

Parrot Pediatrics...

Recognizing and Preventing Common Diseases

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Pediatric problems face both the experienced aviculturist and the novice. As we advance in our knowledge of avian science and husbandry, new diseases have been found as well as solutions to old problems. Raising baby parrots will always be as much art as science. This discussion, however, will primarily deal with the science and medicine of baby parrots.

Reasons for Handfeeding

1. Tame babies — Imprinting to people is probably the best reason.
2. Abandonment — Lovebirds, cockatiels, prolific parents often abandon babies, making it necessary to raise by hand.
3. Poor maternal instincts — Broken eggs, injured babies.
4. Increase number of clutches — Many pairs will go back to nest after babies have been removed if environmental and nutritional factors are right.
5. Weather conditions
6. Disturbances — Visitors, animals.

Handfeeding Recommendations

1. Remove babies from the nest at two to three weeks of age to allow normal bacterial flora establishment and vigor. Expert aviculturist can remove babies earlier without problems.
2. Keep each clutch in separate brooders to reduce spread of viral and bacterial disease. Do not allow any utensil or syringe to be shared between each brooder.
3. Keep babies warm.
day 1 — 99.5° Fahrenheit
day 2 through 10 — 95 to 97°
day 10 to 4 weeks — 85°
feathered chicks — 75 to 80°

Make sure that in keeping the babies warm the heat is from an indirect source. Heat lamps and heating pads often cause overheating and burns. Be extremely careful if using a direct heat source.

When checking the temperature of the brooder, if using direct heat, make sure that you are measuring the temperature where the babies are sitting

as temperature can vary greatly.

The best brooders are pediatric incubators which can often be purchased used from a hospital. If these are not available, numerous manufacturers make bird brooders and advertise in bird publications. These brooders are usually very expensive compared with used medical incubators, however.

4. Keep clean — Shredded paper is one of the best substrates for the floor as it is easy to change and non toxic.

Disposable diapers are also an excellent substrate. Crushed walnut shells sold as Critter Litter make a good substrate.

Avoid material with fiber. Baby birds have an uncanny ability to wrap any fiber around their extremities usually resulting in leg injuries.

Avoid corn cob and wood shavings as the babies often consume these products and sometimes require surgical removal. Also, corn cob often causes a thick, oily dust that causes sinusitis.

5. Incubator/brooders should have square walls. Curved walls predispose leg deformities.
6. Feeding utensils should be used for only one incubator and sterilized after each feeding. Wash hands with disinfectant to reduce spread of virus and bacterial disease.
7. Mix food fresh or use Micro Block by Phoenix to prevent bacterial growth in food.
8. If using Monkey Chow, make sure to boil it as it can sometimes contain gram negative bacteria.
9. Make sure feeding formula is warm but *not hot* as it can burn the crop. Be especially careful with microwaved food as it can have hot spots. Heat to between 98° and 100°. Keep food cooler than 105°.

Handfeeding Formulas

There are probably as many handfeeding formulas as there are aviculturists. Some are excellent and

some leave much to be desired. If a handfeeding formula is time proven and results in healthy babies, it is probably fine. Most of the handfeeding formulas that I computer analyze are incomplete but, with the addition of a few nutrients, do well. There are numerous commercially prepared handfeeding formulas that may or may not result in as good a diet for your baby as a homemade diet.

In general, I recommend sticking with a formula if it works for your babies. Diets that work well for another aviculturist may not always work well for your birds. Have your veterinarian computer analyze the diet to make sure the protein, vitamin, and calcium levels are adequate. If the babies have poor weight gain, poor feathering, stress lines on the feathers, spraddle leg, frequent fractures, beak deformities, or die of vitamin overdose, switch to one of the commercial prepared handfeeding formulas.

One of the advantages of the commercially prepared formulas such as Lake's Parrot Buffet, Roudybush, or Lafeber is that all you have to add is water. This can be a real time saver compared to some of the handmade diets we analyze.

The handfeeding formula should be made fresh at each feeding to prevent bacterial overgrowth. Bacterial overgrowth can occur as soon as 30 minutes after mixing the formula at room temperature.

Digestive Disorders

Crop Impactions: Crop stasis is a sign of a serious, life threatening condition in baby birds. Normally, the bird's crop should empty in four to five hours. Any longer than this we consider stasis of the crop. Contact your veterinarian immediately as medical treatment is usually needed to save the baby's life.

Some causes of crop stasis include:

Disease causing slowed digestion — bacterial and viral diseases.

