

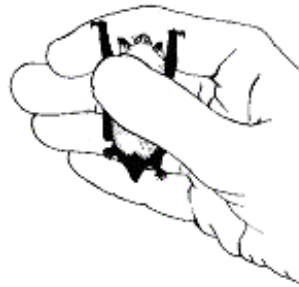
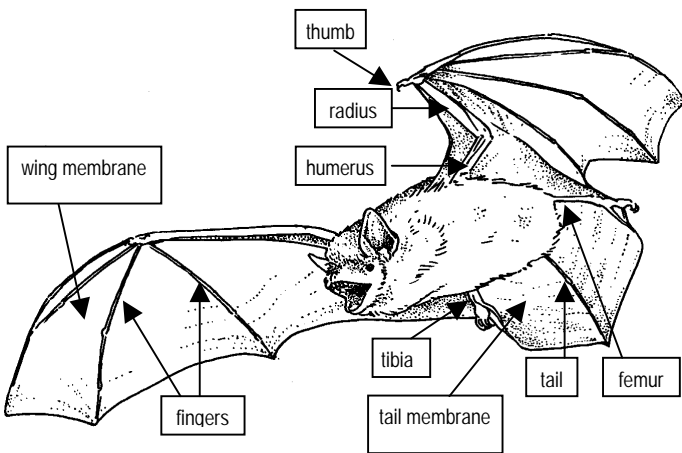
TREATMENT OF BAT CASUALTIES FOR VETERINARY SURGEONS



Wildlife casualties are increasingly part of general practice, but because of their small size (4–40g weight) and specialisation for flying, bats present a particular challenge for the veterinary surgeon interested in wildlife.

All species of bat native to the U.K. are insectivorous nocturnal mammals, and are protected by law under the 1981 Wildlife & Countryside Act and in England and Wales by the 2000 Countryside and Rights of Way Act. It is illegal to have them in captivity unless it is for the sole purpose of tending and releasing the bat when it is no longer disabled. Euthanasia may be performed on badly injured bats.

Handling bats



a) correct

Joints could easily be dislocated or otherwise damaged by incorrect handling. Never hold a bat by the wing tips, or with its wings behind its back.



b) incorrect



c) incorrect

When first presented with a bat

- Be sure to take as much detail as possible. As a minimum you should determine who found it, where it was found and in what circumstances. Bats are social and territorial animals and must be released back to their own colony area. Recording forms for bat casualties are available from the Bat Conservation Trust.
- Wear gloves when handling the bat (see section below on rabies). Keep the bat in a secure container with ventilation holes less than 10mm wide as bats can squeeze through very small gaps. A plastic small animal carrier with a piece of cloth loosely crumpled in one corner will suffice.
- Contact your local bat group. Care of bats is very specialised and most bat groups have experienced carers who will be willing to work with you to rehabilitate the bat. They will also be well placed to assess fitness for release before returning the bat to the appropriate area.

Examination

Wear protective gloves, and hold the bat firmly but gently and look over body for wounds (often indicated by matted fur). Carefully examine wing and leg bones, and wing membranes. The wings are normally folded at the side of the body but can be fully extended by gently pivoting at the wings/thumb joint. Hold the extended wing up to the light to look for bruising or fractures. Small punctures in the membranes are very often due to cats, and so there may be more extensive abdominal or thoracic problems. This also commonly introduces deadly infection, such as *pasteurella*, so antibiotics are recommended when cat damage is suspected.

Some bats have been known to “play dead” when handled. The legs and wings are drawn in tightly and the bat stops struggling.

Treatment

Rehydration

Bats quickly become dehydrated because of their large surface area of skin. Give water or a rehydration fluid such as Lectade by mouth or using a pipette or small paintbrush. Captive bats are normally fed on mealworms but a small amount of canned dog or cat food can be used in an emergency.

Wing and tail membrane tears

Small holes and tears heal without treatment, large tears will heal around the edges. Tears involving the trailing edge can be repaired with adhesive such as Vetbond in small spots along the length of the tear, but not in a continuous strip. Suturing is not recommended.

