

Insect-Bite Hypersensitivity

General Information

Various types of insects can cause skin problems in horses. Problems involving large, easily visible insects, such as deer flies, house flies, stable flies, horn flies, bot flies, mosquitoes and fire ants, are usually obvious. The extent of involvement of very small insects, such as lice, ticks, chiggers, mites and midges (no-see-ums), in skin disease may not be readily apparent and can be deceiving.

Horses can have 2 types of hypersensitivity reactions to insect bites:

___ *Toxic reaction:*

___ The bites of larger insects can cause multiple wheals (welts) over the horse's body, about 1cm in diameter or larger.

___ The bites of smaller insects, such as black flies, *Culicoides* midges or straw-itch (*Pyemotes*) mites, can cause a diffuse pattern of small crust-covered papules (pimples). This type of reaction tends to diminish when the insects are eliminated or reduce in number.

___ Lice bites over the neck, mane area and tail can cause the horse to rub against fences, resulting in skin trauma. Severe lice infestation is usually a problem of sick, malnourished or weak horses during winter or early spring.

___ *Allergic reaction:*

___ Some horses develop an allergy to the bite of certain insects. An example is allergy to the bites of the *Culicoides* midge, called "summer itch" in North America, "Queensland itch" in Australia and "sweet itch" in the British Isles. If a horse is very hypersensitive, even only a few insect bites can cause a severe allergic reaction. These bites become very itchy, causing the horse to rub against fences and other objects, damaging the skin. Damaged areas can also become infected, compounding the problem. These damaged areas may not heal over the winter because of continued rubbing and can become worse with the onset of the new insect season in the spring.

___ *Combination reaction:*

___ Some horses may develop toxic reactions and allergic reactions.

It is important to control insect populations as part of a total management program. A "one-shot" approach to insect control is unlikely to have long-lasting benefits. If we have begun treating your horse in the midst of the insect season, then our primary goal will be to test a management and treatment program that can help your horse now. This may not completely cure your horse's problem immediately, but it can guide us in planning for the next insect season. After the insect season ends, you should continue using the management practices mentioned below; we may or may not continue using medication to control your horse's insect-related skin problems.

___ *Insect control:*

- ___ Regularly remove manure.
- ___ Consider environmental control of insects, such as release of insect predators that kill fly larvae.
- ___ Evaluate sources of standing water, such as in tires, troughs, buckets or ponds, for their role in propagation of insect populations.
- ___ Use screens on stable windows and doors, and tassels in doorways to discourage insect entry.
- ___ Use stable fans to blow away smaller insects and discourage entry of large ones.

___ *Medication and other treatment:*

- ___ Occasional use of a very mild shampoo can help reduce skin irritation and rubbing caused by insect bites.
- ___ During insect season, do not apply sprays containing phenols or alcohol to your horse's haircoat. These tend to dry the skin and predispose the skin to damage.
- ___ Apply oil-based insect repellents as needed. Oil-based products enhance coat conditioning. Don't use the same products every time; alternate applications of products with different active ingredients to increase their effect.
- ___ Apply a fly mask or fly tassel, fly sheet or consider bandaging sensitive or damaged areas of skin. It is best to have 2 sets of fly masks, tassels or bandages so that one set can be laundered while the other is in use.
- ___ A good deworming program can help reduce skin problems related to lice, fly larvae and ticks.