

# First Aid and Emergency Care of Falconry Birds

Neil A Forbes BVetMed DipECZM(avian) FRCVS  
Great Western Exotic Vets, Swindon

Most sick or traumatised raptors are emergencies, as they hide signs of illness and deteriorate fast, so the first point is to hone ones skills in recognising illness:

## Signs include –

Change of appetite (eating or drinking more or less)

Loss of weight or condition

Change in level of activity, more or less vocal, increased aggression

Reduce flight performance

Not moulting or failed moult

Any abnormal swellings (especially bumblefoot)

Abnormal discharges (faeces, casting, vomit, mouth, ears, eyes, preen gland, cloaca)

Altered perching (two legs not one, or position – i.e. on floor not perch)

Lame – leg or wing

Breathing – (increased effort, noise or loss or alteration of voice)

Blood loss or other obvious trauma

Blindness or apparent impaired vision

Collapse, fitting

Any sick bird, is in effect an emergency and should be presented to a suitably qualified and experience avian vet asap, this may well mean using the services of more than one veterinary practice. If your regular avian vet is not available when required, possibly 'out of hours' don't

be surprised if you have to pay a surcharge to use a different vet in this circumstance. Veterinary fees, for high quality thorough treatment are typically expensive, if this is a concern to you, do consider taking out insurance to cover such eventualities.

**Beware toxicity of 'aine' products – e.g. procaine penicillin or local anaesthetics e.g. benzocaine, lignocaine, lidocaine. Great care must be taken when using products licensed for use in humans or other animals, where a local anaesthetic agent may have been added as a 'trace element' to reduce local pain or stinging. Such added pain relief is safe and effective in humans and other mammals, but rapidly fatal in birds. As these products are not licensed for use in birds, this risk is not stated to be a risk.**

## Emergencies

**Immediate treatment for shock:** when any raptor is sick, or has suffered a trauma, it is likely to suffer

from shock. In a shocked patient, the end arterioles leak fluid from the circulation into the surrounding tissue, resulting in a reduction of circulating fluid in the blood vessels. The later leads to a reduced blood pressure and impaired tissue perfusion. Shock is best treated by administering fluid therapy, (e.g. Life Aid, Lectade or a human version e.g. Diarolyte, or in emergency, a heaped tablespoon of glucose powder, plus a level teaspoon of salt, in a pint of warm water), at an initial rate of 20ml per kg body weight – by gavage tube into the crop, to be repeated 2 hours later. In the meantime, the bird should be left undisturbed in a warm quiet situation.

**Lost talons:** not uncommon, especially in Harris' hawks, occurring most commonly when talons are over long, when grasping quarry. The nail bed is exposed, this should be immediately cleaned with effective disinfectant, and bleeding controlled with digital pressure and a clean dressing. Once controlled a hydro-colloidal dressing should be





*Haemorrhage in mutes*

applied for 48 hours, prior to apply repeated coats of Germolene New Skin, to provide a protective coating. The bird should not be flown again at quarry until the talon has regrown, which will ordinarily take 8-16 weeks. Speed of regrowth can in many cases be increased by the provision of one biotin tablet (500ug) by mouth each day.

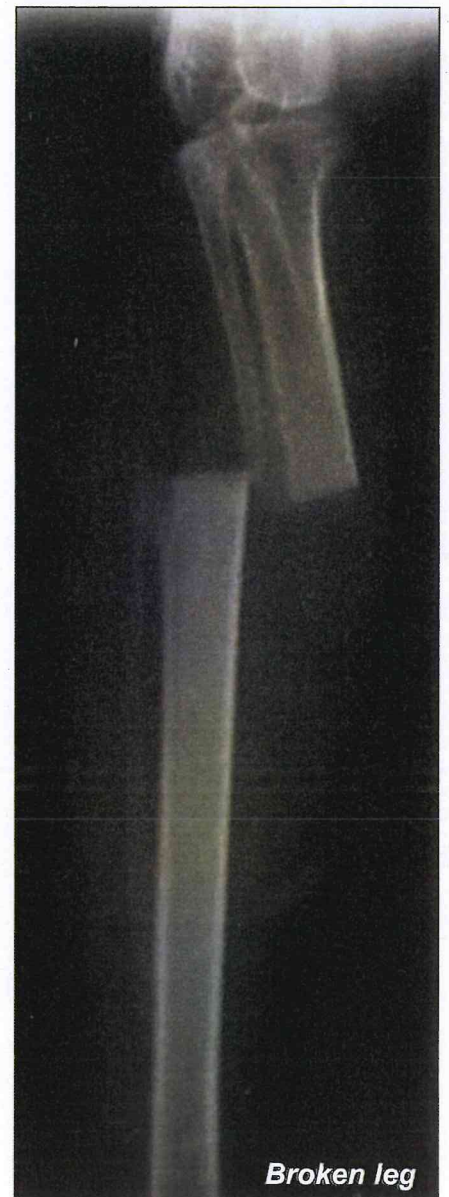
**Bleeding:** any bird losing more blood (in mls) than 1% of its body weight in grams, is at risk of dying. So a 1kg goshawk cannot afford to lose more than 10ml of blood, whilst a 130g male merlin cannot afford to lose more than 1.3ml, i.e. about 20 drops. Any bird losing more blood must be presented to a suitably experienced avian vet as a matter of emergency. The most effective form of haemorrhage control is simply 'finger pressure', although once bleeding has slowed, cessation can be effected by applying a strong solution of potassium permanganate to the point of bleeding (e.g. with a cotton bud), or a silver nitrate pencil, or failing that wound or glucose powder.

