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Grizzly Bears

Taxonomical Classification

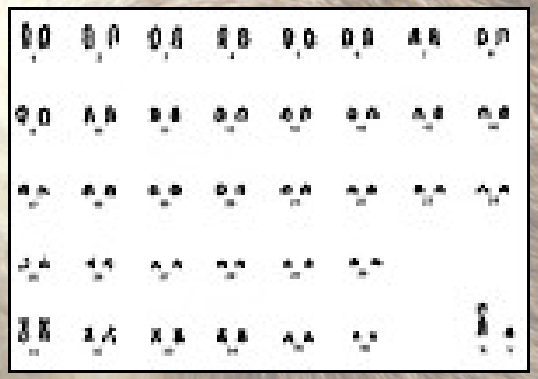
- Kingdom: Animalia
- Phylum: Chordata
- Class: Mammalia
- Order: Carnivora
- Family: Ursidae
- Genus: Ursus
- Species: Ursus arctos
- Sub Species: Ursus arctos horribilis

Genetic Make Up

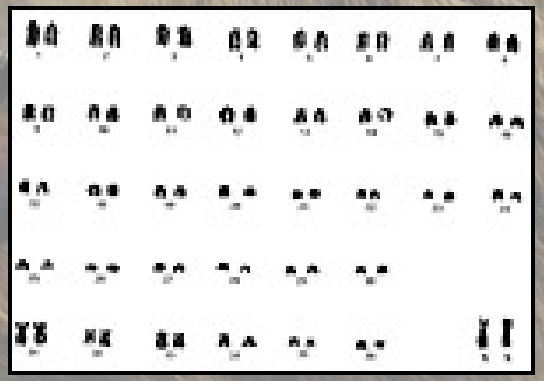
- Grizzly Bears have 74 chromosomes or 37 pairs of chromosomes
- They have 3 Y-linked genes and 4 X-linked genes
- Some genetic disorders that grizzly bear can get are cancer, congenital heart anomalies, hypothyroidism, albinism, and progressive retinal atrophy.

