Pet Birds

For Vets

Worms & Germs
Promoting Safe Pet Ownership

General Information on Pet Birds

- In 2006, there were approximately 11 million pet birds in US households. In comparison, there were over 70 million dogs and over 80 million cats kept as pets in the same year.
- **Psittacine birds** (order Psittaciformes) include members of the **parrot family** (Psittacidae) and **cockatoo family** (Cacatuidae), and are likely the most common type of pet bird.
- Many bird species are monomorphic, such that males and females cannot be differentiated by looking at them. Karyotyping is commonly used to determine sex when necessary.
- The **life span** of pet birds is highly variable depending on the species. In general, larger birds live longer. Finches, canaries and budgerigars may live up to **15 years**. Cockatoos and macaws may live more than **60 years**.
- It is very important for owners to be informed about appropriate husbandry for birds before obtaining such a pet. Birds can be excellent pets and long-term companions, but good management is crucial to keeping a pet bird happy and healthy. Behaviour counseling can also be critical.
- In general, well-kept birds are relatively low-risk pets in terms of their potential to transmit zoonotic diseases to humans, but it is important to be aware of the diseases they can carry and simple steps that can be taken to avoid disease transmission.

Obtaining a Bird

- **Domestically bred and raised birds** are preferable to wild-caught birds. Although birds can often be purchased from pet stores, it is best to obtain a bird directly from a reputable breeder. The medical history of such a bird is well known, and the animal is less likely to be harbouring or incubating an infectious pathogen than birds that have been stressfully transported, housed and mixed with other animals.
  - Owners must **avoid obtaining birds that may have been illegally imported**. Purchasing such animals contributes to the deaths of countless other smuggled birds for every bird that survives.
- It is important to **counsel prospective bird owners** on selection of an animal that appears bright and active, with well-kept feathers and without signs of discharge from the eyes, nose, mouth or around the vent. It is also important to avoid birds that already have undesirable behaviours which may be difficult to change.
  - Weaning a young bird can be a long, difficult process, therefore it is best to obtain a **weaned bird**. Doing so does not have any significant effect on the ability/likelihood of the bird bonding with its new owner.
- **Baby chicks are not appropriate pets**. Chicks have been associated with *Salmonella* outbreaks in people, they constantly contaminate their environment with feces, and are likely to be surrendered or euthanized when they lose their "cute and fuzzy" appeal.
- Bear in mind that people can develop allergies to antigens in bird feathers and dried bird feces, just as a person may develop allergies to fur and dander from dogs and cats.

Bird Management Basics

Behaviour

- Birds are sociable animals that require regular social contact. Many bird species also have a tendency to "bond" to a particular mate, or, when kept in captivity, often to one of their human companions.
- Preventing boredom is very important, especially for caged birds. A variety of toys should be offered to stimulate the bird, including puzzle toys, foot toys and chew toys. No more than three toys should be left in the cage at one time, and toys should be rotated weekly.
  - Avoid toys with mirrors, which may cause the bird to bond with its reflection rather than its owner.
- Birds are generally "creatures of habit" – they like routine. Disruption of their regular routine can lead to stress and undesirable behaviours (e.g. screaming, feather picking).

Feeding

- A psittacine's diet should consist mostly of **pelletted feed**, which provides balanced nutrition and avoids sorting, as well as up to 20% **dark pigmented vegetables** (e.g. carrots, beats, sweet potatoes). Small, limited amounts of fruit can also be offered, but fruit such as apples, grapes, bananas and citrus are poor nutrient sources for birds.
- Other kinds of birds may have different dietary needs or restrictions. **Lories and lorikeets** normally eat nectar, and therefore require a diet that simulates their normal food source. **Toucans and mynahs** are susceptible to iron toxicosis, and therefore require low-iron diets.

- Changing a bird's diet can be quite difficult because some birds are very stubborn. All diet changes must be made very slowly. Do not withdraw the old diet completely until the bird is eating an adequate amount of the new diet.
- **Fresh water** should be available at all times. Avoid adding supplements to the water such as vitamins, because this may make the bird less likely to drink if it dislikes the taste of the water.

Housing

- A bird's enclosure should be large enough for the bird to move around easily and stretch its wings out completely.
- The bird's tail should be well clear of the cage floor when the bird is perched.

