

# Nails, Nails, Nails..... The Truth about Nails

The GRSA Animal Welfare Team do a lot of Meet and Greets every day and we see a lot of canine nails! At times we come across some nails that are overgrown – some quite severe. In a few cases, the dog's nails were so long that their paws were deformed, they could not walk properly and they were in pain.

The dog's nails pictured on the right were so long that his toes were terribly extended, causing him to walk on the back portion of his foot, rather than on his toes. Also notice how splayed his toes are. He was in a great deal of pain and could not walk properly.

This information is dedicated to helping our participants understand the importance of keeping nails trimmed and some helpful hints on how to trim nails quickly and easily.





Trimming long nails every 5-7 days will help quicks recede.
Once the nail is at the appropriate length they should be trimmed every 2-3 weeks to keep them healthy and as short as possible.

### **Diseases and Injuries of Canine Toenails**

Dogs can develop many diseases and unnecessary injuries that affect their toes if toenails are left to grow too long.

Most of these can be successfully treated if caught early enough or even prevented by keeping toes nails short and well maintained. It's important to be aware of these problems and check the nails at home regularly. Nails should be trimmed at least once or twice a month to prevent pain, disease and injury. There are several types of injuries that can occur to toes is nails are not properly trimmed on a regular basis. Nails that are too long or sharp can get caught on things resulting in injury and even the loss of the nail altogether. This is extremely painful for the dog and can often lead to bleeding and if untreated infection. The nail will eventually grow back but often requires medical attention initially.

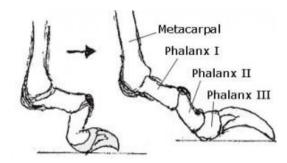
In severe situations toenails can get that long they start growing into the paw pads. This is also very painful for the dog and can cause deep infection in the pad. If this occurs the nail needs to be cut out of the pad and the dog is usually placed on antibiotics and paws bandaged for a period of time. Finally, nails that are too long can affect the dog's ability to walk and run properly. The gait abnormality may be caused by a lack of traction from the long claws or from severe pain due to an injured or ingrown toenail. Some diseases that affect canine toenails are infections, auto-immune diseases and even cancerous. Infections can be caused by a bacteria or fungus. Bacterial infections can occur secondary to trauma or underlying metabolic disease. The nail may appear swollen, red or even have pus coming from it. Treatment often includes Fungal infections are usually caused by either ringworm or yeast. The nails will look weak and misshapen and there may be loss of fur around the dog's claws. At times a brown discharge and bad odor is evident and is associated with this disease. Fungal infections are diagnosed by doing a skin scrapes or cultures and are treated with a long course of antifungal medications and shampoos. Symmetric Lupoid Onchodystrophy (SLO) is an autoimmune disease that affects canine toenails. An autoimmune disease means that the dog's immune system attacks itself and in this case the toenails. The nails will start to become very painful and fall off or break very easily verse a healthy nail. Treatment can include vitamins that will help strengthen the nails, antibiotics to prevent infections and medications to suppress the immune system. SLO may never be 100% cured, however many dogs will go into remission after treatment. Finally, dogs can get cancer such as melanoma and squamous cell carcinomas in their toenails or in the surrounding skin of the claws. Melanomas are usually black or brown, raised, firm irregular growths that grown rapidly on or around the toenails. Squamous cell carcinomas usually cause swelling and pain of the entire affected toe region. The claw may be loose or become deformed and therefore may bleed. Cancer is diagnosed by doing x-rays and biopsies of the affected area. Both of these types of cancer can spread to other areas of the body so it is important to diagnose them early and treat aggressively by having the affected toe removed. Because many of these diseases are contagious or potentially life threatening, it is important to examine your dog's toenails regularly and report any concerns to your acting veterinarian.

In conclusion, it is very important to check the toenails on your dog frequently and maintain the proper length at all times. Any signs of disease or discomfort can be much easier treated if prevention is put in place verse that of waiting for the problem to occur and is much less painful to prevent than to treat.

## Toenails 101

Dogs walk on their toes like horses, not on their pads or the "soles" of their paws like a human.

This put weight dispersion and balance of the dog's entire mass on a very small center of impact absorption (especially if the dog is overweight). If they feel pain in a toe or nail area they often have to rock back on their heels to extend the ligaments of their larger pad and back of their ankles to try to ease the pain in their toes. This puts them at a tremendous risk of unnecessary injuries to their ankles, elbows, hocks, shoulder and hips; as well as the connective tissues such as ACLs. Everything in one's musculoskeletal structure is connected with every other part of the body; hence overgrown nails can be considered as one of the leading causes of obesity in dogs.