Karyotype

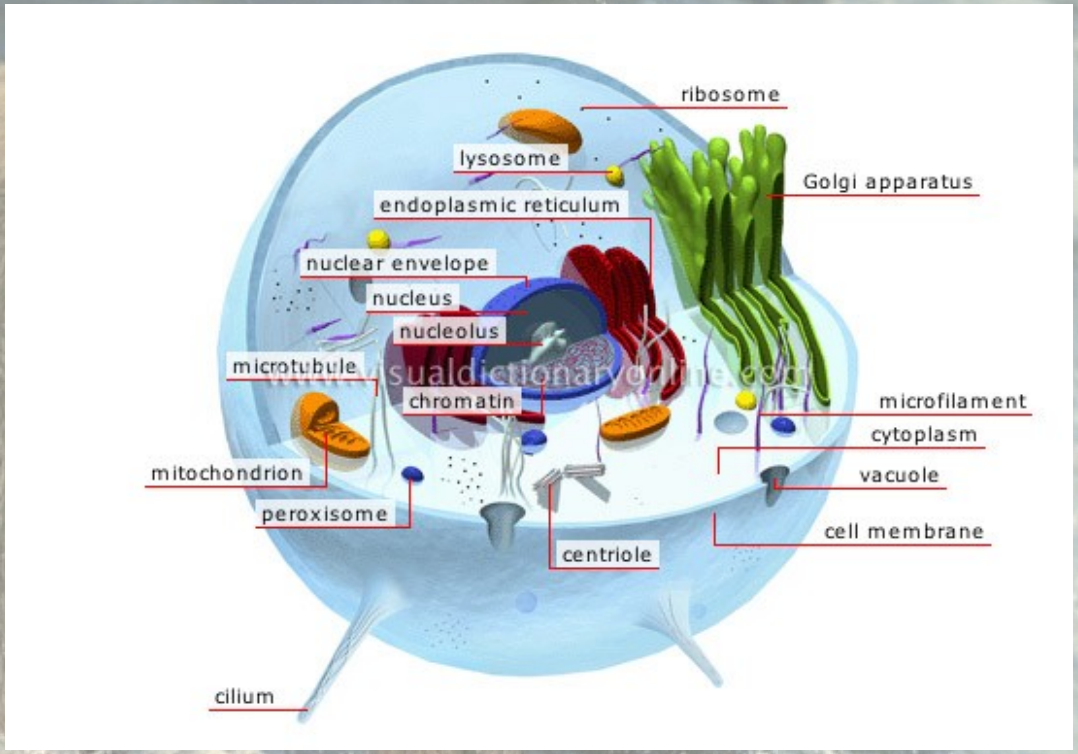
- Male Karyotype



- Female Karyotype



Grizzly Bear Cell



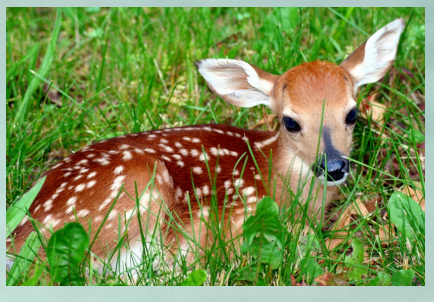
Environment

- Niche: Grizzly bears eat a variety of foods including plants, nuts, berries, and meat (bugs, elk, deer, bison, trout). Grizzly bears are essential for distributing berry-producing plants through their feces. They will also till the soil with their claws, promotion new vegetation growth.

Nutrition Value

- 10 Raspberries have 2g of carbohydrates.
- 10 Hazelnuts have 2g of carbohydrates, 1g of fat, and 2g of protein.
- 7 Walnuts have 4g of carbohydrates, 18g of fat, and 4g of proteins

Nutrition Value



- 1 Trout has approximately 215 calories, 8g of fat, and 33g of protein
- 100g of Deer meat have 120 calories, 8g of fat, and 26g of protein
- Carbohydrates are the major source of fuel for the grizzly bear
- Fat maintains healthy skin and fur, insulates body organs, and maintains body temperature
- Protein make hemoglobin and build cardiac muscles

