Month old Puppy



In the X-ray of a 7 month old puppy (above) the growth plates are visible which means the bones are still developing.

Adult



In the X-ray of an adult (above) the growth plates have closed and are no longer visible.