

Customer Name, Street Address, City, State, Zip code

Phone number, Alt. phone number, Fax number, e-mail address, web site

Dental Malocclusion in Guinea Pigs

(Dental Disease)

Basics

OVERVIEW

- Occlusion is the relationship or contact between the biting and chewing surfaces of the upper and lower teeth; malocclusion is any deviation in the relationship or contact between the biting and chewing surfaces of the upper and lower teeth.
- The cheek teeth are the premolar and molars. These function as a unit to grind and chew food and are thus referred to as cheek teeth. The incisors are the set of front teeth that can easily be seen when looking at the front of the mouth.
- Guinea pigs' teeth grow continuously, lifelong. The rate of normal wear should equal the rate of growth. Normal wear requires proper occlusion with the opposing set of teeth and a highly abrasive, fresh food diet to encourage proper movement of the mandible and grind tooth surfaces.
- The cause of dental malocclusion is feeding diets that contain inadequate amounts of the coarse roughage material required to properly grind tooth surfaces. Malocclusion as an inherited defect does not occur in guinea pigs.
- When cheek teeth are a normal length, they will contact the opposing set of cheek teeth at an angle such that the teeth will wear normally. The bottom row of cheek teeth are naturally curved toward the tongue. If normal wear does not occur and teeth overgrow, sharp spikes or spurs will often form, angling toward the tongue. Spikes can become very long and penetrate into the tongue. In other cases, sharp spikes may not form, but the curved teeth actually entrap the tongue, making it difficult or impossible to swallow.



SIGNALMENT

Usually seen in middle-aged or older guinea pigs

SIGNS

- Preference for soft foods
- Decreased appetite—often show an interest in food, but unable to eat
- Excessive drooling
- Tooth grinding
- Weight loss
- Signs of pain—reluctance to move, depression, lethargy, hiding, hunched posture

- Unkempt hair coat, lack of grooming
- May sometimes notice incisor overgrowth first, as these teeth are readily visible. Not all guinea pigs with cheek teeth malocclusion have abnormal incisors. The cheek teeth cannot be seen by just opening the mouth. Examining the cheek teeth requires specialized lighting and magnification, and often requires sedation or anesthesia to completely assess the extent of disease.

CAUSES

- Inadequate fibrous, tough foods or foods containing silicates (grasses) to encourage proper jaw motion and properly grind tooth surfaces
- Trauma—fractures of the cheek teeth, usually bottom teeth or incisors

RISK FACTORS

Feeding pelleted diets and simple carbohydrate treats, with insufficient hay

TREATMENT

APPROPRIATE HEALTH CARE

Trimming of the teeth requires general anesthesia but is usually performed on an outpatient basis.

DIET

- Most guinea pigs with dental disease are taken to the veterinarian because they are not eating, or cannot eat. It is absolutely imperative that the guinea pig continue to eat to prevent potentially life-threatening disease of the intestinal tract (GI stasis, bacterial overgrowth). Guinea pigs that cannot chew are syringe-fed a gruel such as Critical Care for Herbivores (Oxbow Pet Products) or Emerald Herbivore (Lafeber Company, Cornell, IL); feed as much as the guinea pig will readily accept. Alternatively, pellets can be ground and mixed with fresh greens, vegetable baby foods, water, or juice to form a gruel. Do not feed starchy, sweet, or fatty foods.
- Return the guinea pig to a solid food diet as soon as possible to encourage normal occlusion and wear. Increase the amount of tough, fibrous foods and foods containing abrasive silicates such as hay and wild grasses; avoid pelleted food and soft fruits or vegetables.
- Encourage oral fluid intake by offering fresh water or wetting leafy vegetables.

SURGICAL CONSIDERATIONS

- Trimming of spurs and sharp points alone will be of little benefit for most guinea pigs; in most cases the crowns all of the cheek teeth are elongated and will need to be reduced to normal length.
- This procedure is always performed under general anesthesia using a focused, directed light source, magnification, and specialized dental equipment.
- Severely damaged teeth may require extraction.

MEDICATIONS

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered all-inclusive.

- Pain medications such as butorphanol, meloxicam, or carprofen are commonly used following molar trimming procedures.

FOLLOW-UP

- Make sure that the guinea pig is eating after the teeth are trimmed. Many guinea pigs with dental disease have stretching and inflammation of the muscles in the jaw. Sometimes, disorders of these muscles are so severe that the guinea pig cannot eat solid food after molar trimming, and may require assisted feeding of gruel for days to weeks. In very severe cases, the patient may never be able to eat solid food again. There is no practical way to determine the degree of muscle damage prior to trimming the teeth. The most efficient way to determine the degree of muscle and joint damage is to perform the tooth trimming and monitor the ability to eat after this procedure.
- Return to the veterinarian for rechecks and to have teeth trimmed as needed, every 3–12 months, depending on the severity of disease.

PATIENT MONITORING

- It is extremely important to monitor the guinea pig's ability to eat after teeth trimming. If the patient cannot eat solid food, assisted feeding of gruel is critical to maintain normal intestinal function and prevent potentially life-threatening disorders of the intestinal tract.
- Monitor for signs of recurrence of overgrowth, such as inability to chew, excessive drooling, teeth grinding, or decreased appetite and stool production.

PREVENTION/AVOIDANCE

- Prevention is not possible once symptoms of malocclusion are present. With periodic molar trimming and appropriate diet, progression of disease may be arrested, but treatment is often lifelong.
- To help prevent dental disease, discontinue or limit the feeding of pellets and soft fruits or vegetables; provide adequate tough, fibrous foods such as hay and grasses to encourage normal wear of teeth.

POSSIBLE COMPLICATIONS

- Tooth root abscesses, recurrence, chronic pain, or extensive tissue destruction
- Inability to chew solid food following teeth trimming. This is due to damage to the jaw muscles and joints caused by overgrown teeth.

EXPECTED COURSE AND PROGNOSIS

- Mild to moderate disease—good prognosis with regular trimming and appropriate diet change, depending on severity of disease; lifelong periodic trimming is often required.
- Advanced disease—causes stretching of muscles used in chewing and inflammation of the jaw. This can be severe enough to prevent chewing of solid food, and in severe cases, the guinea pig may never be able to chew solid food again. There is no practical method of predicting the severity of jaw and muscle damage prior to performing the teeth trimming procedure. Monitoring the ability to eat after trimming is the best way to determine the long-term prognosis. Euthanasia may be warranted with severe or advanced disease, especially in guinea pigs that are painful or cannot eat.

KEY POINTS

- Guinea pigs' teeth grow continuously throughout life and have to line up properly in order to wear normally.
- Malocclusion of the cheek teeth is usually caused by feeding diets that have insufficient rough, coarse hay. Hay helps the teeth stay trimmed because it forces proper motion of the jaw, and the rough surface of hay grinds the teeth.
- Once a guinea pig develops dental disease, periodic trimming is usually needed, lifelong. The interval between trimmings depends on the severity of disease and can range from 3–12 months.
- Teeth trimming requires general anesthesia and specialized dental equipment.

Notes

Enter notes here

