

# Free-range poultry diseases

Exhibition chickens, hens, ducks, geese, turkeys, ornamental waterfowl, quail, ornamental pheasants, guinea fowl and peacocks

## Common problems and some causes

**Weight loss:** internal parasites, poor nutrition, liver disease, starvation, bullying, avian TB, Northern fowl mite or red mite, poisoning, coccidiosis, kidney disease, lack of water, high levels of ammonia.

**Diarrhoea:** *E. coli*, BWD, coccidia, too many green foods including cabbage, *Hexamita*, *Salmonella typhimurium* or *enteritidis*, sudden change of diet. Do not confuse caecal contents (voided 1 in 10) with diarrhoea.

**Missing feathers:** external parasites, moulting, pushing head through fence, hens plucking each other or cockerel (culprit usually has all feathers), claws of male, poor nutrition.

**No eggs:** poor body weight, birds too young, days too short, IB (or other viruses), fright/stress, new home, rats or magpies stealing eggs, birds laying away, laid on floor and buried, eaten by hens, not enough food, too much food Northern fowl mite or red mite.

**Chick discomfort:** noisy when defecating and pasted-up vent: *E. coli* or chilling. Continual cheeping: too cold, hungry, thirsty, one escaped from brooder. Panting: too hot. Huddled together: too cold

**Respiratory noises:** *mycoplasma*, IB (or other viruses), aspergillosis, high levels of ammonia, gapeworm, panting because of excessive heat.

**Eggs: Infertile:** excess males, flea eggs on vent, too many feathers on vent, cock too old. **Not hatching:** not know correct incubation time, not fertile, infected by hen. **Dead-in-shell:** “banger” (egg explodes in incubator as rotten), too much humidity in setter, not enough humidity in hatcher, sat on by broody before collection, poor nutrition of breeders, poor egg storage, eggs too old (>14 days), old age of hen, drugs at incorrect levels, *Salmonella pullorum*, infection, damaged shell, malposition of embryo, high bacterial load in dirty nests.

## Common diseases by age

**Chicks:** Early hatch: very small bantams, eggs too fresh (<24hours), sat on by broody before collection. Unhealed navel: eggs too old, temperature of incubator too low, too much humidity in setter. Deformities: genetic or nutritional, slippery surface for first few days, temperature fluctuations and extremes during incubation. Deaths: salmonellosis, coccidiosis, chilling, smothering.

**Sudden death in adults:** egg peritonitis, heart failure, salmonellosis, stoat/mink/ferret/fox, choked, kidney failure, aspergillosis, botulism, duck viral enteritis, Newcastle Disease, Avian Influenza.

**Chicks:** deformities (bent toes, crossed beak, splay leg), *E. coli*, BWD (*Salmonella pullorum*), Gumboro, IB, aspergillosis, coccidiosis, starve-outs, feather pecking. Natural rearing includes the previous conditions plus chilling, squashing, vermin.

**Growers (8–26 weeks):** Gumboro, Northern fowl mite/red mite, scaly leg, coccidiosis, mycoplasmosis, swollen sinus, feather pecking, angel wing, perosis, smothering, Marek’s, lameness, roach back, wry tail, cow hocks, impacted gizzard, roundworms, breathing difficulty (IB, ILT, other viruses, gapeworm), poisoning, blackhead, aspergillosis, lice.

**Adults and aged:** egg peritonitis, avian TB, Blackhead, *Pasteurella*, *Erysipelas*, heart failure, scaly leg, Northern fowl mite/red mite, lice, mycoplasmosis, swollen sinus, ear canal infection, bumblefoot, vent gleet, wet feather, arthritis, choking, sour crop, impacted crop, impacted gizzard, tumours, poisoning, aspergillosis, kidney failure, liver failure.

## Life expectancy

Large fowl, turkeys and guinea fowl: 6–10 years. Bantams, peacocks and pheasants: 8–12 years. Ducks: 6–8 years Geese: 10–20 years. Quail: 1–2 years.

## Useful tips and information for clients

- Protect from vermin and wild birds
- Take advice on housing and nutrition
- Use high-quality feed specific for age and species
- Always seek prompt veterinary attention
- Buy new birds from a single source
- Take care in introducing new birds

## Biosecurity guidelines

- Isolate new stock for 2–3 weeks (quarantine)
- Isolate birds after taking to an exhibition for 7 days
- Change clothes and wash boots before and after visiting other breeders
- Change clothes and wash boots before and after attending a sale
- Keep fresh poultry disinfectant at the entrance to poultry areas for dipping footwear
- Disinfect crates before and after use, especially if lent to others. However, it is preferable not to be sharing equipment
- Disinfect vehicles which have been on poultry premises but avoid taking vehicles onto other premises
- Wash hands before and after handling poultry
- Comply with any import/export regulations/guidelines

