

NEW FACTS ON DOG DIETS

BY RUTH RINGLE

VETERINARIANS find that a large percentage of dog patients suffer from malnutrition. When dogs could forage for themselves, they ate a healthy diet. They fed themselves almost entirely on meat, but they got vitamins and all other needed food elements by devouring the viscera, blood and bones of their kill. Today's dogs, whether city, country or kennel pets, are almost entirely dependent on their owners to feed them adequate, healthful diets.

We have long been poetic about our dog pets; sung of their faithfulness and undemanding love, yet we haven't been very practical and considerate in their care. But dogs are having their day in the research laboratories at the University of California. Dr. Agnes Fay Morgan, internationally known nutrition authority, has been doing some research in canine nutrition there and has proved that a dog's looks, vitality and health are entirely up to his master.

In the laboratory tests, extreme symptoms were produced by ex-

treme deficiencies of the various food elements. But a slight deficiency, not immediately apparent, may eventually ruin health, vitality and resistance to disease. If your dog has skin disorders and a dull coat, becomes finicky about food and seems to have lost his enthusiasm for life, it is probable that something is lacking in his diet. If his ration is known to be adequate and still he loses weight and is in poor condition, worms may be suspected.

A good diet for all dogs should include meat, eggs, vegetables, fruit, cereal and milk. If the dog weighs 25 pounds he should get $\frac{1}{4}$ to $\frac{1}{2}$ pounds of meat, an egg, $\frac{1}{4}$ pound of vegetables, $\frac{1}{4}$ pound of fruit, $\frac{1}{3}$ pound of cereal and a cup of milk every day. If your dog weighs 75 pounds, he should get $1\frac{1}{2}$ pounds of meat, an egg, $\frac{2}{3}$ of a pound of vegetables, $\frac{1}{3}$ pound of fruit, $\frac{3}{4}$ of a pound of cereal and a pint of milk.

These are total rations. Serve the milk and cereals in the morning, the remainder in the evening

to a grown dog. Puppies should be fed small amounts of food at frequent intervals. The meals should decrease gradually, but the quantity should increase. Growing dogs need a larger proportion of milk and eggs, and liver should be the meat course every few days. Nursing bitches need about twice the usual amount of food.

The meats served may include beef, lamb, liver, kidney, fish; vegetables should be spinach, string beans, peas, asparagus, cauliflower, tomatoes, beets and turnips. Contrary to popular belief, onions and garlic are not good for dogs. Experiments uncovered a definite anemia-producing effect in dogs from feeding onions. Cereals may include dog biscuit, bread, whole grain and cooked cereals.

All the food should be cooked. Raw meat may contain dangerous parasites such as flesh worms or trichinae, which would infect the dog. But high temperatures may destroy the food value of the proteins. The wisest course is to cook the meat to boiling point (212 F.) which will kill all possible parasites. Eggs also should be cooked, for Dr. Morgan has proved that dogs do not digest uncooked egg whites.

Vitamins, Dr. Morgan found, are just as important to dogs as to their masters. Dogs must have reg-

ular rations of vitamins A, B and D. A dog has the advantage of his master when it comes to vitamin C, however. Men must include some C-containing food in their diet every day, but dogs are able to produce this vitamin by their own body chemistry.

Tests proved that serious results follow a deficiency of vitamin A; damage to the body that is sometimes lifelong, sometimes fatal. Four dogs from the same litter were used in one test. A male and a female were put on a diet adequate in vitamin A, and a brother and sister drew the unhappy lot of testing a low-A diet. This program lasted only from the time of weaning to one year of age, when all four were fed a normal diet. But irreparable damage had been done to the dogs deprived of sufficient vitamin A. At the age of twenty months the low-A male developed a suppurative skin disease and had to be destroyed. The other male, receiving plenty of vitamin A, played with his sick brother but did not contract the skin disease. He later went through a siege of distemper, but today is the prize sire of his colony. The low-A female is two years old, but has never matured genetically, while her A-fed sister has raised a fine litter of pups.

