

GUINEA PIG – MEDICAL CONSIDERATIONS

BREEDING CONSIDERATIONS

The single most important breeding consideration is that female guinea pigs should participate in their first breeding before seven months of age. If the first breeding is delayed beyond this time, serious (sometimes, life-threatening) problems with delivery are encountered. Female "pigs" should be first bred between 3 and 7 months of age. Males should be 3 to 4 months old at their first breeding.

The guinea pig's heat cycle lasts 16 days. The actual period during which the female is receptive to the male and will allow breeding is approximately 8 hours. Female guinea pigs are capable of coming back into heat 6 to 15 hours after giving birth. This is called a "postpartum estrus" which means that they can be nursing a litter and pregnant at the same time!

Pregnancy lasts an average of 63 to 68 days. The larger the litter size, the shorter the term and vice versa. The duration of pregnancy for guinea pigs is unusually long when compared with that of other rodents.

Pregnant sows exhibit a grossly enlarged abdomen during the latter stages of pregnancy. It is not uncommon for their body weight to double during pregnancy. The time of delivery may be difficult to determine because of the relatively long gestation period and because pregnant sows do not build nests into which their young would otherwise be delivered. The pet owner attending a near-term sow, however, will feel a slowly widening separation of the pelvis just in front of the external genitalia of the pregnant sow within the week prior to delivery. This separation reaches slightly more than 1 inch in the hours just prior to delivery.

This separation of the pelvis fails to take place in females that are bred for the first time after 7 months of age. Delivery of the young is not possible and a caesarean section must usually be performed in order to save the life of the sow and her babies. An uncomplicated delivery usually requires about 1/2 hour with an average of 5 minutes between babies. Litter sizes range from 1 to 6 young with 3 to 4 being average. Litters resulting from the first breeding are usually very small. Abortions and stillbirths are common occurrences with guinea pigs throughout their breeding lives. The young are born relatively developmentally advanced. They are unusually large and fully-furred and capable of walking about.

Furthermore, they possess teeth and open eyes at this time. Even though the newborn "pigs" are capable of eating solid food and drinking water from a container, it is recommended that they be allowed to nurse their mother for at least 2 weeks.

MEDICAL CONDITIONS OF GUINEA PIGS REQUIRING VETERINARY ATTENTION NON-INFECTIOUS CONDITIONS

MALOCCLUSION OF PREMOLAR TEETH (SLOBBERS)

A common problem of guinea pigs (especially those over two to three years old) results when the upper and lower premolar teeth (the most forward-positioned of the cheek teeth) meet improperly while chewing. In time, this problem results in abnormal wear of these teeth which, in turn, causes entrapment of and continual injury to the tongue. Both of these problems result in the desire to eat but inability to chew and swallow food, drooling resulting in a continually moist mouth and chin, and weight loss (often dramatic).

A veterinarian must be consulted as soon as possible if this condition is suspected. The diagnosis is confirmed upon direct visual examination of the mouth. Correction of the problem involves general anesthesia and aggressive trimming or filing of the overgrown teeth, a most difficult procedure because of the guinea pig's extremely small mouth opening. Forced feedings and antibiotics are usually necessary for a number of days before and after this procedure has been performed. Guinea pigs in the advanced stages of this disease are difficult to save.

There is no permanent solution or correction for this problem, Periodic trimming/filing is almost always necessary. Guinea pigs with this problem should never be bred in order to prevent passing this most undesirable trait to their offspring.

VITAMIN C DEFICIENCY (SCURVY OR SCORBUTUS)

As discussed in the section on Food and Water, guinea pigs (like man) cannot manufacture vitamin C and must receive an adequate supply of it from outside food sources. Failure to do so results in scurvy, the symptoms of which include inappetence, swollen, painful joints and ribs, reluctance to move, poor bone and teeth development, and spontaneous bleeding from the gums and into muscle.