  - Cages should be lined with newspaper, which should be changed daily. Shavings or corn cob bedding mask the amount and consistency of droppings in the cage, and can cause respiratory problems due to dust.
  - Several different sizes and types of perches, appropriate for the size of the bird, should be provided. Concrete perches are acceptable as long as the bird has alternative perches as well. Avoid perches covered in sand paper – these can damage the feet and some birds will ingest the "sand." Ensure that perches are not positioned over food or water bowls in order to prevent fecal contamination of these items.
- Full-spectrum lighting should also be provided for indoor birds, and a timer can be used to regulate the photoperiod. This helps to maintain normal cyclic endocrine functions and vitamin D synthesis.

Basic Veterinary Care

- It is important to assess the consistency, colour and quantity of **droppings** as a component of any health examination. There are **three components** to bird droppings, all of which are excreted through the common vent at the base of the tail. The clear liquid component is urine; its volume is directly proportional to the bird's water intake. The thicker white-to-cream coloured component is the urates, which are also produced by the kidneys. The true feces (i.e. waste material from the gastrointestinal tract), should be formed (like a worm), but the colour will depend on the bird's diet. Whole seeds should never be passed in the feces.
- A normal, healthy bird should naturally wear down its **beak**, preventing overgrowth. However, in psittacines the tip of the beak can become quite sharp. This tip can be trimmed using a grinding tool.
- **Nails** should be trimmed as needed to help prevent scratches, if they are not sufficiently worn down by the bird.
- For indoor birds, **wing feathers** should be trimmed such that the bird is not able to fly or gain lift, but is able to glide to the ground should it jump (e.g. from a person, perch, table) so that it will not injure itself.

Handling Pet Birds

- Proper handling of birds is very important in order to reduce stress on the animal itself and decrease the risk of aggressive behaviour due to fear/discomfort.
- Restraint: Keep the bird as calm and relaxed as possible by speaking in a reassuring tone and avoiding sudden movements whenever possible.
  - If a bird is being uncooperative and/or must be restrained, it should be caught using a **towel** (not gloves).
  - **Restraint of the head** is of primary importance, as this controls the beak. For small birds, grasp the head from behind with the thumb and index finger, cupping the bird's wings and body in the palm of the hand. For larger birds, grasp the head by the lower jaw, and use the towel to control the wings and legs.
  - **Covering the bird's head** can help keep the animal calm if it is stressed, but ensure the bird is still able to breathe easily. Birds, particularly if stressed, can **overheat** if wrapped in too heavy a towel or for too long.
  - Recall that birds have no diaphragm, so they must be able to move their chest (keel bone) in order to breathe.

Bird Bites

- **All birds may bite.** Psittacines and other seed-eating birds in particular have powerful jaws. A large macaw can exert enough force with its beak to sever a finger with a single bite.
- All bite wounds should immediately be cleaned vigorously with large volumes of soap and water, and monitored closely for signs of infection.
- Medical attention should be sought for any bite over a joint, hand, tendon sheath, prosthesis, implant or genital area, and for any bite to an immunocompromised individual (e.g. HIV/AIDS, transplant and cancer patients).

- Chocolate, avocados, and any food containing caffeine or alcohol should not be fed to birds.
- Seeds and pits of some fruits (e.g. apples, cherries, plums, peaches) can be toxic to birds.
- Never allow a bird to eat directly from a person's mouth or off their utensils.
- Avoid rope toys – frayed pieces may be ingested, or may cause entrapment of limbs/digits.
- Never use twist-ties to hang anything in a bird's cage.
- Ensure that all cage materials, clamps and toys are lead-free and zinc-free.
- Avoid use of air fresheners (e.g. plug-ins, aerosols, scented candles) around birds.
- Do not use Teflon-coated cookware or appliances (e.g. curling irons) anywhere near a bird.
- Keep birds away from large, open containers of water (e.g. sinks, bathtubs, toilets, pots).
- Many plants can be toxic to birds, including (but not limited to) parsley, clematis, lily of the valley, poinsettia, philodendron and rhododendron.

Zoonotic Diseases Of Pet Birds

It is important to recognize signs of illness in birds due to the zoonotic potential of the conditions below, and the associated human and public health concerns. It is also important to be aware that birds can carry and transmit some of these pathogens without appearing sick themselves. Please refer to specific disease information sheets and additional references for more details.

