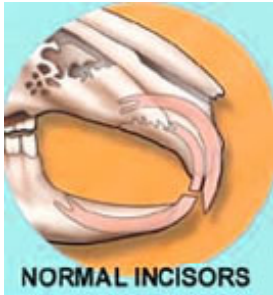


Dental Anatomy and Dental Care for Rabbits and Rodents

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Anatomy



"Lagomorphs" (the most popular lagomorph pet is the rabbit) and rodents share some similar dental features although there are differences. Lagomorphs are distinguishable from rodents in that they have two pairs of upper incisors (the second pair, located immediately behind the larger incisors, are small and peg shaped, often referred to as the "peg teeth"); rodents have one pair. Lagomorphs also have more teeth than rodents (specifically, premolars) and their lower jaw (called the "mandible") is narrower than the upper jaw (called the "maxilla"), while in rodents, the upper jaw is narrower than the lower jaw.

Lagomorphs, like cats, dogs, and humans, are "diphyodont" meaning they have two sets of teeth, one set (called "deciduous", or "baby teeth") being shed and replaced by a permanent set. However, in lagomorphs, the deciduous teeth are rarely seen as they are generally shed before birth or shortly thereafter. Rodents have only one set of teeth their entire lives.

The incisors of both lagomorphs and rodents are "aradicular hypsodont" (they have no anatomical root), therefore, they continually grow throughout life. Lagomorphs have a white incisor enamel color while rodents have a yellow incisor enamel color.

Lagomorphs and the truly herbivorous rodents (such as the chinchilla and guinea pig) feed on tough, fibrous vegetation in their natural environment; other rodents, such as hamsters, rats, and mice feed mainly on tubers (a fleshy, underground part of a plant, such as a potato), seeds, and grain. In the true herbivores, the diet tends to have a low energy content requiring the intake of larger quantities of food, resulting in more grinding of the vegetation and rapid wear to the cheek teeth (large teeth in the back of the mouth used for grinding). As a result, the cheek teeth, like the incisors, have evolved to continuously grow throughout life. In other rodents, the diet of tubers, seeds, and grain requires little chewing, resulting in little wear of the cheek teeth. As a result, these cheek teeth have anatomical roots and stop growing once they have fully erupted.

Rabbit Teeth



Rodent Teeth



"Malocclusion" refers to an undesirable alignment of upper and lower teeth when the jaw is closed. Malocclusion can occur due to several reasons including genetics, trauma to the teeth, abnormal growth, reverse scissor bite, and, most commonly, inappropriate diet. Malocclusion can occur in the cheek teeth and the incisors, resulting in the uneven wear of the teeth and often the overgrowth of the teeth. If overgrowth occurs, the teeth can be trimmed by a veterinarian to prevent further problems.

Dental and oral care

In the truly herbivorous lagomorphs and rodents, a diet consisting of tough, fibrous roughage is extremely important to the health of the animal. If a diet that does not require enough chewing is given, cheek tooth wear is uneven causing spikes of enamel to grow on the outer and inner sides of the teeth. These spikes can cause severe oral pain resulting in excessive salivation (often called "slobbers"), reluctance to chew, inability to close the mouth, and reduced food intake. The situation deteriorates as the teeth continue to grow, and, if it is not treated, will result in severe malnutrition.



In some species, cheek tooth overgrowth can lead to root elongation. When this occurs the root continues to grow through the oral tissues causing swellings. If this occurs in the upper jaw, the root can grow to the point of affecting the eyes, resulting in watering, bulging, or inflammation.

Because there are limited treatments in lagomorph and rodent dental disorders, prevention is best. The teeth should be examined routinely for abnormalities and a balanced diet enriched with coarse vegetation should be fed to maintain adequate wear. Contact your veterinarian if you see abnormal growth or if your pet drools, has difficulty chewing, is eating less, or shows pain when touched around the mouth or head. If diagnosed early, the enamel points and/or overgrown incisors can be trimmed by the veterinarian. In more severe cases, permanent damage may have already occurred.



It is important to know, especially in the differing rodents, the anatomy and physiology of the teeth so appropriate care and nutrition can be provided for a long and healthy life.

