

Preventing skin problems from any collar

It is a good idea and good practice to check any objects (including normal pet collars) that your pet wears on a regular basis for evidence of damage or injury to the skin.

- Skin injury can occur in less than one day.
- If a collar or other device or object being worn causes a reddening to the skin, scratches, or injuries to the pet, take it off immediately.
- Discuss any changes to your pet's skin condition with a veterinarian as soon as possible.
- Observing and keeping the pet's skin healthy is its best protection.

Check your pet's skin every day



First Aid Tips to Treat Contact Dermatitis and Edema:

- Remove the traumatizing agent.
- Wash the area with room temperature water and a mild soap.
- Pat dry with a clean cloth.
- Contact your veterinarian for an appointment as soon as possible.
- Discontinue use of the device until healing has occurred.
- Do not apply any ointments or gels without your veterinarian's consent. This could worsen the condition.

REMEMBER:

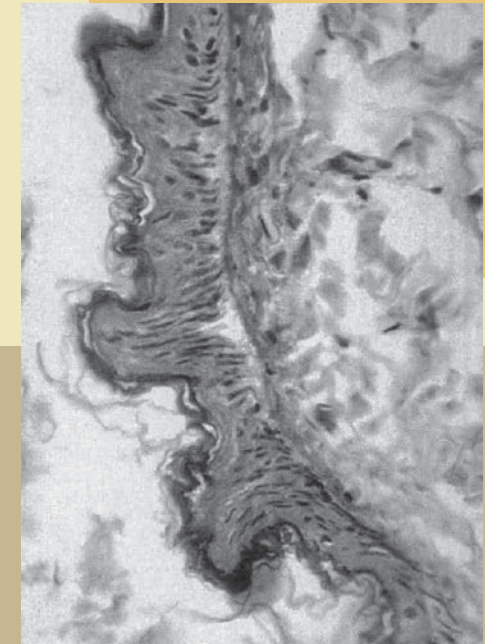
- Electronic training devices cannot cause burns to the pet's skin.
- Have a training professional help you fit and train your pet to the electronic training device. This will help you avoid any injuries to your pet's skin.
- Avoid leaving electronic training devices on for extended periods of time. Follow manufacturer recommendations for wear and use.
- Clean your pet's neck and the electronic training device (especially contact points) regularly.

Recommended Websites:

- www.trainmypet.net
- www.invisiblefence.com
- www.petsafe.net

The BIG MYTH


Electronic Training Collars and Thermal Burns to Your Pets.



Production design donated by
Invisible Fence brand and PetSafe

416-488




**Poolesville Veterinary
Clinic**
Peter H. Eeg, BSc, DVM
Poolesville Veterinary Clinic
Poolesville, MD

Myth:

Electronic trainer collars can burn my pet

FACT:

Injury from an electronic training device is not a thermal burn

The facts about burns

- Electrical burns require a moderate frequency discharge of 3,000 to 5,000 Hz from a device producing at least 5 Amps. This produces a rapid heating effect to the fluid of the tissue of 58 to 70 degrees centigrade, causing a burn to occur.
- Power, concentration, duration, and resistance of the tissue all play a role in thermal injury.

The facts about electronic training devices and Pressure Necrosis

- The maximum electrical output of electronic training devices (such as those from PetSafe®, Innotek®, Guardian®, SportDOG®, and Invisible Fence® Brand) are currently less than 100 milliamps. That's a mere 2 percent of what's required to create a burn.
- Electronic pet containment contact points do not generate electrical potentials or frequencies that would create an electrical discharge powerful enough to create a thermal burn to the adjacent skin.
- Injuries to tissues associated with the electronic pet containment contact points are commonly due to the creation of chronic irritation or reduced vascular flow from being fitted too tight, for too long.
- The visible skin effect seen from irritation or pressure is a result of inflammation and edema to the associated skin.
- If not identified quickly, this condition can deteriorate into severe edema and loss of vascular flow to the tissue. This can result in tissue death and necrosis.
- About batteries: Today's lithium ion and alkaline batteries, used with most pet training devices, do not easily leak. In addition, most training collar units are waterproof; they would not allow any liquids to escape either inside or outside the device.
- Just because a device uses electricity does not mean that it can cause a burn.

Contact Dermatitis and Edema

Contact dermatitis and edema to the skin can be recognized by reddened skin and inflammation. These dilated areas may contain serum that can leak to the skin's surface. This type of dermal edema is common when the skin is irritated or blood flow is reduced due to chronic pressure.



Contact Dermatitis with Edema from improperly fitted Electronic Training Device Points.

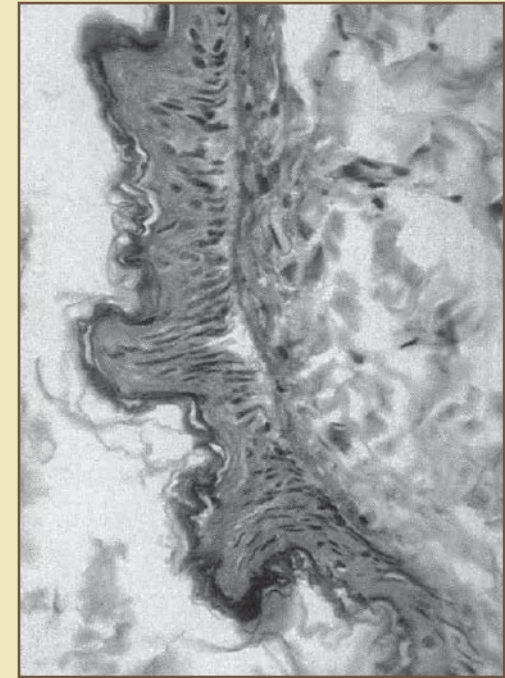
Severe Edema Leading to Pressure Necrosis

Severe edema will result in the presence of subepidermal vesicles and the formation of bullae in the tissue that will rupture. Blood flow is interrupted and cell death occurs. This leads to the formation of necrotic tissue that becomes discolored, blackened, and hard.



Severe Edema and Pressure Necrosis due to extended or excessive pressure on the skin from electronic training device points.

About Cover Picture



In this micrograph, electric burns show a histologic feature where epidermal keratinocytes are vertically elongated as if "standing to attention." In layman's terms, as viewed through a microscope, cells in the skin tissues are vertically elongated as the result of a burn. Micrograph published in Muller and Kirk, *Small Animal Dermatology*, 6th ed. Pg. 131, Figure 2-32, W.A. Saunders, pub 2001.