**Blood in the mutes:** on occasions a small amount of blood may be seen in the mutes when a bird is suffering from coccidiosis. However on occasions there is a much more serious cause. Bleeding may come from the gut, the genital tract – e.g. oviduct, or the cloaca itself.

**Suspected fractured or dislocated wing:** the commonest fracture of free flying raptors is an upper arm (humerus) injury. Second commonest would be an injury to the shoulder, which is typically consequent to flying into a stationary object. In any such event, it is essential that the bird is presented to a suitably experienced avian vet as soon as possible. In the meantime, it is important that no further damage occurs, prior to arrival at the vets. If the wing is obviously hanging down, the bird should be placed into the 'sleeve of a jacket', 'stocking leg', 'pop sock' or similar, being careful not to cause any tightness or restriction to the chest (i.e. breathing). If the wing cannot be flapped about, no further damage will arise.

**Leg fractures or dislocations:** occur most commonly as bating injuries on newly tethered birds, or occasionally as flying injuries. Leash length when initially tethered must be minimalized, so that as they bait, travel distance and hence speed at time of impact is minimalized, to reduce the risk.

Small size perches, with short leash length and in Harris hawks one can even use a block perch for the first three weeks, as block perches have an inherent lower risk than bow perches, due to the shorter potential baiting distance. Unless there is going to be an inevitable delay in reaching a vet, (e.g. stuck the wrong side of a ferry in gale force winds), then no further treatment is required.



*Broken leg*

Where delays are inevitable, then the fracture may be immobilised by placing a splint on the effected leg, so long as it is possible to immobilise the joint above and the joint below the fracture.

A foam backed, aluminium finger splint is used, with 90 degree bends on the splint and leg, at the joint above and below the fracture. The splint is placed down the front of the leg.

**Smoke inhalation:** ironically, despite the fact that birds lung gas exchange system is said to be ten times more efficient than mammals, they suffer less severe effects due to accidental smoke inhalation than any mammal. This is because air passes into, through and out of their lung, whilst in mammals, the lungs are the end of point of respiration, with air being sucked in, then blown back out of our lungs. If smoke inhalation has occurred, shock therapy may be administered and then the bird should be presented to a bird vet as soon as possible, i.e. the same day.

**Lost flight feathers:** if a blood feather is lost, whilst it may re-grow immediately there is a significant that it will re-grow bent or twisted. In contrast if a hard penna feather is lost, it may re-grow immediately, at the next moult or never at all. Traditionally some falconers have tried to keep the feather follicle open, by replacing the feather shaft, or inserting a section of plastic tube or bees wax, if this is done all that is likely to occur, is the introduction of a bacterial infection into the feather follicle and as such, techniques of this type are not recommended.

**Broken lost beaks:** small cracks, extensive cracks or total loss of the beak, over lying top or bottom jaw can occur. All such cases should be presented to a bird vet as a matter of great urgency.

**Electrocution:** the vast majority of birds which are electrocuted are killed outright. Occasionally the electrical burn will just affect one limb. Whilst the charring may be seen superficially on the limb surface, typically the internal tissue is akin to charcoal. In a very small number of cases, charring may effect only soft tissues, and in such cases veterinary intervention may be effective. All such cases should be submitted to experienced avian veterinary care, for full assessment and appropriate therapy.

**Water logging:** falconry birds will on occasions become water logged, either whilst out on the fist in a heavy rain storm, or consequent to flying quarry into water. Once a bird's plumage is wet, it can no longer act as a layer of insulation, to maintain body temperature. Any waterlogged bird is likely to suffer hypothermia and as such should be treated for shock, taken into a warm dry area and the feathers dried off.