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This mandatory vitamin C requirement is well known to those who manufacture the pelleted diets for guinea pigs and adequate levels of this vitamin are always included in the formulation of them. Often, however handling and improper storage (exposure to light, heat, and dampness) of these pellets results in loss of potency of the vitamin C. Therefore, even pet guinea pigs fed presumably reliable pelleted diets may exhibit signs of scurvy if the potency of the vitamin C within them has been reduced or lost.

A veterinarian should be consulted if this disease is suspected so that confirmation of the diagnosis can be made. Furthermore, the veterinarian will need to prescribe a program of vitamin C supplementation (via food or water or injection) in order to reverse the symptoms (see section on Food and Water for more details on supplementation of vitamin C).

DIFFICULTIES WITH DELIVERY OF YOUNG (DYSTOCIA)

As stated in the section on Breeding Considerations, female guinea pigs intended for breeding must participate in their first breeding before seven months of age. If the first breeding is delayed beyond this time, serious (sometimes, life-threatening) problems with delivery are encountered.

A portion of the pregnant sow's pelvis must open partially in order for successful delivery of her young. This separation fails to take place in females bred for the first time after seven months of age, usually necessitating a caesarean section in order to successfully deliver the young and save the life of the sow.

Signs of dystocia include straining and uterine bleeding. An owner of a guinea pig exhibiting these symptoms must seek veterinary help immediately. The veterinarian will evaluate the pregnant sow by direct exam and by taking x-rays. If a vaginal delivery of the young is not possible, then a caesarean section will be advised.

PREGNANCY TOXEMIA

Pregnancy toxemia is a serious condition of usually overweight sows most often in their first or second pregnancies. Symptoms of this condition are most likely to be noted within the last two weeks of pregnancy or the first week following same and include; inappetence, depression, weakness, reluctance to move, incoordination, difficulty breathing, coma, and death. These symptoms may be noted over a one to five day period. Some afflicted sows may show no symptoms and suddenly die.

There is no single cause for this condition but stress and obesity are major predisposing factors. Others include advancing age, lack of exercise, fasting just prior to onset of symptoms, and a large number of developing fetuses. The fundamental underlying problem appears to be an inadequate blood flow, and hence, nutrient supply, to the pregnant uterus.

Pregnant sows or those which have recently delivered that exhibit any of the aforementioned symptoms must be seen immediately by a veterinarian. Treatment is directed towards reversing the low blood sugar, acidic pH of the blood and accumulation of ketones within it, but such attempts are often unsuccessful.

Prevention of pregnancy toxemia, therefore, is of paramount importance. Pregnant sows should be prevented from becoming obese. Fasting and stresses of all kinds, too, must be avoided, especially in the last several weeks of pregnancy. Pregnant sows must be supplied with fresh water at all times and a nutritious diet.

HAIR LOSS

Hair loss or thinning of the hair is a common problem of female guinea pigs that have been repeatedly bred. These sows tend to lose hair with each successive pregnancy. Hair loss is frequently noted among juvenile guinea pigs in a weakened state at or around the time of weaning. "Barbering" also results in hair loss. This vice (bad habit) occurs when guinea pigs habitually chew on the hair coats of "pigs" that are lower in the social "pecking order". Younger guinea pigs, in particular, can lose substantial amounts of hair as a result of this activity. Hair loss accompanies fungal disease and external parasite infestations of guinea pigs. Please refer to specific sections of this handout covering these topics.

HEAT STRESS (STROKE)

Guinea pigs are especially susceptible to heat stroke, particularly those that are overweight and/or heavily furred. Environmental temperatures above 85 F., high humidity (above 70%), inadequate shade and ventilation, crowding, and physiological stress are additional predisposing factors.

Signs of heat stroke include panting, slobbering, weakness, and refusal to move about, convulsions and, eventually death. Heat stroke is a treatable condition if recognized relatively early. Heat-stressed guinea pigs should either be sprayed with cool water or be bathed in cool water. Once this first aid measure is undertaken, a veterinarian should be contacted immediately.

Prevention of heat stroke involves providing adequate shade from the sun (if guinea pig(s) are housed outdoors) and adequate ventilation (if guinea pig(s) are housed indoors).