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Signs	Disease	Cause	Prevention	Bird species
Listless, head sunk in neck, white diarrhoea, maybe blood in faeces	Coccidiosis	<i>Coccidia</i> parasite	Check bacterial levels of drinking water, use an acidic water sanitiser, with plastic drinkers only (to avoid zinc toxicity). Vaccinate dayolds, available in small amounts.	All birds from three weeks
Listless, head sunk in neck, yellow diarrhoea	Blackhead (Histomoniasis)	Parasite carried by heterakis worm	Worm chickens and turkeys with Flubenvet see below. Use suitable water sanitiser as above.	Turkeys, pheasants, guinea fowl, uncommon in hens, chronic in peafowl
White diarrhoea, thirst, sudden death	Bacillary White Diarrhoea (BWD)	<i>Salmonella pullorum</i>	Blood test to find and cull carriers.	Chicks 0–3 weeks, adults as carriers
Listless, greenish diarrhoea, gaping, waterfowl lame	Parasitic worms	Up to six different types round, tape, <i>capillaria</i>	Regular worming with Flubenvet 60g tub, add a little vegetable oil to pellets to stick the powder. Frequency depends on stocking density, tri-annually or bi-monthly if continuously on small area.	All poultry
Visible parasites around vent, listless, blood spots on shell, dirty crest	Lice or mites	Four types louse, two types mite	Diatomaceous earth in hut and litter all the time, desiccates chitin of mites, not toxic to vertebrates, so can put this on birds.	All poultry
Sneezing, nasal discharge, foam in eye, rattly breathing, swollen sinus	Mycoplasmosis	<i>Mycoplasma</i>	Use suitable water sanitiser as above. <i>Mycoplasma</i> vaccine lasts only six months. Consider the use of licensed poultry vaccines under the advice of a specialist poultry vet.	Hens, turkeys, peacocks, pheasants, ducks
Swollen sinus in waterfowl	Mycoplasmosis or <i>Pseudomonas</i>	<i>Mycoplasma</i> or <i>Pseudomonas</i>	Spray fomites with Virkon or F10.	Waterfowl
Raised, encrusted scales on legs	Scaly leg	Mite	Dunk legs in surgical spirit weekly for three weeks. Scales grow back properly at annual moult.	Any bird
Blood	Wounds	Featherpecking: heat stress, overcrowding	Remove red colour, spray coloured antiseptic, put Stockholm tar on area. Isolate until healed. Reduce temperature, increase space.	Any bird
Brown diarrhoea, slow growth, slow feathering	Enteritis	<i>E.coli</i> , stress, dirty litter, chilling, poor nutrition	Use suitable water sanitiser as above. Improve nutrition, reduce stress.	Young stock from five days
Noxious smell, scabby vent	Vent gleet	Herpes virus	Cull, no treatment.	Birds over one year
Purple comb when normally bright red	Heart failure	Age, disease, deformity	ACEi useful at dog dose rate.	Chickens
Swelling on underside of foot	Bumblefoot	<i>Staph</i> bacteria, wound	Poultice for at least two weeks. Refer for surgical intervention if necessary.	Old, heavy birds, perches too high
Top beak overgrown, long claws	Overgrowth	Deformity, soft ground	Trim or file to normal shape.	All birds
Female flank, no feathers or bleeding	Bareback	Sharp claws or spurs	Trim or file to shape, use saddle for breeding or remove cockerel.	Soft-feathered hens, turkeys
Unusual behaviour	Stress	Disturbance or change	Use suitable water sanitiser as above. Multivitamins may also be useful.	Any bird
Lameness (if waterfowl, also see worms)	Injury, tumour	Kidney disease, tumour, arthritis	Separate affected bird but add companion if waterfowl. Symptomatic treatment, pain relief.	Any bird
Paralysis, same side leg and wing	Marek’s disease	Herpes virus	Vaccinate dayolds. Cull affected birds. Keep chicks and adults separate. Consider the use of licensed poultry vaccines under the advice of a specialist poultry vet.	Hens up to the point of lay, cockerels
Weight loss, but still feeding and alert	Avian TB	<i>Mycobacterium avium</i>	No treatment. Cull affected birds. Wild birds are carriers.	Birds over one year
Respiratory distress, loss egg quality	Infectious Bronchitis	Coronavirus	Vaccinate day-olds. Carrier adults (40% chick mortality). Consider the use of licensed poultry vaccines under the advice of a specialist poultry vet.	Hens, pheasants, guinea fowl
Respiratory distress, gasping, death	Aspergillosis	Fungus	Cull, remove bark substrate or damp litter, fog with F10.	Chicks 0–4 weeks, turkeys, waterfowl, pheasants, plus any adults
Pendulous crop/sour crop	Cropbound/sour crop	Fibrous grass, poor muscle tone, yeast overgrowth	Isolate with only water 48hrs. Surgery if impacted. Add grit to diet as prevention. If sour crop, use suitable water sanitiser as above. Check heavy metal blood levels.	Old hens or birds on long grass
Sudden chick deaths, rest recover	Gumboro (IBD)	Birnavirus	Consider the use of licensed poultry vaccines under the advice of a specialist poultry vet to vaccinate young birds.	Hens 1–16 weeks
Cheesy substance in ear canal	Ear infection	Bacteria or mites	Flush then treat.	Any bird
Cheesy substance in mouth and throat	Canker	<i>Trichomonas</i>	Use suitable water sanitiser as above. Check vitamin A levels are adequate.	Any bird
Listless, straining, penguin-like stance	Egg bound or egg peritonitis (EP)	Low available calcium or yolks in abdomen	Warmth, remove egg, give Calcivet. If EP, poor prognosis and may need culling.	Old ex-battery or laying hens
Waterfowl wing droops then sticks out	Angel wing	High protein diet	Drop protein, tape wing in natural position for three days, do again if necessary.	Growing waterfowl
Waterfowl no longer waterproof	Wet feather	Shaft lice, excess preening, tree mould	Keep off water until next moult, de-louse, if mould, wash in detergent.	Waterfowl
Sudden death breeding waterfowl	Duck viral enteritis	Herpes virus	Vaccinate. Remove wild mallard.	Waterfowl

Medications licensed for laying hens are very limited. SAES are not to be used in food-producing animals. Medications under the Cascade may take the hen out of the food chain forever and in any case, egg withdrawal times should be extended by several weeks. Specialist poultry veterinary advice should be sought for vaccination advice, most vaccines can only be given at day-old.

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