**Crabbing / bite wounds:** both bite and crabbing injuries, typically comprise a small entry point with the injection of dirt and infection deep into body tissues. When a crabbing incident is suspected, owners will often search the body for signs of wounding and on finding none, ignore the incident. This should never be done, as the discovery of such lesions is typically very difficult. Any potential crabbing incident should be considered to have occurred and treated as such. Shock therapy may be provided, but also antibiotics and anti-inflammatory pain killers should always be provided, for at least 5-7 days.

**Eye damage:** When next looking at your bird, study the top of the head and appreciate that the two eye globes touch each other as they meet in the top of the head. So any bird suffering a crabbing incident to

the top of the skull, will typically suffer an ocular penetration, rather than brain damage.

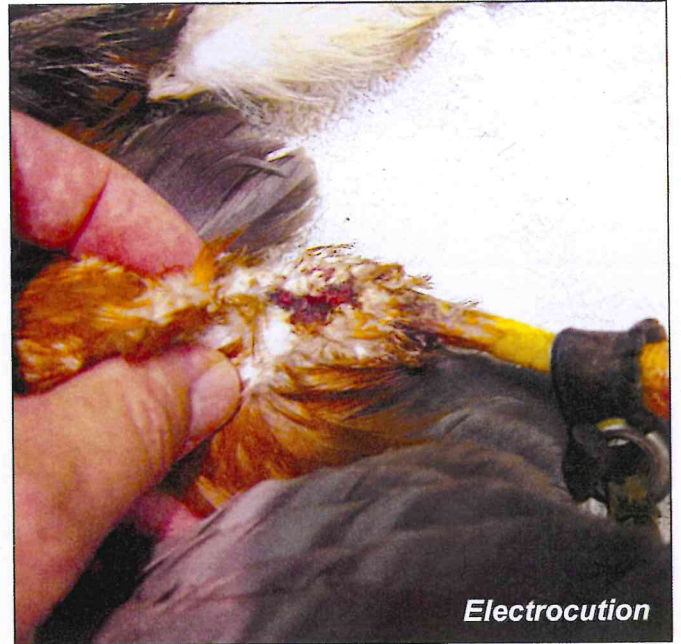
More commonly hunting birds suffer corneal scratches or penetrations (by thorns, typically gorse or blackthorn), when flying into undergrowth after quarry. The signs typically seen, are a bird with a watering eye, or simply a reluctance to open the eyelids. Such injuries are serious, but will not necessarily result in loss of eye sight, so long as prompt competent treatment is sought and provided.

**Fitting:** there are many different causes of fitting in raptors, including head trauma, lead, zinc, iron or copper poisoning (after ingesting any of these metals), calcium deficiency, glucose deficiency (as bird was too thin and then worked too hard often on a cold or wet day) or glucose excess (stress induced diabetes, typically effecting goshawks during initial training), meningitis, middle ear infection, blood born parasitic infection (visceral larva migrans), vitamin E deficiency, vitamin B (thiamine) deficiency, severe liver disease (hepatic encephalopathy), various systemic infections e.g. Chlamydia or fat embolism (in effect a stroke caused by a fat globule circulating in the blood system). The presenting signs and correct treatments vary greatly. It is essential that the bird is examined by an experienced avian vet, with in house laboratory facilities, so that xrays and blood tests can be carried out instantly on site, such that correct treatment can be provided. Shock treatment (fluid therapy) and sedation (to control fits) are likely to also be required.

**Sick bird:** more often than not, a falconer will not be certain what is wrong with their bird – 'it just isn't right'. The truth is that birds will hide the signs of illness for as long as



*Cracked beak*



*Electrocution*



*Crabbing injury*



*Haemorrhage in anterior chamber*



*Sour Crop*



*Wound management*

possible, once they show they are sick, they are very ill and require expert veterinary care as a matter of urgency.

**Lost bird came home in very low condition:** it is almost inevitable that once in a while a flying bird will go AWOL, hopefully being recovered a day or two later, although typically feeling sorry for themselves, thin and in low condition. The same may occur when a young bird enters for the first time. It may have been necessary to cut the weight further and further to make them keener, prior to them initially entering. This may be compounded by a particularly hard flight, maybe even in the cold or wet, prior to actually entering. In either situation, the bird may be in very low condition and the falconer may well appreciate a need to get weight back on as a matter of urgency. The temptation is to gauge the bird – whilst this is completely the wrong solution. In such a case, being in low condition, possibly exhausted, with an over full crop, it is more likely than not, that the bird will be unable to put their crop over, the meat rapidly going off, and the bird suffering sour crop. Instead of this, if a bird is very low in condition, small, easily put over and digested meals, with no casting, (e.g. skinned chicks), should be provided, with subsequent meals as soon as the crop is put over. In this way, rather than an overfull crop of say 5 chicks which results in sour crop, perhaps a small crop of 2 skinned chicks is given four times in the day (total 8 chicks) and the bird's weight rises nicely.

