

Dogs

Why do different breeds look so different?

Dogs have been bred for centuries in order to achieve the desired characteristics of each breed. The best way to achieve those characteristics is to only breed dogs with the desired characteristics with one another. Close relatives with similar characteristics were therefore selectively bred to one another.

The Downside of Breeding Close Relatives

This technique allowed breeders to successfully produce many different breeds of dogs, but has also led to health problems in purebreds due to inbreeding.



Great Danes

Originally bred for their hunting skills and then to be guard dogs in Germany.

Health Problems

Heart problems
Wobbly walking
Severe hip pain



Chihuahuas

Originally bred in Mexico to be companion dogs.

Health Problems

Seizures
Low blood sugar
Eye problems



German Shepherds

Bred to herd sheep

Health Problems

Severe hip and elbow pain
Heart problems
Nerve Problems



Golden Retrievers

Bred to fetch birds shot down by hunters; they have soft mouths and love water – characteristics useful for returning fallen birds undamaged to the shooter.

Health Problems

Heart problems
Wobbly walking
Severe hip pain



Mutts

Dogs that are mix of more than one breed have been found to live longer and have fewer health problems than purebred dogs.

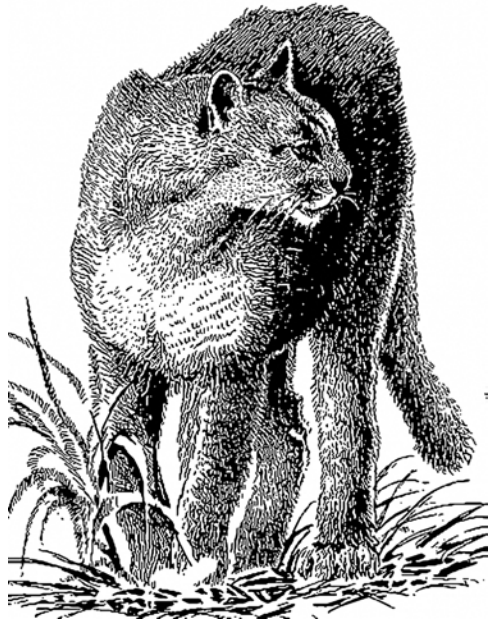
The Florida Panther: Fighting for Survival

Endangered and Inbred

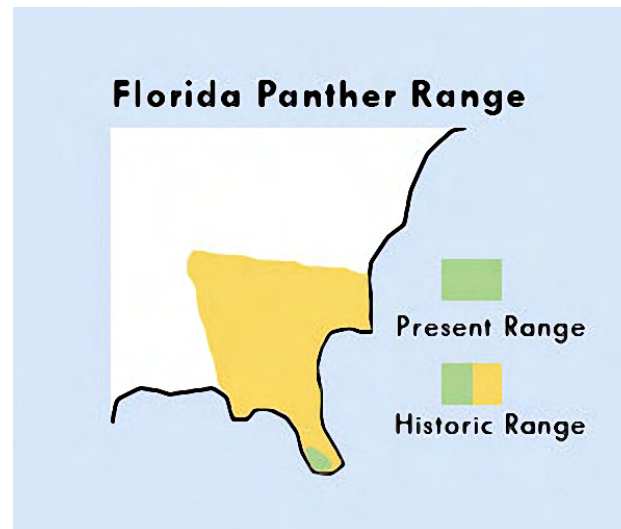
The panther used to be abundant throughout the Southeast United States. Habitat loss and hunting have caused the Florida Panther to become endangered. Today, only 80-100 panthers survive in Southern Florida. So few Florida Panthers remain that close relatives breed, making undesirable traits like heart defects and abnormal sperm common. Panthers born with these defects cannot survive in the wild or even if they do, they have problems parenting a new generation of panthers.

Attempting to solve the problem

A few panthers from Texas were bred with the Florida Panthers. Scientists hope that the addition of new genetic material will help the Florida Panther population to become healthier.



Florida Panthers are a member of a group of animals that are sometimes called mountain lions, pumas, panthers, and cougars. The Florida Panther is the state animal of Florida.



This panther used to be found throughout the Southeast United States including Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, and even some of Tennessee and South Carolina. Today, the Florida Panther is only found in the southernmost tip of Florida.



Panthers mostly eat white tailed deer, but they also eat raccoons, rabbits, feral hogs, and birds. You should keep pets away from panthers because panthers will eat them too!