Campylobacteriosis:*

- This is a bacterial infection caused by various species of *Campylobacter*, including *C. jejuni* and *C. intestinalis*, which are commonly carried by domestic fowl, particularly chickens. In people, infection causes intestinal disease (e.g. diarrhea), but many birds carry the bacteria subclinically. *Campylobacter* is transmitted by fecal-oral contamination, particularly on contaminated poultry products. The risk associated with pet birds has not been well studied. It is also thought that some of the biotypes that infect birds may not be involved in human disease.

Mycobacteriosis:

- In birds, this bacterial infection is also known as avian tuberculosis, the two primary causes of which are *Mycobacterium avium* and *M. genevense*. Several subspecies of *M. avium* make up the *M. avium* complex, or MAC. In the past, it has been estimated that 40% of AIDS patients that do not undergo preventative therapy will develop disease due to MAC, but infection is uncommon in otherwise healthy people. Signs of MAC infection in humans depend on what organ systems are involved, but often include fever, weight loss and anemia. Although these bacteria can be isolated from birds, they are also common in the environment (e.g. soil, water), and exposure to birds is not considered a significant risk factor for disease.
- Psittacines are the only order of birds that are thought to be susceptible to *M. tuberculosis*, the primary cause of tuberculosis (TB) in humans. Suspected transmission of *M. tuberculosis* between humans and pet birds has been reported, and often involves owners who pre-chew their bird's food. The incubation period for infections with *Mycobacterium* is very long, so an infected animal (or person) can harbour and spread the bacteria for a long time before mycobacteriosis is suspected. The bacteria are typically shed in the feces of birds, and ingestion of fecal contamination is the primary route of transmission.

Psittacosis:

- This is an infection caused by the bacterium *Chlamydophila psittaci*. The disease usually causes flu-like illness in people, but can cause severe pneumonia and other problems. The organism may be carried by 16-81% of psittacine birds, but can also be carried by non-psittacine birds (e.g. pigeons, doves). Clinical illness in birds (avian chlamydiosis) occasionally occurs, signs of which are highly variable. Chronic disease is common in parrots and pigeons. The bacterium is shed in the feces and transmitted by the fecal-oral route, or by inhalation of dry, dusty fecal material. Psittacosis is uncommon in people (125 cases reported to the Centers for Disease Control and Prevention (CDC) from 2000-2006), but sporadic cases and outbreaks do occur, and the disease is likely underreported. Psittacosis may be overlooked in the early stages of infection if the physician does not know the patient has had contact with birds.

Salmonellosis:*

- This infection, caused by one of the many serotypes of *Salmonella*, typically causes diarrhea in people, but in some cases it can cause much more serious disease. The bacteria are passed in the feces of infected animals, which may or may not show signs of diarrhea. Transmission is by the fecal-oral route. Based on serologic testing of pet birds, it is estimated that 0.2-3.0% of pet birds may be subclinical carriers of *Salmonella*. Most cases of transmission from live birds to humans are due to exposure to chickens, particularly young chicks.

Avian Influenza:*

- Highly pathogenic strains of avian influenza virus (e.g. H5N1) can cause severe illness in both domestic birds and people, although many wild birds (particularly water fowl) seem to be resistant to disease even from these more virulent viruses. Subclinically and clinically infected birds shed the virus in respiratory secretions and feces, and contact with this contaminated material can spread the virus to other birds and people. In areas where the disease is not endemic (e.g. Canada, USA), the risk is primarily restricted to direct or indirect contact with wild birds (particularly migratory birds), or with birds that are allowed outside and may therefore have direct or indirect contact with wild birds. The best way to prevent this disease is to keep pet birds indoors and avoid keeping "backyard" poultry. All domestic birds should be kept in a secure enclosure that prevents contact with wild birds at all times.

Newcastle Disease:

- Newcastle disease virus is relatively common in wild and domestic birds, both poultry and pets. Velogenic strains are often reportable because they cause severe septicemia and death in birds, but other strains can be carried subclinically, particularly in recovered birds. It is very unusual for the virus to affect humans. When it does, signs are usually mild, including conjunctivitis, malaise and sinusitis, and typically resolve within 1-3 weeks. Disease may therefore be underreported in people. The best way to avoid exposure from pet birds is to obtain animals from reliable sources, avoid birds that may have been illegally imported, and prevent contact with wild birds.