**Sour Crop:** the crop is not a stomach, instead it is more like heated shopping basket, where meat is kept warm at 41°C, containing no enzymes or acid, such that if meat remains in their longer than necessary, it will rapidly putrefy, producing poisons, which enter the blood

stream, making a bird extremely sick, with potentially fatal consequences. If a crop is not moving by 6 hours, the bird should be given a dose of electrolyte by crop tube (10ml/kg bwt). If after another 2 hours, the crop is still not being put over, emergency veterinary intervention is required – immediately, irrespective of time of day or night.

**Ingestion of poisoned food:** occasionally whilst out hunting, ones bird may descend on some meat of questionable wholesomeness, possibly even poisoned. In such an event, food should be milked up from the crop, double quick time, then a dose of electrolyte given by crop tube, 10ml/kg body weight, and an emergency appointment made with your vet.

**Wound management:** as stated above any puncture wound (bite or crabbing injury), needs to be seen by a vet and antibiotics provided. In any event, examination and medications must always be provided before any infected wound, starts to fester, i.e. before 8 hours post injury. In addition to this any electrocution wound must be seen immediately. Any wound that is contaminated, (which doesn't mean it has to be covered in soil or farm yard manure), should be cleaned off with appropriate disinfectant and copious fresh clean water, then an urgent appointment made with the vet. Likewise any wound more than 1cm in length will need veterinary intervention and is likely to need sutures, so long as it is clean enough to close.

**Respiratory toxins:** especially as more birds are now imprinted, i.e. living close (maybe inside) to the falconer, there are now far more incidents of birds inhaling substances which are dangerous to them. This ranges from household fire smoke, tobacco, or 'whacky backy smoke', Teflon (i.e. PTFE – polytetrafluoroeth-

ylene – found in non-stick cookware, grill sheets, self-clean ovens, solid fuel burners, hardening agent in some household gloss paints, water-proofing on some outdoor clothing, some irons, ironing board covers, matt black surface on some heat lamps, working parts of some gair dryers, etc etc. ), various solvents e.g. Toluene (in some impact adhesives), various air fresheners (including some car air fresheners), carpet cleaning agents, etc.. In many situations, birds are far more sensitive to these effects than mammals. Such issues are relatively unknown, as traditionally birds have not been exposed to them. In such a situation, birds may collapse, show nervous signs or start breathing with great difficulty. Any such bird must get to a vet – immediately.

**Wing tip oedema:** as described in a previous article, this disease occurs in the UK between October and the end of April. The bird is seen to have cold, wet, fluid filled swellings of the wing tips. The average affected bird will lose the tip of the wing with three primaries, never to re-grow, i.e. a long-term crippling effect on flight ability. Any keeper suspicious of such a disease, must seek veterinary care immediately. In the interim they should warm the bird up and



**Wing Tip Oedema at 4 days**



**Tick on eyelid**



**Goshawk off legs - lead poisoned**

encourage the bird to move its wings, by rolling or dropping the first.

**Tick pyaemia:** birds have their own ticks (*Ixodes frontalis*), although they look very similar to sheep / hedgehog ticks. If untreated, over 50% of raptors with a tick on them will die. Urgent veterinary treatment is required for any effected bird. The ticks will always be found around the head or neck (i.e. where the bird cannot preen them off). The tick will attach when small, will fill with blood gradually swelling to some 7x4mm.

Once fully swollen (in approx. 7 days), they will drop off, but the bird will be left with tell tell signs, such as: sudden death, a dark red blood blister under the skin around where the tick attached, a swollen head, blood saliva in the mouth, or a closed eye. If treated soon enough, with the correct antibiotic, no birds will die. All other in contact birds will at the same time be at risk and should be treated with anti parasiticide prevention.

**Loss of use of the legs:** this is always a serious sign. It may be

caused by lead poisoning, spinal trauma, kidney disease or leg injuries, especially developmental problems. Urgent expert veterinary care is indicated.

**Cloacal prolapse:** various prolapses may occur (cloaca, colon or oviduct). All effected birds will be extremely shocked and need urgent veterinary care. In the meantime, keep the prolapsed tissue clean and do your very best to prevent further damage.



**Prolapsed colon**

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**[swindonreferralsexotics@vets-now.com](mailto:swindonreferralsexotics@vets-now.com)**

**10 Berkshire House, County Park Estate, Shrivenham Rd,  
Swindon, SN1 2NR**