Raspberries

- Genus: Rubus
- Species: Rubus strigosus

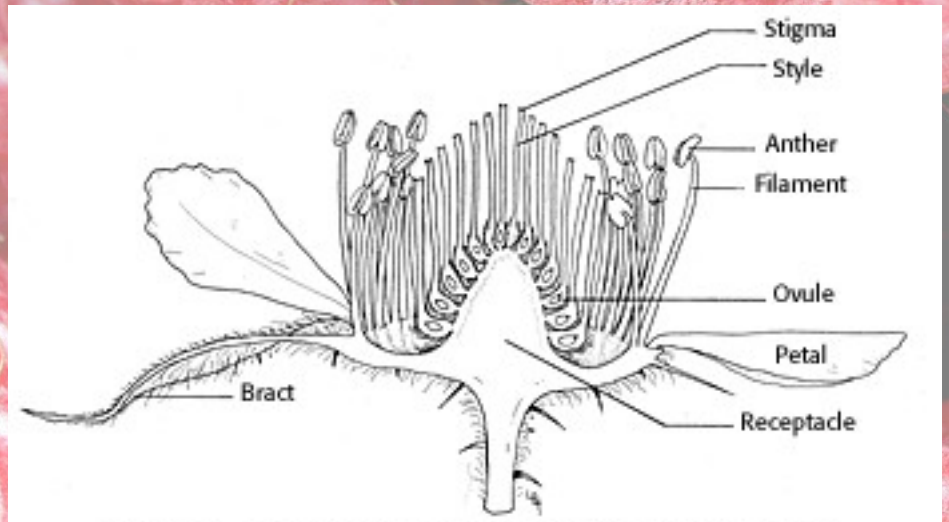