Cryptococcosis:

- This infection, caused by the fungus *Cryptococcus neoformans*, is relatively uncommon in birds. When infection does occur it is difficult to diagnose and treat. Infection in healthy humans is rare, but transmission from birds has been reported. Pigeon roosts in particular can be a problem with this fungus. Avoiding dry, dusty fecal material is likely the best way to prevent transmission.

Dermatophytosis (ringworm):

- This fungal skin infection is typically caused by one of several species of *Microsporum* or *Trichophyton*. Dermatophytosis in birds occurs but is considered uncommon. In humans it can cause well-delineated areas of red, raised, itchy skin with central pallour, which therefore appear as a "ring." There are a very small number of reports of transmission of dermatophytes from birds to people. The fungus is transmitted by contact with the skin, feathers or dander of an infected animal, particularly if the person's skin is damaged or moist.

* Notifiable disease in people in Canada

Other "Zoonotic" Diseases of Pet Birds

- Pet birds can also be infected by ***Giardia intestinalis*** and ***Cryptosporidium* spp.**, some types of which can potentially infect humans, but transmission of these pathogens from pet birds to people has not been reported.
- Birds can be infected by several **viral encephalitis viruses** (e.g. eastern and western equine encephalitis (EEE/WEE), West Nile). Mosquitoes are typically responsible for transmission of these viruses to mammals. Direct transmission of these viruses from birds to humans or other animals is a *theoretical* concern, because birds develop such high viral loads. There is very little information regarding infection in pet bird species, but the best preventative measure is to avoid exposure to the insect vectors.

- There are no reported cases of natural **rabies** infection in birds. However, birds of prey could potentially play a part in mechanical transmission of the virus, so personnel who handle wild raptors should be vaccinated for rabies.
- **Yersinosis** is an infection cause by the bacterium *Yersinia pseudotuberculosis* that occurs primarily in Northern Europe. The same strains that infect birds can also infect people, but evidence of direct zoonotic transmission remains circumstantial. Transmission is thought to be via fecal or urinary contamination of food and water. Clinical signs in animals and humans are generally non-specific. In humans infection can mimic acute appendicitis.
- Bird **mites** are generally species-specific, although *Dermanyssus gallinae* and *Ornithonyssus* spp. will occasionally bite humans that handle infested birds or work in mite-infested buildings where birds are housed.

Recognizing Illness In Birds

Birds are very good at hiding signs of illness. A bird may therefore be quite sick by the time visible signs of disease are detected, so it is very important that birds receive prompt veterinary attention if they appear ill. Owners should be advise to consult a veterinarian if they observe any of the following signs in their bird:

- Anorexia or decreased appetite
- Lethargy or weakness
- Other abnormal behaviour (e.g. feather picking, self mutilation, tail bobbing, unwilling to perch)
- Change in colour or consistency of droppings, or fecal staining of the feathers around the vent.
- Nasal or ocular discharge
- Abnormal or overgrown beak or toenails
- Damaged, dull feathers
- Masses or swelling anywhere on the body
- Change in vocalization

The more familiar an owner is with an individual bird's normal behaviours and habits, the easier it will be to detect subtle changes which may not be apparent in a clinic situation. Nonetheless, the owner's concerns must be taken seriously, as even subtle changes can be indicative of developing illness. Illnesses in birds may be due to inadequate or inappropriate diet or environment, but it is very important to rule out infectious disease. Medical problems should always be ruled out first before focusing on behavioural issues/modification.

Environmental and Management Problems

Important aspects to address when attempting to discern contributing factors or the cause of illness in a bird include:

- Adequate provision and accessibility to clean drinking water
- Frequency, quantity and quality of feed, including what the bird actually eats versus what is offered
- Any changes in daily routine, including frequency and type of handling
- Type of enclosure (including materials used), bedding and frequency of cleaning
- Location of enclosure (high traffic area, marked variations in temperature, adequate light)

Infection Control

Although birds are relatively low-risk in terms of their potential to transmit disease to humans, there is always some risk. The risk of illness in a bird and zoonotic transmission can be reduced by proper handling, good management, personal hygiene and routine healthcare. A bird that is not stressed and is well cared for is less likely to be susceptible to infection, and therefore less likely to transmit infection to a person.

