



British Hedgehog Preservation Society

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REMOVING TICKS FROM HEDGEHOGS by Kay Bullen VN

Many hedgehogs are presented to rehabilitation units with ticks. Healthy hedgehogs, those arriving following an injury perhaps, will have a few whilst those hedgehogs that are sick will often have large numbers of ticks. This is probably due to them being more lethargic thus giving the ticks more time to home in on them. The 2 types of ticks most commonly found on hedgehogs are firstly *Ixodes hexagonus* (the hedgehog tick) and then *Ixodes ricinus* (the sheep tick - amongst other names). Ticks can carry zoonotic diseases in the form of viruses, bacteria and protozoa. The most common in Europe being Lyme disease that is caused by the bacteria *Borrelia burgdorferi*. Not all ticks carry infective agents but any attached ticks should be considered as potentially infective and appropriate precautions should be taken.

There is now some concern about the way we remove ticks from hedgehogs. We used to suggest that oil (eg olive oil, cooking oil, tea tree oil) could be applied to the ticks to encourage them to loosen their grip and make removal, including the mouthparts, easier.

[Note - other methods include:

- *Manual removal, tick remover, fine tweezers, forceps – this is OK for a few ticks but would be stressful if there are a large number*
- *Sedation/anesthesia and removal – expensive and there is the risk of giving a sick hedgehog an anesthetic*
- *Apply chemicals eg Frontline – this may be toxic if used indiscriminately and would also chill the hedgehog and may have a similar affect as applying oil – see below.]*

However it is now recognised that applying oil may prompt the tick to regurgitate its stomach contents, in which harmful zoonotic organisms may be present. This applies not just to oils but any other preparations that may irritate/stress the tick and make it regurgitate. Rough handling may also do the same. The recommended way of removing ticks from people is a tick remover or a pair of fine-tipped tweezers. The tick should be gripped as near to the head as possible and pulled firmly and smoothly outwards rather than plucked.

The BHPS suggests that gloves are worn while handling hedgehogs and the same applies to handling the ticks, if the mouthparts are detached and any blood seeps out of the tick or if any saliva gets into a small cut, graze or prickle puncture then the infection may enter a rehabilitator's blood stream. Infection can also enter through mucus membranes eg the eyes, nose and mouth.

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Hedgehogs often harbour ticks at various stages of engorgement. It is accepted that the longer an infective tick is attached, the greater the risk is of infection being passed on. The duration that a tick has to be attached before transmission can occur will vary depending on the infective agent concerned. Irritation/stress caused to the tick may also result in the regurgitation of its saliva and gut contents, increasing the risk of disease transmission.

Hedgehog and sheep ticks require 3 feeds to develop and between these feeds they develop to the next stage in their life cycle. I did wonder whether the first stage would be disease free because it needed an infected host for the tick to develop into a carrier. However, I understand that certain rickettsial infections are known to be transmitted directly from the female tick to her offspring via the egg. (Note - Rickettsial micro-organisms are "placed" between a bacteria and a virus.) Also in some cases the first stage tick may become dislodged from its original first host and find another "first" host to feed on.

Given the above information the BHPS no longer recommends that ticks be removed by applying oil to them. Manual removal is preferred when there is a small number of ticks – as many as possible should be removed. If some smaller ticks are overlooked or are difficult to get at they can be left until they are a little bigger and taken off then – provided the hedgehog is in reasonable health. However when large numbers of ticks are present, you, as a rehabilitator, will need to weigh up the risks involved in the prolonged stress to the hedgehog when removing a large number of ticks manually and the risk of infection from the ticks if another method of removal eg insecticide (or more precisely acaricide) is used.

Whilst hedgehogs may in some way be immune to these infections (just as they can be to some of their endoparasites); when they are sick, injured or stressed these infections can cause problems. However in most cases the hedgehogs that come to us for rehabilitation will receive antibiotic cover for their original problem and this would also treat the Lyme disease.

There are several types of tick remover on the market. One is a hook that is shaped like a claw hammer that fits under the body of the tick and this is better for the removal of small ticks and those in the fur. The other is a lasso that loops over the body and then is tightened under the body of the tick so it will not slip off, and this is better for larger ticks in the prickles. When the lasso type is used in the fur it can catch fur within the loop and either pull out fur (causing additional discomfort to the hedgehog) or the fur may impede the efficiency of the lasso. Really it is down to personal preference or you may find that having one of each will cover all eventualities.

Tick removers are available on E-bay and one of the lasso types is available from Vale Wildlife Rescue.

Another consideration is what advice should we give to the hedgehog lover who has a garden hedgehog with a tick? I would guess the best advice based on the above is to either remove the tick carefully with a tick remover (and kill it) or leave well alone. The odd tick will not harm a healthy hedgehog.

However people may not be so keen to think of ticks breeding in their garden and may want to use an insecticide around the hedgehog's nest. This should be discouraged as to do so is illegal as there is no licensed acaricidal /insecticidal product for this type of use, even for pest controllers. In addition such action may have an effect on the nest and its inhabitants – the hedgehog may abandon the nest and occupants may inhale any spray or powder that enters the confines of the nest. Also non-targeted, beneficial insect may be affected plus any birds etc that may feed on these insects.

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