There is definite knowledge that

lack of vitamin A can cause eye disease with severe corneal ulcers which leads to blindness, and a peculiar paralysis and muscular weakness. As in humans, an ample supply of vitamin A greatly increases the resistance to infections, especially of the respiratory tract. Alfalfa meal, which may be added to dog foods, is an excellent source of the vitamin, but butter, green vegetables, tomatoes, carrots, prunes, liver, liver oils and egg yolk also contain it.

The various elements which make up vitamin B are also necessary. They may be added to the diet through whole grain cereals and grain embryos. Wheat, corn and rice are the best sources. Without sufficient vitamin B₁ (thiamin), a dog will lose his appetite and is subject to digestive ills and paralysis of the hind legs. The amount of B₁ needed is not governed by the size of the animal, but is in ratio to the non-fat calories of the food. Diets low in fat require about five times more vitamin B₁ for health, and three to five times the usual amount is required for nursing bitches. Concentrated wheat germ, which is packaged commercially, has a rich supply of B₁.

Lack of vitamin B₆ (pyridoxin) brings on a severe anemia which in

one dog was fatal in five months. Without riboflavin, found in liver, kidneys, brewer's yeast and milk, another dog had paralysis, extreme nervousness, and an infection of the jaw and lungs. Without nicotinic acid, found in meat, brewer's yeast, eggs and peanut meal, another dog died of bloody diarrhea in four months.

The filtrate factor of vitamin B₁₂, recently discovered and known as the "anti-gray-hair" factor, plays an important part in dog health. Lack of this filtrate, the best source of which is liver, results in digestive disturbances and loss of appetite, but the most striking result is the fading of hair color. A few months of filtrate deficiency and the hair becomes grizzled. When the filtrate factor is added to the diet, the results are almost instantly noticeable, and within a few months richly colored hair will again grow in.

Vitamin D, the sunshine vitamin, is especially needed by growing dogs. Without a sufficient amount dogs develop rickets. There is no natural food source of vitamin D. Plain cod liver oil is the safest source of extra vitamin D. Viosterol, sometimes used as a therapeutic in vitamin D deficiency in humans, often causes poison symptoms in dogs. A few

drops of cod liver oil should be added to the diet at weaning, and the amount increased gradually to one or more tablespoons daily, depending on the size of the dog and the season. Winter's lack of sunshine should be compensated for by increased amounts of cod liver oil. And the apartment-bred dog should get more than the outdoor dog.

Dogs, like all other red-blooded animals, need a regular supply of blood-building minerals. Iron, the premier blood-builder, is of two types, organic and inorganic, both of which should be included in a well-rounded diet. Liver, kidney, red meat and egg yolk supply organic iron; and apricots, peaches, prunes, spinach and other green, leafy vegetables are good sources of inorganic iron.

There's another reason for including green vegetables and fruits in a dog's diet. It is considered probable that copper, which these foods contain, aids in the utilization of iron by the body. Research has shown that the iron of meat muscle is only 25 per cent to 50 per cent assimilable; that of alfalfa and spinach is also of low availability; but the iron of fruits is almost entirely absorbed and used. A few prunes, peaches, apricots (dried) or raisins added to a dog's daily

menu will be an inexpensive and certain way of giving his regular iron ration. And he'll like them, for dogs have an active "sweet tooth."

An abundance of calcium, the bone building element, is essential to growing dogs, and adult animals should have a regular amount, too. Milk is the best source, with cauliflower and other vegetables as second best.

Phosphorus is also required for bone health, and meat is the richest source. It has been found that most rickets, in both children and dogs, is caused by a lack of phosphorus — either an insufficient amount in the diet, or a failure to absorb what is eaten.