Fractures

Broken finger bones may heal naturally. Fractures high up in the shoulder or pelvic area are common but are very difficult to detect. A major wing or leg fracture will mean that the bat will be unable to hang and groom properly. Compound fractures cannot usually be repaired and are a route for infection. Euthanasia is usually advisable.

Subcutaneous emphysema

This is a common problem due to lung puncture or a skin wound. Air can sometimes be removed with a needle, or with a few days confinement it will resolve itself.

Skin disease

Bats can in theory suffer from the same health problems and diseases as other mammals, but there is very little scientific information. A common problem of captive bats is hair loss and skin disease, which can be exacerbated by wetting and soiling of the fur. An inability to groom wing membranes can lead to infection. Poor diet may contribute and fungal infection may also be a problem. Correct the management problems and then treat with appropriate antibiotics orally or topically following culture.

External parasites

Sick or weak bats often have a heavy burden of mites, fleas, ticks or bat flies. All these can be removed by use of a permethrin-based flea powder applied very sparingly and preferably between the shoulder blades so the bat will not groom it off. If there are few parasites they can usually be removed by daily brushing with a soft paintbrush and regular changes of roosting material.

Rabies

The rabies virus European Bat Lyssavirus (EBL) has been found in one bat species in the U.K. Although the risk is very small, great care should be taken when handling bats. Be alert to the possibility that a bat may exhibit suspicious signs. There is little firm information but extreme aggression, uncoordinated movements, trembling and spasms have been reported in infected bats. If a bat displaying these symptoms dies or is put down, contact your local Animal Health Office to make arrangements for getting the bat tested for rabies – note that rabies is a legally notifiable disease. Dead bats that are not suspected of having rabies can be submitted to the Veterinary Laboratories Agency (VLA) for testing. (See Contacts)

Torpor

All British bats hibernate in winter. Throughout the year they become torpid in the daytime – a strategy to conserve energy. They will appear cold and very inactive, and may take up to half an hour in a warm place to 'wake up'. Do not feed or anaesthetise a torpid bat; it may prove fatal.

Medication

Anaesthesia

Halothane or Isoflurane by mask.

Hypothermia is *not* a recognised form of anaesthesia, and is illegal.

Euthanasia

Can be carried out by injectable barbiturates or overdose with gaseous anaesthetic. Alternatively, it can be achieved by compression of the neck.

Antibiotics

Can be used but with the usual restraints and preferably after sensitivity tests. The following dosages have been administered orally and were gained through experience, appearing to have no ill effect:

Synulox - 0.014mg/gm bid.

Baytril - 0.003 mg/gm – 0.007 mg/gm bid.

Cephalexin - 0.25 mg/gm bid.

Antirobe - 0.0625 mg/gm bid.

Release

All British bats feed on insects which they catch while flying. They have no alternative feeding strategy to hunting on the wing, and so must be completely fit and able to fly strongly before release. A bat can be considered suitable for release if it can maintain flight in a room for several minutes and can alight and take off at will.

Considerations

Bats are not aggressive but like any wild animal, they may bite to defend themselves if handled. Most of the UK's bats have such small teeth that a bite will not break the skin. However, although the risk is very small, you must take precautions to avoid being bitten or scratched.

If you regularly come into contact with wild bats, consider whether pre-exposure rabies inoculation is appropriate.

Contacts

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The Bat Conservation Trust

National Bat Helpline 0845 1300 228

The documents "Good Practice Guidelines on Bats and Rabies" and "Bat Related Enquiries – advice to give to a non bat worker" are both available from the BCT free of charge

Veterinary Laboratories Agency (VLA),

Rabies Diagnostic Unit, Woodham Lane, New Haw,
Addlestone, Surrey KT15 3NB
Tel: 01932 357645

Test tubes, prepaid envelopes and instructions for sending dead bats to the VLA can be obtained from the BCT. When you send a dead bat you should include details of where the bat came from and of any biting incident involving people. If you believe the bat may have rabies, ring the local Animal Health Office as rabies is a legally notifiable disease. The AHO will arrange for the bat to be tested by the Veterinary Laboratories Agency.

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