

# **The Avian Physical Examination**

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## **Physical Examination**

The following discussion covers what is evaluated during a proper 'hands on' physical examination by an avian veterinarian. Hopefully, it will enable you to better evaluate your birds, as well as understand what your veterinarian is looking at during the examination. There are many variations of performing the exam but I prefer to start with the head and work downward.

**1) Head** - I initially begin by evaluating the feathers on the head, looking for normal feather development and good quality feathers. If there are bare patches or poor feather development nutritional, metabolic or systemic disease may be responsible. Trauma could cause feather loss. If the feathers are being plucked on the head, you can determine this by the presence of black stumps where blood feathers were picked, which would indicate domination by another bird in the cage/household. Abnormal crest feathers on cockatoos may sometimes be the first indication of Psittacine Beak and Feather Disease. The skin is paper thin and will be slightly flaky. Excessive flakiness could indicate a nutritional condition such as a vitamin A deficiency.

**2) Cere/Nares** - The cere and nares are then evaluated. The cere is usually dry and may be slightly flaky. There should be no unusual swellings noted. The color of the cere is used to determine sex in budgies: blue in males, light blue or brown to dark brown in females. Unfortunately this is not always reliable especially with the color mutations and it also varies with age. A female in breeding condition may undergo brown hypertrophy of the cere and in severe cases may occlude the nares. It can also be seen in males with testicular tumors that secrete estrogen.

The nares should be symmetrically placed in the cere and similar in size and shape. The nostrils should be open with no discharge noted. As mentioned earlier sometimes discharge may be seen only as staining above the feathers indicating rhinitis. In some instances thick, flowing discharges may be noted. On occasion the nostrils are blocked and removal of the plug will free the discharge. Very enlarged nostrils may have been the result of chronic rhinitis or injury. Chronic nasal discharge may produce grooves in the beak.

**3) Beak** - The beak should be relatively smooth and clean. A small degree of flakiness is normal, if the bird is a poor chewer the beak may appear rough as the older beak does not wear away with beak usage. Excessive flakiness of the beak or dullness could indicate a nutritional problem.

For reasons not yet determined, in fatty liver disease the beak will grow abnormally rapidly and irregularly. Particularly in parakeets and some cockatiels with fatty liver disease there may be black/brown areas of hemorrhage on the beak and toenails coupled with some deterioration of the beak. These birds should be handled with extreme caution as their systems are extremely compromised.

Malocclusions are frequently noted, particularly twisting of the upper beak. The causes are uncertain but heredity, trauma, malnutrition or systemic disease have been implicated. Such conditions can be treated surgically or with frequent beak trimming so the beak can remain functional.

**4) Mouth** - Examination of the mouth is a very important part of the physical. The beak can be held open with a speculum, scissors, gauze strips, etc. and a direct light source should be used to illuminate the oral cavity. Care must be taken with birds that have thin margins of the beak, such as macaws and cockatoos for if they bite down aggressively cracking of the beak and hemorrhage may occur.

The epithelium of the oral cavity should be smooth. In bacterial infections it may appear to have a grayish cast, sometimes with a pungent odor. Off-white oral lesions may be seen, usually due to squamous metaplasia produced

by a vitamin A deficiency (one of the most common nutritional deficiencies seen). Other causes of mouth lesions include candidiasis, trichomoniasis, avian pox or bacterial infections. Candidiasis is especially common in young birds being hand raised. Occasionally abscesses may be seen, particularly on the sides of the tongue.

The margin of the choanal slit should be sharp, clean and bordered by numerous sharp papillae. Blunted, absent papillae, thickened edges to the choanae and white plaques indicate vitamin A deficiency. This can provide ample opportunity for secondary pathogen invasion. Choanal viral papillomas may also be noted in Amazons, macaws and particularly hawk headed conures. Occasionally these papillomas may be peppered throughout the oral cavity and have been noted in close proximity to the glottis interfering with respiration.

**5) Eyes** - The eyes of the bird should be examined as any other animal, however, an added feature is that birds have a functional third eyelid. Check for any abnormalities of the margins of the eyelids. Avian pox can cause deformation of the eyelids as well as corneal ulcerations, particularly in blue fronted Amazons. Discharges, conjunctivitis, matting of feathers around the eyes, and periophthalmic swellings are all indications of infections. Mycoplasma may cause these signs in cockatiels and budgies.

**6) Ear** - Ear infections are uncommon in birds but they do occur. In my experience I most often see otitis externa in lovebirds. Discharge may be noted and the ear canal swollen shut. On occasion pruritus (itchiness) in the region may lead to self-mutilation.

**7) Neck/Trachea** - Leaving the head, the neck and trachea are palpated for any unusual swellings or abnormalities. In small birds such as canaries and finches the feathers in the neck can be wetted and the trachea transilluminated to detect air sac mites.