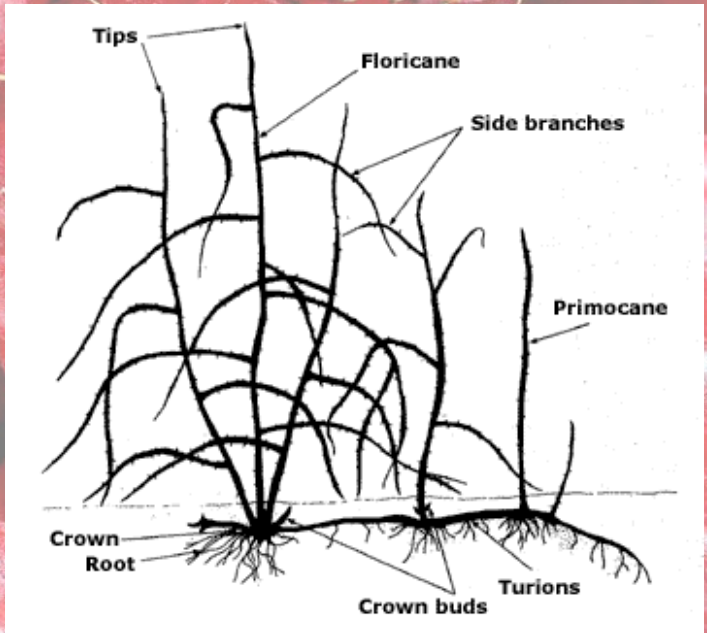
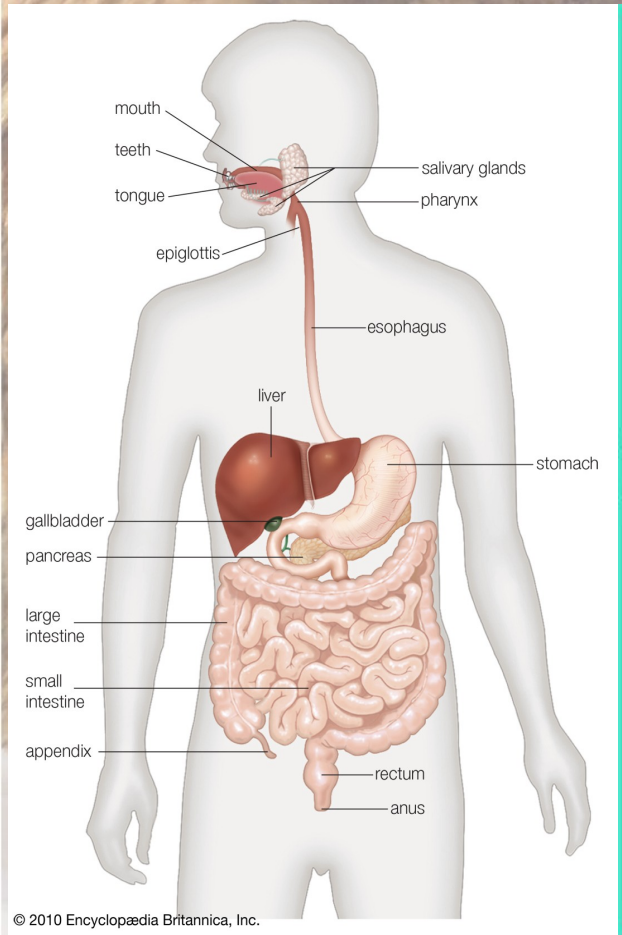
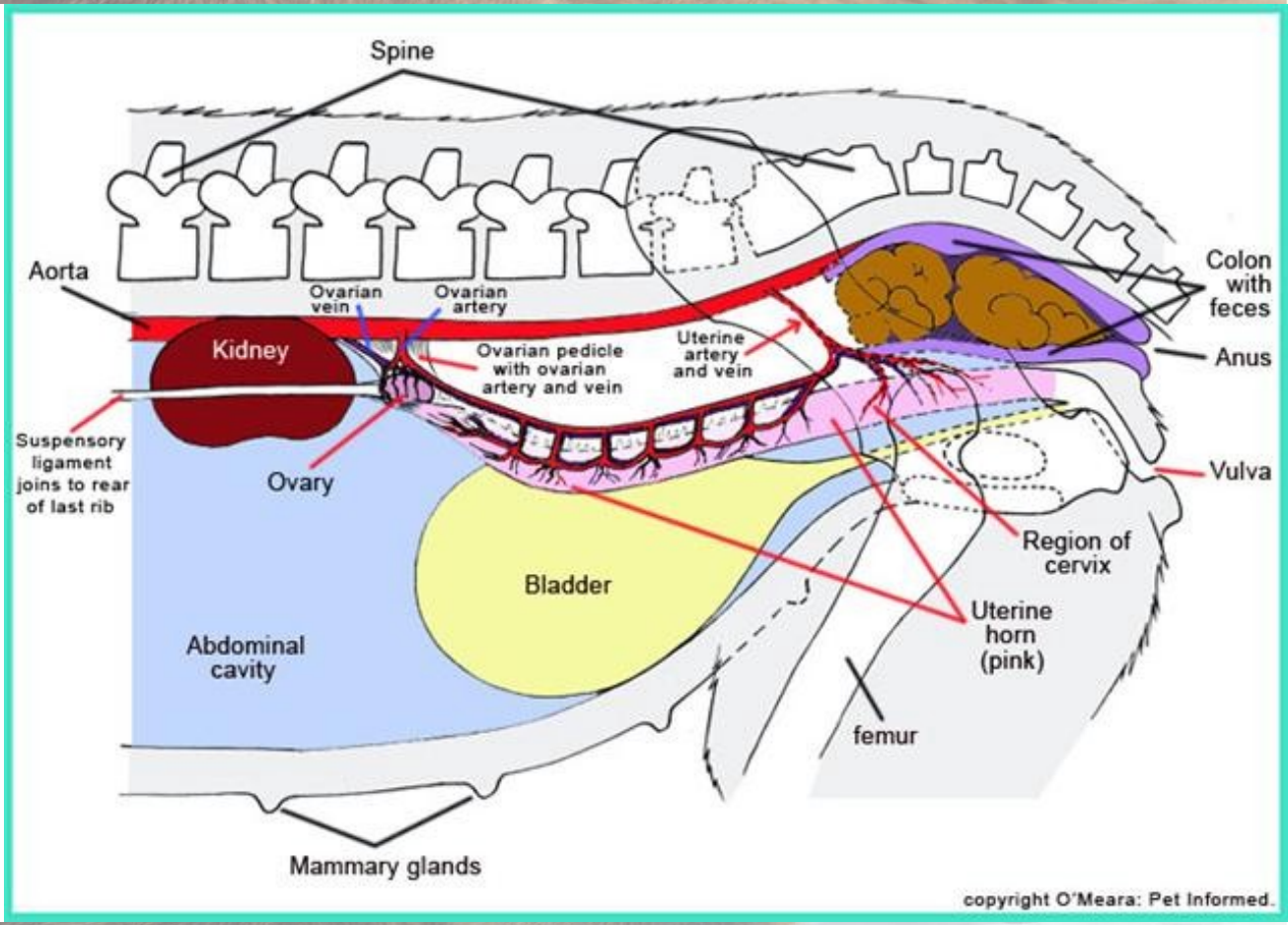