Thoroughbred Horses

History

The Thoroughbred line of race horses began three hundred years ago in England when people bred horses imported from North Africa and the Middle East. Breeders kept careful records of the parentage of their horses. These records are still used by horse breeders today to help understand the family history of new breeding horses

Breeding

Scientists recently discovered through analysis of Thoroughbred family histories and genes that all modern racehorses are descended from only 28 horses. In fact, most horses are descended from three horses with only one of those males contributing genes to almost all of the Thoroughbreds alive today!

Inbreeding Effects

Selectively choosing to mate fast horses together has made Thoroughbreds the fastest breed of horses, but it has also made them inbred, which has contributed to some reproductive problems. Some Thoroughbreds also have skeletal defects, which leads to bone breaks. If a horse breaks a bone they are usually put down.



The three Triple Crown races, the Kentucky Derby, Preakness Stakes and Belmont Stakes, are the major races for three year old Thoroughbred horses in the United States.



A Thoroughbred horse is shown on the Kentucky state quarter. Kentucky is known for its breeding of thoroughbred horses.



Most racehorses today are descended from this horse, the Darley Arabian

Maple Syrup Urine Disease

What is it?

People are born with this disease if they have inherited an improperly functioning gene from both their parents. Affected babies cannot breakdown certain protein components, which build up in the body leading to sweet smelling urine (like maple syrup). If left untreated, babies will become brain damaged.

Treatment

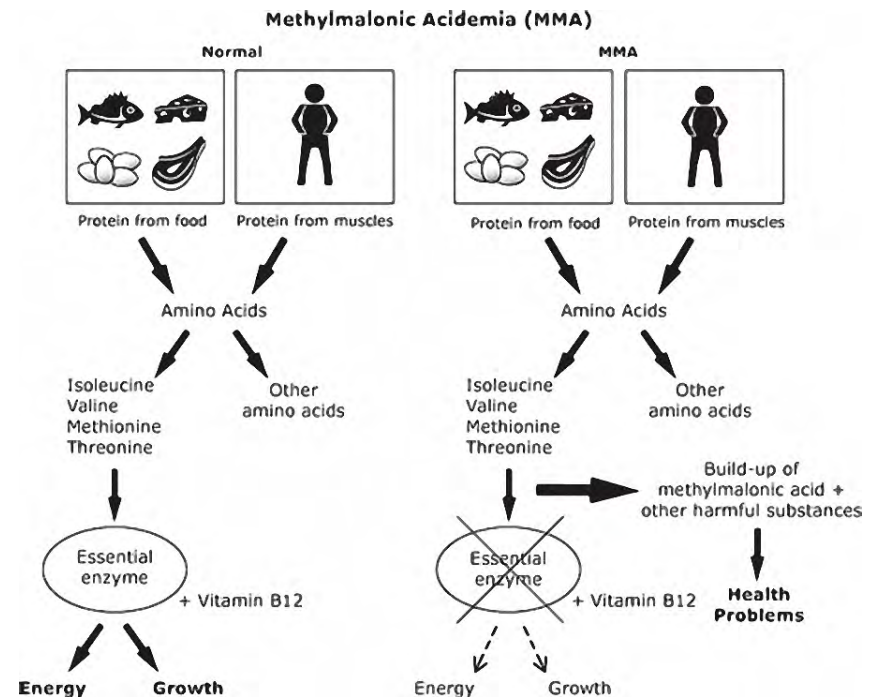
This disorder can be treated by eating only foods without the proteins that affected individuals cannot breakdown.

Where is it most common?

A greater proportion of Amish suffer from this disorder than the general population because many of today's Amish are descendants of a small founding group that carried the gene for this disorder. The smallness of the original founding group means that the gene for this disorder is carried by a higher proportion of Amish than in the general population.



The largest Amish communities are in Ohio, Pennsylvania, and Indiana.



Inbreeding Amongst European Royalty

The House of Habsburg

This European royal family ruled over enormous regions of central and western Europe during the middle ages and into the Renaissance period.

Inbreeding

In order to keep “pure” bloodlines and seal alliances for increased power, the Habsburgs intermarried one another frequently. Marriages between first cousins and uncles and nieces were fairly common.

The Habsburg Jaw

In the mid 1400s, the Habsburg Jaw was first noticed in the royal family. This condition, where the lower jaw grows faster than the upper jaw results in an elongated chin and can worsen with age. The jaw was so common in the Habsburg family that the condition was named after them!



Photo of a person with Habsburg Jaw



Charles II (1661-1700), the last Habsburg King of Spain had the most extreme case of Habsburg Jaw recorded. He was also mentally disabled. An analysis of the previous marriages that led to his birth reveals multiple uncle-niece marriages and first cousin marriages.



This coin of Leopold I (1640-1705), another Habsburg, again shows the characteristic Habsburg Lip. However, some coin collectors do not believe that this coin is accurate.

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