- Kissing a bird, or allowing a bird to take food directly from a person's mouth should not be permitted.
- Anyone handling a bird, especially children, should be taught how to do so correctly and as safely as possible.
- Keep birds and cages **away from the kitchen**, food and any areas where food is prepared.

Hand Hygiene

- Hands should be thoroughly washed with soap and running water, or an alcohol-based hand sanitizer should be used, after handling a bird, cleaning a bird's cage, or coming into contact with droppings or cage bedding.
- Children should be supervised by an adult to ensure that this is done properly.

Cleaning Up

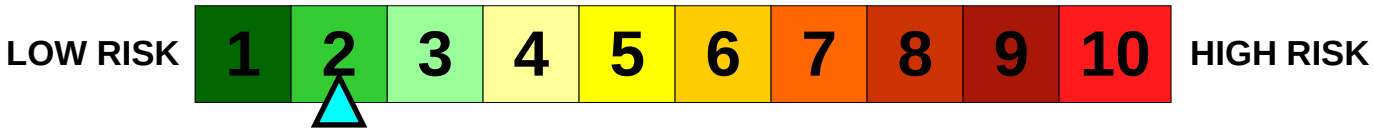
- Cage bedding (newspaper) should be changed daily. This prevents build up of droppings and bacterial growth in the bottom of the cage, and also prevents droppings from drying out, as dried stool can form dust which may be inhaled, along with the bacteria in it. Lightly spraying the bedding with water can help reduce such dust.
- Periodically the entire cage should be thoroughly cleaned and disinfected:
  - All bedding should be removed and the inside of the cage should be scrubbed with soap and water using a stiff-bristled brush in order to remove any remaining excrement/debris that may be adhered to the bars or floor.
  - Once the cage looks clean, a household disinfectant (e.g. bleach (diluted 1:9 with water)) should be applied. The disinfectant should be left in contact with all surfaces for at least 10 minutes, followed by **thorough rinsing with water**. Allow the cage to dry completely prior to placing fresh newspaper and replacing the bird.
- Hands should always be washed thoroughly with soap and water after cleaning the cage.

- **Food and water bowls** should be scrubbed with soap and hot water at least once daily and dried completely before being placed back in the cage. Having two sets of food/water bowls allows these items to be replaced immediately and therefore provides more time to properly clean the dirty bowls.
- Any **fresh produce** that are not eaten promptly by the bird should be **removed** in order to prevent spoilage.

Zoonotic Disease Risk

For **healthy adults and older children** (over 5 years old), the zoonotic disease risk associated with a pet bird is:

HEALTHY ADULTS / OLDER CHILDREN



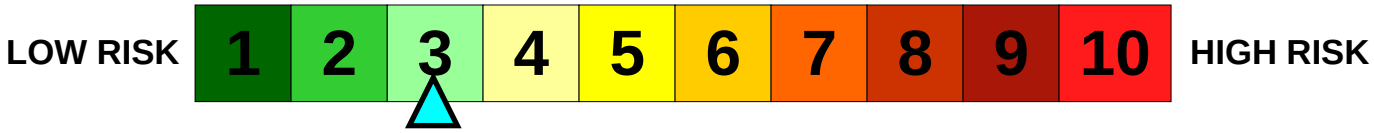
Groups at higher risk of acquiring a zoonotic disease from pets, including birds, are **immunocompromised individuals** (e.g. HIV/AIDS, transplant and cancer patients), infants, **young children** less than five years of age, and the elderly. Nonetheless, pet ownership can have significant emotional benefits for members of these groups. With selection of an appropriate pet and close attention to infection control measures, the risk can be significantly reduced.

With regard to birds living with high-risk individuals, important points to consider include the following:

- Be diligent and thorough about **hand washing** after handling the animal or cleaning its cage.
  - High risk individuals should try to have someone else clean the bird's enclosure regularly. Otherwise the person should wear rubber gloves when cleaning the enclosure and be very diligent about washing his/her hands as soon as the task is completed.
- **Know how to handle** a bird correctly (in a calm, gentle manner), and only handle the animal when necessary to minimize the risk of bites or scratches.
- Keep the bird in **good health** through proper management and veterinary care.

For these groups, the zoonotic disease risk associated with a pet bird is likely:

YOUNG CHILDREN / IMMUNOCOMPROMISED PERSONS



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