Above Left: proper nail length allows dog to stand on its toes

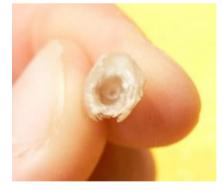
Above Right: overgrown nails causing lengthening of toes and pain

Simply put; overgrown nails can be the root of not only discomfort for our dogs but huge financial expenses in the long run if not well maintained. We often address our own needs and vocalize when we have pain to someone who can help; however, our dogs rely on us [the caregivers] to take notice and to provide relief when required. It's our belief that proper care and maintenance of all dog's toenails is extremely important and one that doesn't take too much skill in order to maintain in good condition.

#### **Canine Toenail Morphology**

The canine nail is comprised of 3 main sections.

They are of the quick or the vein and nerve endings that supply both blood circulation and sensitivity to pressure and hot/cold senses of the toe and the foot. Surrounding this very soft, fluid filled center is a pulp, inner nail bed, or layers of soft and moist tissue that helps to protect and cushion the sensitive vein and nerves much as our fatty tissue and subcutaneous makeup does for our own bodies. This area is slightly harder than the layers beneath it, yet still cannot be counted as the nail itself because it cannot protect the quick of the nail when exposed. This area is also what is visible in a light colored nail as the darker circle or half-moon shape when we trim back the nail and get closer to the quick. On dark nails it can be nearly impossible to see, but it does make a different sound in the nail trimmers when clipped into. This area feels pressure and will often cause the dog to begin to pull back as it feels this pressure and anticipates possible pain. Around these inner layers is a harder more durable wrap of many layers of protein and keratin- or fibrous structural proteins that are tough and insoluble. These layers make up the nail and round out its full length.



This is a cross section of the nail bed, and the bit of moisture in its center.



Here, layers forming the inner and outer portion of the nail and how they grow out in rings and wrap around the nail, creating its shape.



Notice that this nail is quite overgrown.

Looking at the photos above, you can clearly see how important it is to keep nails trimmed as short as possible to avoid the inner quick from getting too long and growing out ahead of it too far.

Overgrown nails cause extension and lengthening of the toes and the dog's weight is shifted to the back of the foot. This is what creates pain, difference in weight distribution and eventual physical issues.



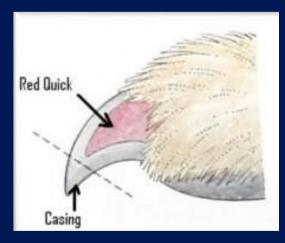
### Clipping Nails

For clipping nails everyone does do it differently, so this technique might not work for you, but its known within the veterinary industry as best practice.

Always clip the nails before a bath - not just in case you cut into the quick, but also because elevated blood pressure actually surges blood flow into extremities – including the toes, so it will be possible to clip a nail "shorter" if the nail is clipped before the dog sits and works itself up (if it is anxious). It often works best to bring the foot softly back under the dog so that the elbow is tight to the pet's side, and the foot is not too overly bent at the ankle - in case the dog has stiffness there from age etc. This can be tough though, depending on the size of the dog and if working on a stationary table. Why hold the foot back instead of forward you may ask??? Firstly, you're back away from the dog's mouth and out of bite range of view. Also, holding the foot out away from the dog encourages them to pull, you then squeeze to equal their pull with yours and then you have a less steady foot for cutting the nails. Also, it is proven that tucking up the foot does help dampen the nerve endings of the toes and therefor may be less sensitive for the feeling of clipping. If you clip a nail on a dog out in front of their body – listen to the sound that the nail makes when you clip. Listen to it when you clip - the sound

will be noticeably quieter when the foot is tucked up. Some dogs just fear that "kajunk!" sound the clippers make when cutting through the nail itself. After lifting the foot back and slightly up, then clip the nails back, straight up & down, until I see the little dark spot in the center of the nail that signals the beginning of the soft spongy tissue that encapsulates the actual vein itself. Some dogs that are older and lack the softness in the center of the nail [this happens from loss of circulation, trauma to the nail bed after years of overgrown nails or, an ongoing low grade nail fungus] it is harder to tell the beginning of this soft area, so you may find yourself at times taking off a sliver of this soft tissue. Cutting the nail straight up & down pulls the angle of the nail up and back from the floor when the dogs foot is down, therefor helping to keep the nails' not "ticking" on the floor as they walk. You can also go back over the nails and clip off the left and right side of the nail to soften the ends and give a "pedicured" look, and of course, clipping first and then going over the nails with a Dremel or file will pull the quick back even more and give each nail a soft tip.

The image to the right shows the angles that are best used to take length off. Clipping the nail at these angles also encourages the quick to "die back" and therefore each trimming session will result in a shorter nail.





Above: notice the green lines that show the best angles for trimming.



Below: this photo shows a clipped set of nails. This dog will need re-clipping every two weeks for approximately 6 weeks in order to get the nails a little shorter without causing injury to the inner quick area.