Dehydration — incubator/brooder humidity below 50%.

Dietary — food too cold, too thick, too high in protein or fat, food too watery.

Candida — fungal infection.

Atony — overstretching the crop from feeding too much at a time.

Burns — caused by feeding too hot food.

Hypothermia — incubator temperature too low.

Change in amount of food fed.

Feeding food that separates into solid and liquid portions in the baby's crop (poorly mixed food).

Over feeding at time of weaning.

Crop stasis usually results in sour crop, a condition of fermentation in the crop resulting in acidosis. In acidosis, the baby's body becomes dehydrated and bacteria often invade the body through the destroyed mucus membranes of the crop and intestines. Death can occur quickly.

Emergency Treatment

1. Warm baby
2. Feed 2 to 15 ml of warm water and gently massage crop.
3. If crop does not empty in two to four hours, call your avian veterinarian.
4. If the baby's crop does empty, watch for any signs of weakness, loss of vigor, red dry skin. It is important to determine the cause of the crop stasis due to the seriousness and the many causes of this disorder.

Respiratory Diseases

Aspiration Pneumonia. Aspiration pneumonia is one of the most common causes of death in handfed babies. This disease is caused by food passing down the trachea (windpipe) rather than the esophagus. The food passes into the lungs and air sacs and a secondary bacterial pneumonia develops.

Causes:

Poor handfeeding technique

Overfeeding

Bacterial and viral disease that weaken bird's protective swallowing reflexes.

Bacterial and Viral Pneumonia.

Bacterial and viral diseases often cause pneumonia in baby birds and can be prevented with good sanitation, keeping clutches in separate incubators, and keeping utensils separate for each incubator.

Signs:

Acute death

Open mouth breathing

Weight loss

Crop stasis

Depressed attitude

Pneumonia is always life threatening in babies. Contact your avian veterinarian immediately for medical treatment.

Orthopedic Problems

Spraddle leg: Spraddle leg is a catch all phrase indicating a deviation in

normal leg development.

Causes:

Incubators with rounded walls

Fractures of leg bones

Calcium and vitamin D deficiency

Hereditary bone disorder

Spraddle leg can involve deformities of the hip and of the knee. Hip deformities are often very rewarding to treat while knee deformities are difficult at best. If spraddle leg occurs frequently with a pair of birds or aviary, examine the parents' diet and the handfeeding formula carefully as it is probably deficient. Occasionally spraddle leg is due to genetic causes.

Fractures: Fractures are very common in neonates. The bones are growing very fast and will heal quickly, often in the wrong direction resulting in deformities. Poorly formulated handfeeding formulas that are deficient in calcium and vitamin D3 cause poor bone growth and result in fractures even without trauma.

Fractures occur most frequently in the tibial tarsal bone. All fractures should be treated as quickly as possible to prevent a permanent disability. Often veterinarians have to re-break the bone to correct what would have been a simple fracture had the bird been seen at the time of the injury.

Swelling of Toes: This is a disorder of Grand Eclectus and sometimes macaws. Cause unknown but does respond to treatment — contact your veterinarian.

Infectious Diseases

Bacterial Disease. Bacterial diseases are one of the most common causes of neonate death. Babies do not have a fully developed immune system and are very susceptible to pathogenic bacteria. Babies that have viral infections, fungal infections, or malnutrition are especially susceptible to harmful bacteria.

Source of Bacteria:

Parents — the adult birds may be harboring a bacterial infection that is not dangerous for an adult bird's immune system but can be deadly to the undeveloped neonate immune system.

Food — (allowed to spoil and incubate bacteria at room temperature or feeding monkey chow not boiled). Use Micro Block, a product from Phoenix, to inhibit bacterial growth.

Utensils — sterilize with Roccal or other suitable disinfectant and rinse thoroughly.

People — bacterial flora in our

bodies are harmful to exotics, especially babies. Wear exam gloves when handfeeding birds.

Other babies — different species of parrots have different bacteria flora and can cause disease in baby birds not exposed to these bacteria. Keep babies separate.

Bacterial infections are easily diagnosed by gram stains and culture. By routinely culturing babies during the handfeeding period, bacterial infections can be detected and prevented before the baby is sick. Since gram positive bacteria such as *staph. aureus* sometimes cause death in babies, a culture is superior to a gram stain.

