## Veterinary Viewpoints

Edited by Amy B. Worell, DVM Dipl. ABVP Woodland Hills, California

## **Ouestion**

What is the benefit of using lactobacillus products for birds while on antibiotics? I am especially interested in this for baby birds. Can it be harmful? How much of which product should I use and how often? Thanks for your help.

S. Tucker, New Jersey

#### Answer #1:

The main benefit of using lactobacillus products for birds is in the profit to the seller. There is no scientific proof that lactobacillus has any benefit to the bird other than creating an acid environment in the intestinal tract. Using a little apple vinegar in the drinking water would work equally well at much less cost to you.

James M. Harris, DVM Oakland, CA

## Answer #2:

The use of lactobacillus products in animals and birds has been controversial. Numerous studies indicate that in some instances giving animals beneficial bacteria is helpful. The most dramatic affects occur when live, speciesspecific bacteria (bacteria that originates from that species) have been given to animals that have compromised immune systems and that have been exposed to pathogens.

How these conditions apply to many captive birds, including baby psittacines: we suspect that they are immuno-compromised due to subtle malnutrition and intense management schemes (lots of birds in a small space leading to stress and increased exposure to pathogens). Baby birds, especially those hatched in an incubator which were never fed by their parents. may be especially susceptible to alterations in their intestinal "microflora" as they are not receiving food from their parents which contains species-specific bacteria. This is because baby birds hatch with no bacteria in their intestines and are susceptible to infections from opportunistic bacteria because they have no beneficial bacteria to combat these "bad guys."

Giving baby birds antibiotics can further compromise the bird because antibiotics can reduce the normal level of good bacteria in a bird's intestinal system allowing potential opportunistic bacteria a fertile ground to multiply. In these cases it will not hurt a bird to receive lactobacillus products, unless the product also contains vitamins and minerals which could lead to hypervitaminosis and hyper mineralization. It may not help either as most products contain non-species specific bacteria, especially in the most severe immunocompromised animals under poor management. Possible recommendations include:

1. Use viable lactobacillus products (contain live bacteria).



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- 2. Use lactobacillus products that do not contain vitamins or minerals.
- 3. Do not rely on lactobacillus products to "solve all problems."
- 4. Use correct management and nutrition.
- 5. Only use antibiotics when necessary. Do not expose birds unnecessarily to pathogens. (Closed aviary concept).

Kim J. Joyner, DMV, MPVM Raleigh, NC

## Answer #3:

There have been a few studies done in past years in regards to the efficacy of lactobacillus in birds. The studies basically concluded that lactobacillus products were of no apparent benefit to birds. From these studies and from my own clinical experience and the experience of other clinicians and aviculturists, lactobacillus products can not be recommended as necessary or helpful in birds. It also appears that the use of lactobacillus is not harmful to birds, so if you choose to add it to your treatment regime it should not be detrimental to the birds either.

Amy B. Worell, DMV,. ABVP West Hills, CA



### Ouestion #2

My veterinarian recommends a liver biopsy for my Dusky Conure to tell why he is not getting better. Is this a safe procedure for him? I understand there are two ways of doing this procedure. Which is better?

M. Hendricks, S D

## Answer #1:

With the anesthetic agents and current state of the art of equipment now available, liver biopsies are of invaluable aid in accurately diagnosing and treating hepatic disease. They can be done either as an exploratory or by laproscope. Both have advantages and disadvantages that you should discuss

with your veterinarian.

James M. Harris, DVM Oakland, CA

### Answer #2:

Liver biopsies are performed in birds where a liver disease is suspected, not just in any sick bird. Other laboratory tests and radiographs may not show that anything is wrong with the liver, whereas a biopsy will. The liver biopsy is the most specific test we have currently in birds for detecting liver disease. If your veterinarian suspects liver disease in your bird, it may be appropriate for a biopsy, however there are risks. Birds with liver disease often have altered liver, heart, and respiratory function and are susceptible to bleeding disorders and could be more at risk to the negative heart and respiratory affects of anesthesia. Most birds will not bleed much after a biopsy is performed, although deaths due to hemorrhage do occur. A thorough evaluation of each case will decide if the benefits of performing a liver biopsy outweigh the risks of the surgery.

A liver biopsy will hopefully tell what caused the original liver disease. In some cases the biopsy will only tell that there is chronic liver disease but the actual originating cause can not be determined. Your veterinarian will also take a culture of the liver to try and find the cause of the disease (hepatitis)

The liver biopsy can be taken through a mid-abdominal "keyhole incision" or from the side, such as when bird is surgically sexed. In an obese bird, the liver may not be easily visualized through a mid-abdominal approach as the lobes are being pushed to the side because of the fat. A lateral approach can be performed, however bleeding can be difficult to control from this approach.

Kim J. Joyner, DMV, MPVM Raleigh, NC

## Answer #3:

I will go on the assumption that your veterinarian has a high suspicion of liver involvement and hence recommended to you the liver biopsy. Often when a liver biopsy is recommended, the liver may be markedly enlarged on radiographs, and the bile acid level (a blood test that tells about liver function) may be persistently and significantly elevated. Please be aware though, that there are cases in birds in which the radiographs and bile acid levels are normal and yet the bird has significant liver involvement. Such would be the case with toucans and iron storage disease (hemachromatosis). Liver biopsies can be extremely rewarding as a diagnostic aid in birds and are fairly commonly performed. The goal with the liver biopsy, of course, is to diagnose the bird's problem and arrive at a treatment plan for the bird.

There are two methods for hepatic (liver) biopsy. Both methods involve a general anesthetic, which is usually isoflurane (and oxygen). This anesthetic is extremely safe in avian patients. The first method of liver biopsy involves making a small incision in the abdominal wall, usually just below the end of the liver lobe itself. This method allows for direct visualization of the liver. A small section, usually wedge shaped, of the liver can then be easily removed. If bleeding occurs, it can easily be controlled with direct pressure or use of a product such as Gelfoam. The abdominal incision is then closed with absorbable sutures. The second method involves the use of a rigid endoscope such as is used for surgical sexing of birds. The liver is then viewed through the endoscope and a small piece of hepatic tissue is removed by a special biopsy instrument that is passed in a channel that runs right next to the endoscope. This method is less invasion but the liver is visualized through the endoscope rather than directly with the human eye. Bleeding, if it occurs from the liver biopsy, is harder to control by this method. Different veterinarians will prefer the two methods for a variety of reasons. Assuming you are comfortable with the level of medicine practiced by your avian veterinarian, I would suggest deferring the method choice to his or her recommendations.

Amy B. Worell, DVM, ABVP West Hills, CA →