

# Safety in the Bee Yard

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Beekeeping in generally is a very safe activity. Still, beekeeping presents a number of dangers of which the beekeeper should be aware. Prevention of harm is always to be valued above cure. What follows are typical hazards that every beekeeper should guard against.

**Bee Stings.** For most beekeepers, bee stings are merely a nuisance. Nonetheless, bee stings can be a real life-threatening hazard for beekeepers non-beekeepers alike who are allergic. This subject has been covered in considerable detail elsewhere and will not be covered here, but non-allergic beekeepers should be certain to work and maintain bees in such a way that those who are allergic are less likely to be stung.

**Burns.** Though admittedly rare, burns can pose a considerable problem for beekeepers. Burns are most likely to occur when a beekeeper comes into close contact with the heat of the smoker. It is best to purchase a smoker that has a protective grate that surrounds the chamber that contains the burning embers. Sunburn can also pose a threat to beekeepers. Skin overexposed to the sun during the course of a day may result in sunburn; skin overexposed to the sun during the course of many years may result in early aging of the skin and even a serious form of skin cancer known as melanoma. Chemical burns are also a possibility for those working with liquid acids.

**Cuts and Contusions.** Cuts from hive tools are a real possibility. Well maintained hive tools are sharp, and should a hive tool slip and hit flesh when being pounded on, it can cut. Trapping a hive tool between a component of the beehive and oneself can also lead to cuts. Contusions are injuries that result without breaking through the skin. Such injuries can cause swelling and leave the skin bruised. Contusions may result from pinching and crushing. When moving portions of the hive, use caution. Do not drop or set down items too quickly. Beehives with a large number of supers can become unstable and fall, especially “sky scraper” hives. When bumped or over filled with honey, these skyscrapers may come tumbling down much to the surprise of the beekeeper. If a beekeeper is beneath the falling hive, hundreds of pounds of honey-filled frames might fall on him causing crushing, broken bones, and worse. Before any hive becomes too high and potentially unstable, it is a wise idea to remove full supers for extraction.

**Eye Damage.** It is commonly suggested that ultraviolet radiation may be responsible for eye damage related to cataracts and a rare form of cancer. To avoid problems in this area, wear sunglasses that reject nearly 99% of impinging UV radiation. Wear broad-rimmed helmets to help protect the eyes and face from UV radiation and the subsequent sunburns of head and neck. Eye damage also can result from flying projectiles. Power tools used for cutting grass spin quickly and can kick up projectiles. Should a stone or similar item be picked up and thrown by a power tool, they have the potential for causing eye damage. When working with power tools in the apiary to cut grass, weeds, or wood, using either safety glasses, goggles, or a face shield is essential to protecting eyesight.

**Fire.** Where there is smoke there is fire. When lighting a smoker, never light it inside a vehicle. Carefully extinguish the smoker’s contents when finished. When emptying a smoker, make absolutely certain that the embers are out before leaving the apiary so that a fire is not started. Be careful if driving a vehicle with a catalytic converter through dry grass and brush. Such converters can easily set dry grass and brush afire.

**Heat-Related Illnesses.** Heat cramps, heat exhaustion, and heat stroke are of significant concerns for beekeepers, especially when there is a high temperature and humidity in combination. Heat-related illnesses can result mostly at these times when the heat index soars. Heavier full-body bee suits, while providing some degree of protection against bee stings, may increase the incidence of heat-related illnesses by restricting cooling air flow around the body. Protect yourself by working at a slower pace on hot, humid days, and periodically retire to a cool place. Eat less food and drink plenty of cool liquids.

**Lyme Disease.** The deer tick is responsible for transmitting Lyme disease bacteria to humans in the northeastern and north-central United States. Deer ticks are very small, and most victims who come down with Lyme disease cannot recall ever having been bitten by a tick. Deer ticks are active throughout the year, but mostly in warmer climates. Because of the deer tick's propensity for "ambushing" warm-blooded victims, it would serve the beekeeper well to keep the grass in apiaries relatively short. Other preventive measures for unkempt areas include the wearing of long-sleeved shirts and pants, tucking pant legs into boots or socks or using leg straps, avoiding tall grass and underbrush, and checking oneself regularly for the presence of ticks. Applying an insect repellent containing DEET also may be effective against ticks. A Lyme disease vaccine is now available. A decision for its use should be made on the basis of individual risk, taking into account both geographic location and a person's activities and behaviors relating to tick exposure.

**Muscle Strain.** Moving hives and hive components can be back-breaking work. Deep supers can weigh as much as 70 pounds or more when completely filled with honey. Unfortunately, the human body is not well designed to lift such weights. The arms, backbone, and legs essentially constitute a lever of small mechanical advantage that can subject the back muscles to a tremendous amount of stress. Muscle strain results from attempting to lift heavy items, lifting them improperly, or simply working too hard. In back strain the muscles are either stretched beyond their usual limits, or are torn as a result of too much stress. The pain results from damage to blood vessels, which causes bleeding in the affected area. The bleeding irritates nerve endings, causing pain. Such muscle strain can result in an inability to work normally, and the resulting pain can last days or weeks. When lifting heavy hive components, use the proper lifting technique. It generally consists of planting the feet squarely upon the ground and some distance apart. Squat -- do not lean forward -- keeping the back as straight as possible. Get a good grip on the object and lift slowly; do not jerk the object upward or twist the trunk of the body as the item is lifted. Set the object down in reverse order.

**Pesticide Exposure.** Beekeepers use a variety of pesticides to manage mites and the small hive beetle. Inappropriate use of various chemicals can result in exposure by any of four different ways: absorption, inhalation, ingestion or injection from puncture wounds. When handling toxic compounds, wear latex gloves to prevent absorption of chemicals through the skin. Leather or cloth gloves may absorb these toxins and, if used over a long time, may result in a long term exposure. Even if beekeepers use gloves, they should wash their hands after using these chemicals and before eating or smoking tobacco products. Touching food with contaminated hands transfers the poison to the food, which is then ingested. Keep food away from toxins. Label all pesticide containers properly, and do not use food approved containers to store chemicals. Beekeepers should be absolutely certain to follow label directions when working with pesticides. Never contaminate honey intended for human consumption by unprincipled use of pesticides.