Bacterial infections can occur very quickly, so procrastinating even 12 hours can sometimes be fatal. Usually, intravenous medications are essential to prevent death. When babies are septic (have a bacterial infection throughout the body), the liver and intestinal tract shut down, requiring very extensive medical support to prevent death. We are currently experimenting with amino acid/insulin/glucose formulas as used in human pediatrics to develop an intravenous and oral feeding solution for these babies which we hope to have available in the next few years.

Psittacosis. Psittacosis is an extremely deadly disease to psittacine neonates and is very common. Many adult parrots carry psittacosis without clinical signs and pass the disease to the babies orally and through the respiratory tract. Handfed babies that have passed through quarantine should be considered positive until proven otherwise. The latex agglutination test used for adult parrots is not as accurate in neonates and can give a false negative reading for this disease. The elisa fecal test is considered more accurate for neonates as it detects the presence of the *chlamydia* bacteria. Another option is to prophylactically treat all of the baby parrots that pass through quarantine for 45 days with a tetracycline drug. This should be done under the supervision of your veterinarian to prevent complications such as yeast infections.

Viral Disease

Viral diseases are another very common cause of death in baby parrots. These diseases are usually introduced into a nursery by asymptomatic carriers (babies incubating a virus but not clinically sick). Viruses spread quickly in a nursery and can

result in tremendous losses. Good quarantine procedures can eliminate the risk of viruses.

There are currently few drugs to treat viral infections. Antibiotics treat only bacterial diseases. Early studies using interferon are inconclusive at the present time. Some herpes infections such as Pacheco's can be treated with Zovirex (acyclovir) but only if treated very early after exposure. Viruses are best prevented by vaccines. Currently Dr. Gaskin at the University of Florida is doing research to develop parrot vaccines but, due to poor financial support, progress is slow. At the present time, the only way to prevent viral infections is by keeping babies free from exposure to these deadly organisms.

Never introduce babies from another aviary to your aviary nursery (set up a separate nursery in another location).

Keep clutches separate and do not cross contaminate with utensils or hands.

Feed sick birds last.

Papovavirus

This virus deserves special attention as it is the most common viral disease in babies. This virus causes only a mild respiratory disease in adult birds but is deadly to babies. Adult birds are often asymptomatic carriers (do not show disease). In addition, adult birds that have the disease often pass immunity to their babies. These babies may also become asymptomatic carriers of the disease and often spread the virus to other babies that have no immunity.

Many aviaries have adult birds that have all been exposed to the disease and their babies often show no signs of the virus due to maternal immunity. Babies from other parents that are mixed with these immunized babies often become ill in four to seven days. Immediate quarantine procedures should be set up. Consult your veterinarian.

Babies that get the disease and have no immunity usually die within three to eight hours of showing clinical signs.

Clinical Signs of Papovavirus:

acute depression
crop stasis
death

Viral infections are difficult to treat since we do not have specific antiviral medications. These babies require very intensive care. Often the babies need antibiotics to treat secondary bacterial infections. Intensive fluid

and sometimes intravenous feedings are often needed to give the neonate's immature immune system a chance to fight off the virus.

Fungal Disease

Fungal disease is common in babies and is usually caused by candida infections. Candida is a yeast that is normally present in very small numbers in the normal flora of psittacines. In handfed psittacines, this yeast can overgrow and cause illness and death. Cockatiels are especially prone to this problem and it is the most common cause of death in cockatiel babies autopsied at Murphy Animal and Bird Hospital. Some handfeeding formulas tend to stimulate the growth of this yeast. If the problem reoccurs frequently, then the handfeeding formula should be altered. The source of the candida may be the adult birds. Aviaries can be treated by applying Nolvasan to the drinking water. This disinfectant breaks down to inert ingredients as it passes through the stomach in mammals and it is assumed that it is equally safe in birds.

This disease can sometimes be prevented by adding nystatin to the

handfeeding formula. If present in the mouth, candida appears to be milk white spots on the oral membranes or as excess mucus in the mouth. Very rarely are these typical white plaques present in babies with candida. Usually, increased crop emptying time is noted and poor weight gain and feathering is observed prior to death. The disease is easily diagnosed by crop and fecal cytology at your veterinary office. Other fungal infections, such as aspergillosis that occurs in raptor neonates, are unusual in psittacines.

Clinical Signs of Sick Baby Birds

Weight loss
Depression
Reduced feeding response
Reduced activity
Separation from nest mates
Dehydration — skin appears
reddened and dry
Crop stasis
Pale (white) skin
Diarrhea

Baby birds die quickly when sick. Don't procrastinate when signs of disease are seen — contact your avian veterinarian immediately! ●

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