Figure 167. - Longitudinal section of 'Willamett' raspberry flower, x10.



Digestive systems

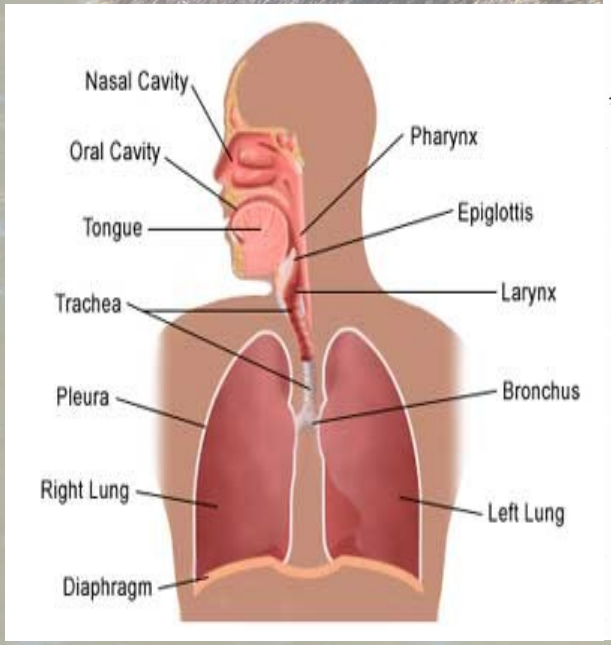


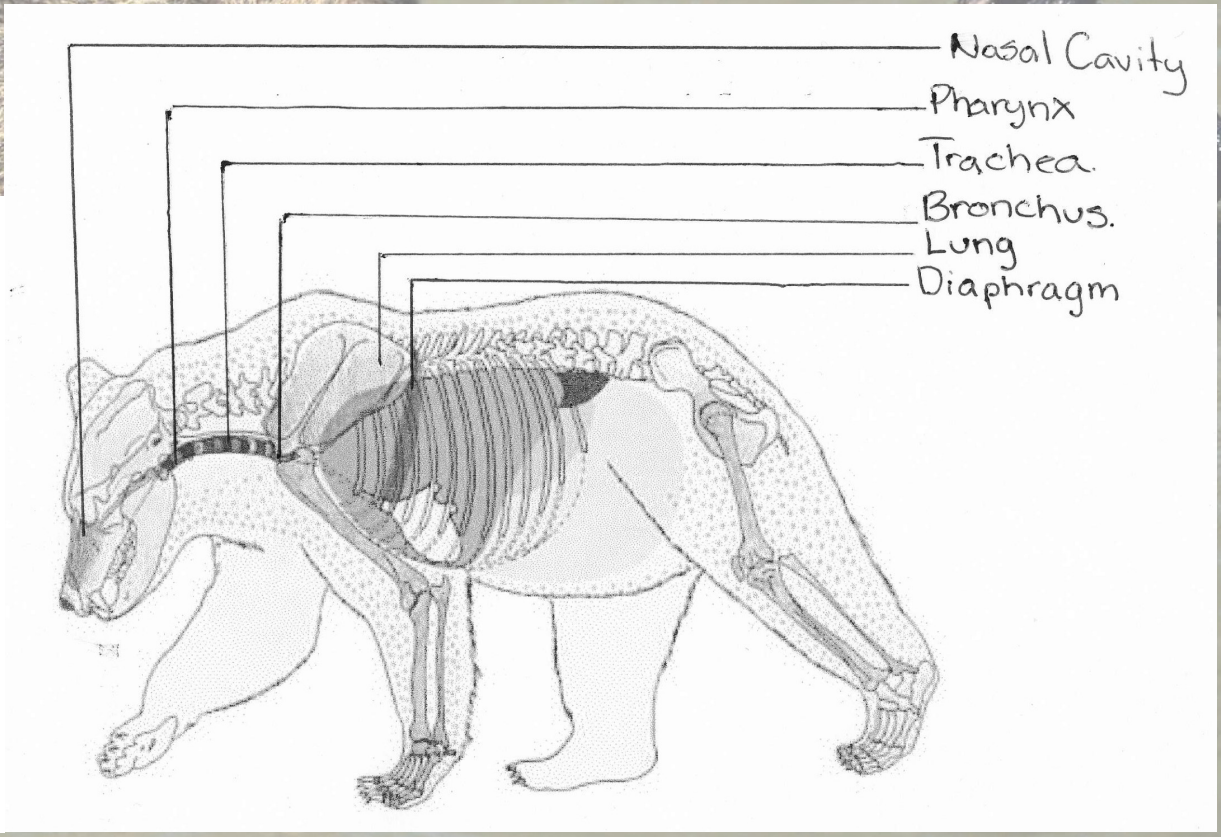


Digestive system

- Grizzly bears have a simple intestinal tract, where the colon is the primary site of fermentation. They have a long gut for digesting grass, but do not digest starches well. Their small intestine is longer than that of a true carnivore, but their digestive tract lacks the features of a true herbivore.
- The barrel-shaped body of a bear is considered an indication of a long intestine. The grizzly bears' intestinal lenth is greater than the black bear and giant panda's, and polar bears have the longest intestine.

