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17/MHS01/235

Anatomy

1. Comparative Anatomy

This is the comparative study of the body structures of different species of animals in order to understand the adaptive changes they have undergone in the course of evolution from common ancestors.

2. Criteria necessary for caring of laboratory animals

a. Housing

Cages, pens, or runs should provide adequate space to allow for normal physiologic needs, permit postural adjustments, and meet requirements for species-specific behavior.

b. Bedding

Bedding materials should be nonirritating, absorbent, free of chemical contamination and pathogens, and unpalatable. Adequate quantities should be used to dilute and limit contact with excreta, promote air quality and other environmental factors by suppressing microbial growth, and keep animals dry and clean between changes of bedding or caging.

c. Feeding

Feed should be of adequate quantity, palatable, free of contaminants, nutritionally adequate, easily accessible, and provided using means that meet behavioral needs according to specific species requirements.

d. Sanitation

A uniformly high level of animal enclosure and facility sanitation is mandatory to ensure that animals are clean and dry, air quality is adequate (without using masking agents), and primary enclosure surfaces and accessories are clean.

3.a) Similarities between the digestive system of amphibians (frogs) and mammals (humans) include:

1. The presence of mouth
2. The presence of esophagus
3. The presence of teeth
4. The presence of tongue
5. The presence of stomach
6. The presence of gall bladder
7. The presence of liver
8. The presence of small intestine
9. The presence of large intestine

b.) Differences between the digestive system of amphibians(frogs) and mammals(humans) are:

Frog	Human
Frogs swallow their prey without chewing	Chewing is a mechanical digestion in humans
During deglutition frogs blink or close their eyes	This is not seen in humans
Frogs have two sets of teeth; maxillary teeth and vomerine teeth	Man has one set of teeth in their oral cavity
The tongue of the frog is attached to the	The tongue of the frog is attached to the

starting point of the mouth	back of the mouth
Frogs don't have strong teeth they use their teeth to hold their prey	Man has strong teeth. Man can use their teeth to chew their food
The top of the tongue is folded backwards	The top of the tongue is straight
The tongue is very sticky	The tongue is not sticky
Frogs have shorter intestine and the two parts of the intestine are the duodenum and ileum	Man has a longer small intestine and the three parts of the intestine are duodenum, jejunum and ileum
Absorption of nutrients of frogs occurs in the ileum	Absorption of nutrients of man occurs in the jejunum
Elimination of indigested food occurs through the cloaca	Elimination of undigested food occurs through the rectum