CANCER

Cancer is a relatively rare problem of guinea pigs. As with most animals, it is most likely to affect guinea pigs as they age. Tumors most often reported are benign and involve the skin and respiratory tract lining. Cancer of the reproductive tract and mammary glands (breasts) has also been reported as well as a viral-induced, fatal leukemia.

INFECTIOUS CONDITIONS

BACTERIAL INFECTIONS

FOOTPAD INFECTIONS (BACTERIAL PODODERMATITIS)

Serious (sometimes crippling) infections of the footpads are extremely common among pet guinea pigs housed continuously on wire. The other major predisposing factor is fecal soiling of wire-bottomed enclosures. The front feet of overweight "pigs" are especially vulnerable to this condition.

Symptoms of this condition include swelling of a foot (or the feet), lameness, reluctance to move, and inappetence. The flooring of the enclosure must be changed and overall sanitation must be improved. Furthermore, a veterinarian must be consulted regarding treatment of the affected foot (feet). Topical dressing with an antibiotic and periodic bandaging will be necessary during the usually lengthy recovery period. Injectable antibiotics are often used by veterinarians in the treatment of this condition. Arthritis is a frequent and unfortunate consequence of these infections.

CERVICAL "LUMPS" (CERVICAL LYMPHADENITIS)

Abscessation of the lymph nodes immediately beneath the lower jaw in the upper neck usually results when coarse foods (such as hay) cause injury to the lining of the mouth or when superficial wounds penetrate the skin over these lymph nodes. In both cases, bacterial invasion is permitted. Symptoms include firm, painful swelling(s) under the lower jaw. Sometimes these abscesses break open, allowing a thick, creamy yellow-white pus to issue forth.

A veterinarian consulted about this problem will examine and evaluate the patient. A bacterial culture of the pus with antibiotic sensitivity testing of the bacterial isolates will be recommended in order to determine the appropriate antibiotic to use. If the abscesses are large, complete surgical removal of them will be recommended along with aggressive antibiotic therapy.

PNEUMONIA

Pneumonia is one of the most common bacterial diseases of pet guinea pigs. A number of potential disease-causing bacteria may inhabit the respiratory tracts of otherwise normal guinea pigs. Conditions of stress, inadequate diet, and improper home care will often predispose a pet guinea pig to an opportunistic infection with one or more of these bacteria. Symptoms of pneumonia may include labored and/or rapid breathing, discharge from eyes and/or nostrils, lethargy, and inappetence, or no symptoms at all with sudden death.

Occasionally, middle and inner ear infections result from respiratory disease in guinea pigs. Additional symptoms that could be noted in these cases would include incoordination, twisting of the head, circling to one side, and rolling.

A veterinarian must be consulted about this most serious of bacterial infections. Aggressive antibiotic therapy by injection and appropriate supportive care of the patient will be necessary. A bacterial culture with antibiotic sensitivity testing of the throat and/or available discharge will assist the veterinarian in the selection of an appropriate antibiotic to use. Unfortunately, even though elimination of the symptoms is often possible, elimination of the causative bacteria is not.

Rabbits and rats are known to harbor at least one of the bacteria known to cause pneumonia in guinea pigs. Therefore, it is wise not to house these animals with or near guinea pigs.

INTESTINAL INFECTIONS (BACTERIAL ENTERITIS)

A number of bacteria are capable of causing infections of the gastrointestinal tract of guinea pigs. Some of these bacteria are introduced on contaminated greens and vegetables or in contaminated water.

There appears to be two major ways in which these intestinal infections manifest themselves; sudden death without obvious prior symptoms or a more lengthy period of illness characterized by lethargy and marked weight loss. Diarrhea may or may not be noted in either case.

A veterinarian will recommend aggressive antibiotic therapy and appropriate supportive care. A bacterial culture of the patient's stool with antibiotic sensitivity testing will greatly assist the veterinarian in the selection of the most appropriate antibiotic to use.

