

## BIOLOGY

# Dogs Have 'Royal Disease'

Animals as well as humans can be victims of hemophilia, the disease in which the blood fails to clot and a patient may bleed to death—By Faye Marley

► DOGS, LIKE HUMANS, can have hemophilia, sometimes called "the disease of royalty."

Hemophilia is also known as "bleeder's disease," because of the victim's extreme difficulty in stopping blood flowing from cuts.

Mose, a three-year-old Chihuahua-Pomeranian studied at the University of Utah College of Medicine, Salt Lake City, bleeds at the slightest scratch.

Dr. Paul Didisheim, assistant professor of medicine at the University, and Miss Dorothy L. Bunting, research assistant, reported that the dog's disease is the same as hemophilia A, the most common form of the malady in man.

The scientists told a meeting of the Federation of American Societies for Experimental Biology in Chicago that Mose's blood is missing factor VIII, called anti-hemophilic globulin (AHG). This factor, the same one missing in human hemophilia A victims, is one of 12 different plasma factors important to blood clotting.

Mose has now been sent to the University of Pittsburgh where he will be bred in an effort to raise a colony of hemophilic dogs for research. The colony will be one of four such research colonies in the world. The others are in North Carolina, Oklahoma and England.

In Pittsburgh, studies will be made of the inheritance of canine hemophilia. Medications will be tested with a view to better treatment of humans with the ailment.

Only females are carriers of the disease. Although not affected by hemophilia themselves, they pass it on to their male offspring.

Mose's mother was proved to be a carrier of hemophilia, Dr. Didisheim said, when two years after Mose was born, she produced another hemophilic in a litter fathered by a different male. The second hemophilic bled to death from a slight scratch.

Hemophilia first came to the attention of medical scientists about 150 years ago. Queen Victoria was a carrier, and through her children passed the disease on to the royal households of Spain, Germany and Russia. It is a relatively rare ailment.

The only treatment now, if a hemophilic starts bleeding, is a transfusion of normal blood that contains the missing clotting factor. The treatment corrects the deficiency for a few hours but the procedure must be repeated if there is further need.

Another paper presented at the meeting upsets research theories about blood pressure. University of Mississippi investigators have discovered that the blood volume goes up along with the rise in pressure. Dr. J. B. Langston and graduate student Ben Doug-

las demonstrated their theories with salt-fed animals.

When the salt in the diet was increased, the volume of blood, volume of fluid between cells of the body, and the pressure within the tissues all rose far above normal but the pressure stayed up as long as the salty food was eaten.

Studies underway at the University of Mississippi in Jackson show that the heart pumps more blood as blood volume increases. The tissues of the body do not want more blood than they need so they offer progressively greater resistance to the extra amounts the heart pumps in the early days of salt feeding.

As the tissues offer more and more resistance, blood pressure rises, just as water pressure will go up in a constricted garden hose.

This is why the Mississippi researchers conclude that an abnormality in blood and fluid volume may be one of the triggers that shoot blood pressure high.

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## Fewer Appendectomies

► THAT PAIN in a teen-age girl's right side may not be appendicitis, but rather some female symptom that needs no surgery at all.

Too many appendectomies are performed unnecessarily in girls as they approach maturity, Dr. Maurice V. Sheets of Hollywood, Calif., told the Clinical Congress

of the American Society of Abdominal Surgeons in Chicago.

When girls aspire to be adults, Dr. Sheets said, their symptoms can be magnified out of proportion. Careful diagnosis is needed to find out whether or not some other abdominal irritation is simulating acute appendicitis. The reproductive organs in the female abdomen can give pain similar to appendicitis, yet not require surgery.

The appendix is a small, wormlike tube attached to the cecum, or pouch, at the beginning of the large intestine. Dr. Sheets called appendicitis the enigma of the female.

Dr. James T. Nix of New Orleans reported at the same meeting that Roman Catholic nuns very seldom have acute inflammation of the pancreas, since community rules restrict the drinking of alcohol except on feast days. The pancreas is a large gland, six to eight inches long, lying crosswise in the upper abdomen. It secretes enzymes for food digestion and manufactures insulin.

Outside the convents, he said, acute pancreatitis and its companion diseases of alcoholism and the gallbladder are increasing. Pancreatitis accompanies acute inflammation of the gallbladder, called cholecystitis, in one-fifth of the cases.

Only two cases of acute pancreatitis as cause of death were noted in 575 nun deaths during the calendar year 1963, Dr. Nix said. A review of 288 gallbladder operations in nuns during 1961 showed a low death rate of less than one half of one percent.

Dr. Nix recently reported also that deaths from breast cancer in nuns were frequent, but that cancer of the uterine cervix (neck of the womb) was extremely rare, although in other women it is common.

Abdominal surgery must be individualized to fit the needs of the patient, the capabilities of the surgeon and the facilities of the hospital, Dr. Nix advised.

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**MEASURING BLOOD FLOW**—Dr. Chester Hyman, physiologist, University of Southern California, closely observes the new electrical instrument that measures blood flow in skin and muscle separately for the first time. The device is an improved version of the instrument developed by Dr. Stepan Figar, physiologist at Charles University, Prague, Czechoslovakia.