Respiratory System

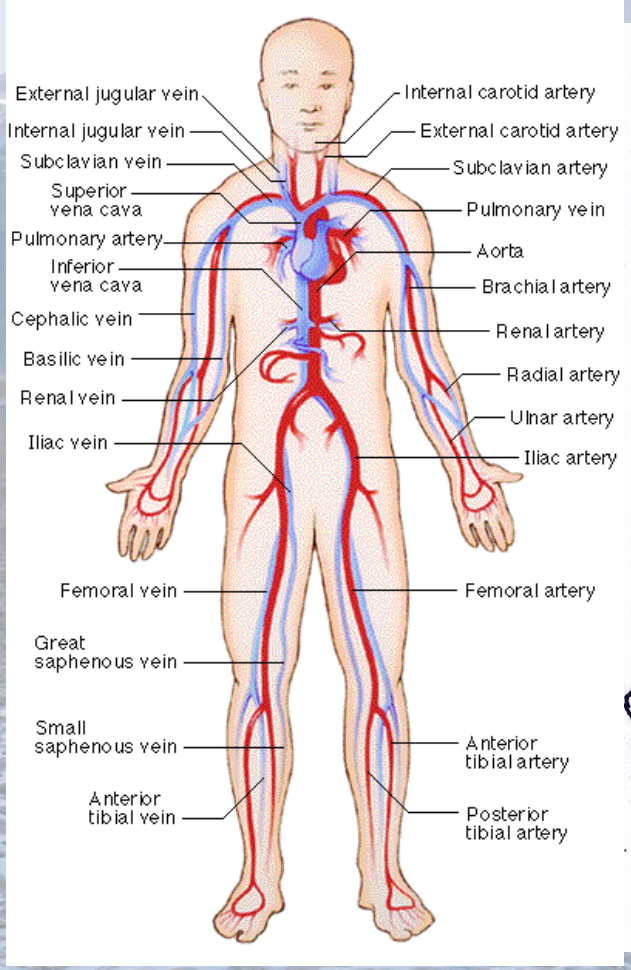


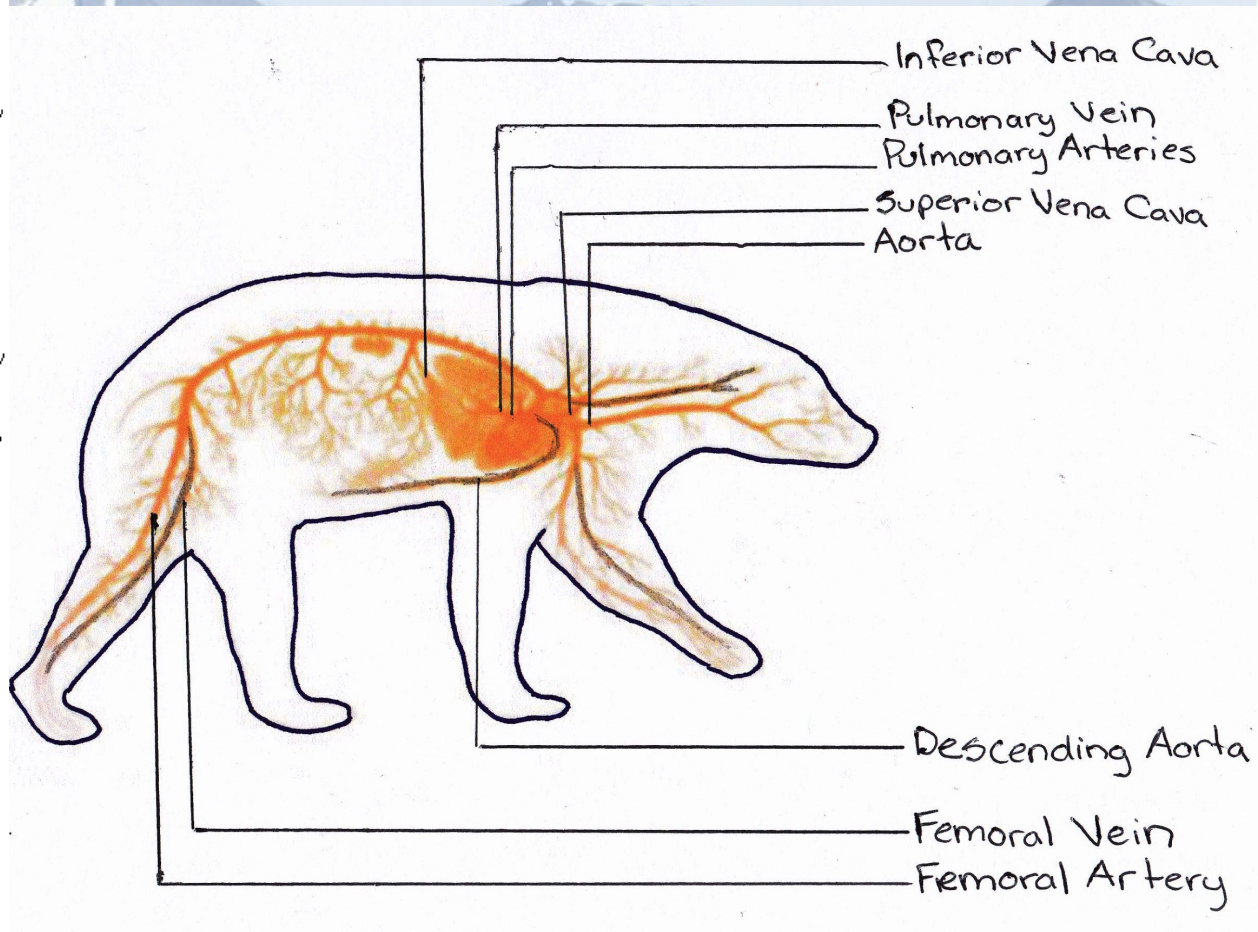


Respiratory System

- The lungs of bears are relatively large and their breathing rate is six to ten breaths per minute while resting, forty to eighty when hot and panting, and sometimes over one hundred breaths per minute during extreme exertion. The oxygen intake while resting is reduced by approximately one half during hibernation.

Circulatory System





Circulatory System

- A normal heart rate for bears is ninety-eight beats per minute while awake and while walking, but it will increase with activity, as well as drop to forty to forty-five beats per minute while sleeping. The heart rate of some bears have slowed to eight to ten beats per minute when they are resting in a snow bank.

Fun Facts!

- Grizzly bears weigh from 300-1500 pounds
- Their coat colour ranges from blond, brown, black or a combination of these; the long outer guard hairs are often tipped with silver giving it a grizzled appearance, hence the name.
- The grizzly has a large hump over it’s shoulders which is a muscle mass used to power the forelimbs when digging.

Fun Facts!

- In spite of their massive size, this bear runs at speeds of up to 35mph
- It was once native in Asia, Africa, and Europe.
- Grizzly bears put on 400 pounds of fat in the winter.
- During hibernation, these bears can be woken up easily
- Every other year, females produce 1-4 young which are the size of rats, weighing only 1 pound

Fun Facts!

- Female grizzly bears have delayed implantation. After they mate with a male grizzly, the resulting fertilized embryo waits inside the female until the fall. If the mother has enough fat reserved to be able to sustain pregnancy, the embryo will implant itself in the wall of her uterus. If she doesn’t have enough reserved, the embryo is simply reabsorbed into her system. Because of this delayed implantation, a female can carry more than one cub from more than one father, resulting in cubs from the same litter that don’t look alike.

Reference