FUNGAL DISEASES

RINGWORM

Ringworm is a skin disease caused by a fungus similar to that which causes athlete's foot of man. Young guinea pigs are usually more susceptible than adults. Ringworm in guinea pigs is generally characterized by patchy hair loss on the face, nose, and ears. The skin in these areas may appear flaky. The areas of hair loss may extend along the top side of the trunk of affected guinea pigs.

A veterinarian must confirm the diagnosis and prescribe topical and/or oral medication. The choice of medications to be used will depend on the number of ringworm lesions present and their distribution on the body of the affected guinea pig(s).

Transmission of ringworm from guinea pig to man is very possible. It is, therefore, extremely important to limit or restrict handling of ringworm infected guinea pigs (especially by young children) until their disease has been successfully treated. If handling of affected guinea pigs is necessary, the handler should thoroughly wash his hands afterwards.

VIRAL DISEASES

Most viral infections of pet guinea pigs are either mild or inapparent. None will be discussed in this handout.

PARASITIC DISEASES

EXTERNAL PARASITE PROBLEMS

LICE INFESTATION

Lice and mites are the most common external parasites of guinea pigs. Lice are tiny, wingless, flattened insects that live within the hair coats of the animals they parasitize. In fact, both the adults and their eggs are found attached to individual hairs of the hair coat.

Guinea pigs may be parasitized with two types of biting lice. Both abrade the skin's surface and feed off of body fluids that exude through the very superficial wounds they create.

Light infestations usually go unnoticed. Heavy infestations are usually accompanied with excessive itching, scratching, and some hair loss. Scabs may also be evident on and around the ears.

A veterinarian will confirm the diagnosis by direct examination of the hairs and hair coat of a guinea pig suspected of having a louse infestation. Direct examination is usually all that is necessary, although the use of a microscope is very helpful. The veterinarian will usually prescribe a safe topical medicine to treat affected guinea pigs. Guinea pig lice do not parasitize man.

MITE INFESTATIONS

A specific mite, similar to the scabies mite of man, causes serious infestations in pet guinea pigs. Mites are microscopic, spider-like organisms that live within the top layers of the skin. Their presence in this location usually causes intense itching, scratching and significant hair loss. Some cases without itching and scratching have been reported. Some guinea pigs are so miserable because of the infestation that they will produce serious self-inflicted wounds and exhibit wild running and circling and occasionally, even convulsions.

A veterinarian will need to do a number of scrapings of the skin in order to confirm the diagnosis. Successful treatment consists of two applications of a topical drug one month apart. Guinea pig mites do not parasitize man.

A SPECIAL COMMENT REGARDING THE EXTREME SENSITIVITY OF GUINEA PIGS TO CERTAIN ANTIBIOTICS

Guinea pigs as a group are unusually sensitive to the potentially lethal effects of certain antibiotics, whether they are given orally or by injection. The list of potentially harmful antibiotics includes; ampicillin, penicillin, bacitracin, erythromycin, lincomycin, gentamycin, clindamycin, streptomycin, vancomycin, and sometimes tetracycline. Even applied topically, certain antibiotics may produce lethal effects.

The major mechanism for this often lethal effect of certain antibiotics is the tremendous alteration that these drugs can cause to the normal microbial balance within the gastrointestinal tract. Once the normal intestinal microfloral balance has been adversely changed, bacteria that are normally present in very small numbers multiply to abnormally large numbers. During this proliferation, harmful chemicals are produced by the multiplying bacteria which can have lethal effects on the individual guinea pig.

Certain antibiotics (streptomycin, dihydrostreptomycin, etc.) possess a directly toxic and usually lethal effect on guinea pigs instead of causing harmful alterations of the normal microbial balance within the gastrointestinal tract. These antibiotics should never be used in guinea pigs.

Even though injectable antibiotics can cause the problems described above, oral antibiotics are more often associated with them. Antibiotics should never be given to guinea pigs unless they are prescribed by a veterinarian. If oral or injectable antibiotics are prescribed, 2 1/2 cc's (equals 1/2 teaspoon) of yogurt can be given orally to the treated "pig" morning and evening for the duration of the antibiotic therapy and for an additional five to seven days. Some believe that yogurt will help to augment the healthy intestinal flora.