II

More and more pet owners are depending on canned or dry prepared dog foods; the industry does a 100-million-dollar business annually in this country. But certain precautions should be taken in feeding prepared dog foods. To be sure of quality, look for the Seal of Approval of the Committee on Foods of the American Animal Hospital Association. They evaluate, chemically and biologically, the foods submitted to them. Only a few states have laws governing dog

foods, and many cheap, worthless and sometimes harmful foods are put up for dogs. Read the label before you buy. Most canned foods consist of meat by-products, or meat, fish, fish meal, cereal products, vegetables, ground bone, and sometimes yeast and cod liver oil.

Don't be misled by vitamin claims. Vitamin A, B, or D may be added to prepared foods, but not in sufficient quantities to supply a dog's needs. Then the eccentric qualities of vitamins must be considered. Vitamin A is apt to vanish when exposed to air or sunlight; even if plenty of A has been put into dry foods, it may have disappeared from exposure before your dog gets it. Canned foods, protected from light and air, usually retain their vitamin A. But vitamin B₁ may be lacking in canned foods. This vitamin withstands heat poorly and may be destroyed at high canning temperatures — as much as 80 per cent is sometimes lost in this way. The nutritive value of proteins is also greatly lowered by excessive heat.

Another consideration in prepared dog foods is the type of proteins and carbohydrates they contain. Soy-bean products are used in many dog foods as a carbohydrate base, but nutritionists believe soy-

bean carbohydrates are largely not assimilable. Fish meal, often used in dog foods, may not be a good form of protein for dogs. Laboratory tests show that it fails to support normal lactation in nursing bitches.

A good quality of prepared dog food may well serve as the main part of a dog's diet, but these foods should always be supplemented by fresh meat, fruit and vegetables. Dr. Morgan reared a litter of five fox terriers on a mixture of four well-known dry commercial dog foods and added 20 to 30 per cent of prune paste to the diet of three of the dogs. The prune-fed dogs' rate of growth and general condition were astonishingly superior to the others. Prunes are a good source of vitamin A.

The activity, size and environment of a dog must be considered in planning individual dog diets. If the dog is very active, as for instance the professional sheep herder or the athletic squirrel chaser, his ration may be increased by 25 per cent. If he is a city plutocrat, reduce his diet ration from the norm to keep his health up and his waistline down. But he must always have protein, carbohydrates, vegetables and fresh water. On such a regimen a dog will be healthy, happy and handsome.

THE STATE OF THE UNION

The Un-Americanizers

BY BENJAMIN STOLBERG

THE MOST effective way of dividing this country is still xenophobia — hatred of the alien. Such minorities as the Negroes, the Jews, or even the Catholics are not ubiquitous enough to satisfy an all-out, All-American vigilantism. But the alien can be invented by retroactive gerrymander: all one needs to do is to create a few more millions of “immigrants” or “newer Americans” by stirring up the ancestral complexes and recalling the “foreign backgrounds” of a nation which has grown by immigrant accretions.

This technique of artificially alienizing our population in the name of Americanism is simplicity itself. First one bisects our citizenship into the foreign-born and the native-born. Then one separates the native-born into first, second, third generation Americans. One can play with genealogical fractions. Then the game can be sophisticated by all sorts of cross-obsessions. A second generation American with

a Polish grandpa, and name, is clearly less American than a first generation American with an English mother, for more Englishmen than Poles came here first. According to Mr. Albert Jay Nock, Jews are not Americans at all, even if descended from Portuguese settlers in Florida in the mid-sixteenth century; they are unassimilable “Orientals.” In this spirit of regressive vigilantism we can cut up the American people chronologically until we hit the Indians. And the Indians, please remember, are a bunch of Chinamen who sneaked across the Bering Straits unmindful of our later Asiatic exclusion laws.

But in this essay I shall not deal primarily with this vulgar vigilantism, which is as old as our history, though especially sinister at this hour of totalitarian danger. Vulgar vigilantism would be no serious menace if a militant democracy did its plain duty in self-defense. For years the Federal Communications Commission, which bars the word