**8) Crop** -The crop should be palpated next. Palpate the crop contents -is there fluid, food, masses, gas, foreign body? Care must be taken if there is fluid in the crop to prevent backflow into the mouth and aspiration. The crop wall should feel relatively thin, in some cases of candidiasis, particularly in young birds, a thickened crop can be palpated. Hand raised birds fed formulas that were too hot could suffer from burning of the crop with resultant fistulation. This can be detected when food runs through the fistula during feeding, visualizing the actual fistula, scabbing, or the presence of food on the lower aspect of the crop.

**9) Chest** - The pectoral muscles and keelbone should be palpated/evaluated. Over time you will develop a feel for the normal muscle mass of the chest. Birds that are ill can lose weight rapidly and this is manifested by the loss of musculature, in fact this may be one of the initial signs of a disease condition before serious clinical signs are noted. Sick birds will tend to ruffle their feathers which would mask the loss of musculature, hence the client or the veterinarian would not be aware of the loss unless the bird was actually handled/palpated. Obesity in birds could also be detected as fat deposits/lipogranulomas may develop on the chest/abdomen. Palpation of the pectoral muscles should not serve as the only means of evaluating a bird's weight/condition. An important part of every physical examination is to obtain the weight of every bird and record it so comparisons can be made. Dehydration can be detected with skin fold elasticity as in other animals. I have noted that in dehydrated birds their skin appears dark with little elasticity; almost tight on their face/trunk.

**10) Abdomen** - The abdomen of the bird is quite small, the cranial border at the base of the sternum running caudally to the pelvis. It is normally palpable as a slight indentation and in the normal bird very little is discernible on palpation. On occasion the gizzard can be detected as a firm mass on the left side of the abdomen and could be mistaken as a growth. Liver enlargements can be determined through the palpation of the right lobe of the liver, protruding beyond the margin of the sternum; normally it is not palpable. Neoplasms and eggs may be detected through abdominal palpation. In a bird that is undergoing reproductive activity, the abdomen may enlarge due to the enlargement of the uterus.

A grossly enlarged abdomen could indicate a reproductive tract disorder (egg-binding, cystic ovaries, etc.), neoplasms, obesity, and ascites (secondary to heart disease, neoplasms, and reproductive tract disorders). Care

must be taken in handling these birds as their respirations are compromised due to abdominal enlargement. Rough palpation could rupture the abdominal air sacs and cause death.

**11) Vent** - The vent should appear clean and unsoiled. Staining of the vent with droppings indicate a gastrointestinal disturbance such as diarrhea or the presence of an abdominal mass irritating the gut, interfering with normal passage of droppings. Cloacal prolapse, egg binding or cloacal papillomas can also produce staining. An enlarged, dilated vent may indicate hormonal stimulation in the female bird and reproductive readiness.

**12) Feet/Legs** - The feet/legs have scales similar to reptilian skin and it appears smooth/shining. Check the bottom of the feet for pressure sores/ ulcerations commonly caused by improper perches or malnutrition. Hyperkeratosis of the feet may occur due to hypovitaminosis A. Crustiness of the feet/legs, particularly in small birds (budgies/ canaries) may serve to indicate cnemidocoptic mange (scaly leg/ face). Check the leg/joints for any structural abnormalities.

**13) Wings** - Examine the wing/joints very carefully. Check range of movement and for evidence of old injuries/fractures. Evaluate the web of the wing for presence of an India ink tattoo, especially in the larger birds. In birds that are surgically sexed the males are marked in the right web , females on the left. Scrutinize the feather quality on the wing (and the entire body as you go along); checking for the presence of abnormal feathers, discolorations, stress lines and, in wild caught birds, parasites (mites/lice). Check the feather shafts on new imports as occasionally feather follicle mites may be seen. The feather shaft should normally be clear, if feather follicle mites are present the feather would be filled with brownish debris. Confirm the diagnosis by opening the shaft and examine the contents microscopically, when you would see exoskeletons of the mites.

**14) Auscultation** - Auscultations can be beneficial. For best results a pediatric stethoscope should be used. The heart is difficult to evaluate due to its rapid rate. Respiratory abnormalities can be detected readily.

## **Conclusion**

By tying together the aspects of a thorough physical examination, examination of the cage/contents, examination of the bird in the cage, proper capture/restraint and a systematic hands on exam, a significant amount of information as to the state of the bird's health can be gained. However, this is still not complete as the physical should be complemented with minimally a CBC, fecal exam and mouth swab. Cultures, chemistries and radiographs may also be performed for the complete physical. Birds hide their illnesses effectively so an external exam alone is inadequate. Thus by combining an external examination and appropriate diagnostic tests we can generate an excellent evaluation of a bird's health.