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Nutrition Fundamentals

INTRODUCTION TO NUTRIENTS

NUTRITION = BRINGING NUTRIENTS TO THE PET

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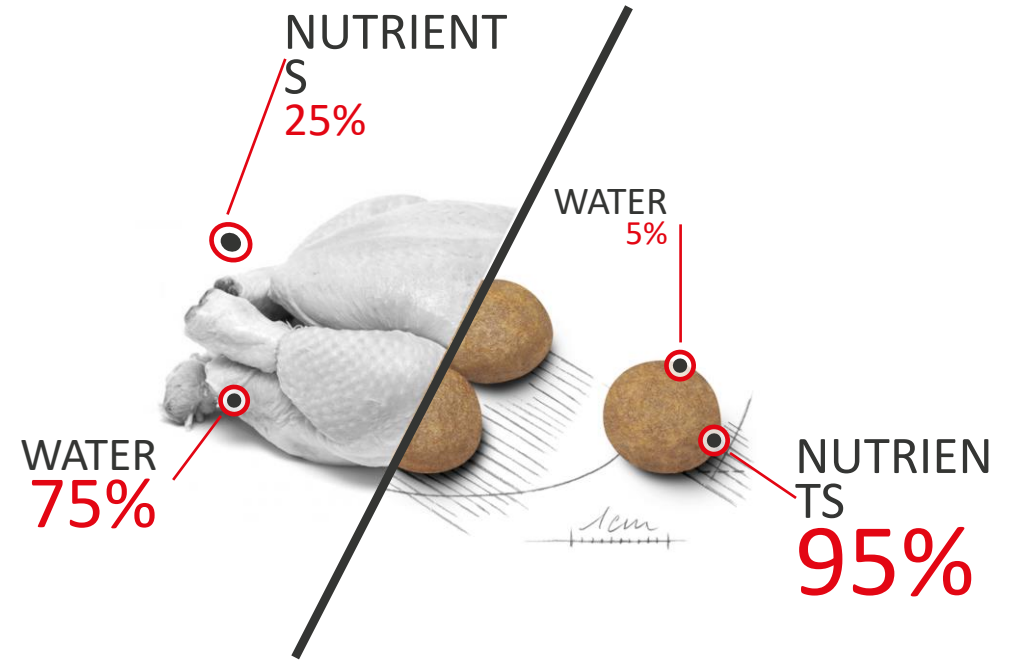
NUTRITION CONSISTS IN BRINGING NUTRIENTS TO PETS, NOT INGREDIENTS



THE DIFFERENCE BETWEEN INGREDIENTS AND NUTRIENTS

Ingredients and nutrients are two terms that are sometimes used interchangeably – but they are quite different.

Ingredient lists can often be misleading and make it difficult to understand the nutritional value pets are actually getting from their food. Meat contains more water than protein.



WHAT IS A NUTRIENT?

Nutrients are the components of food which have a function in...



NUTRIENT CATEGORIES

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INGREDIENTS VS NUTRIENTS

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Protein

Isoleucine, leucine, lysine, méthionine, thréonine, tryptophane, valine, histidine, phénylalanine



Carbohydrate



Fibres

*Insoluble fibre
Soluble fibre*



Lipid

*Unsaturated/saturated fatty acids
(omega 3,6 and 9)*



Vitamin

*Vitamin C, D, B1, B2, E
B3, B5, B6, B9, B12...*



Minerals

*Calcium, phosphorus, potassium,
selenium, sodium, zinc, ferrum;
iodine, copper, magnesium...*

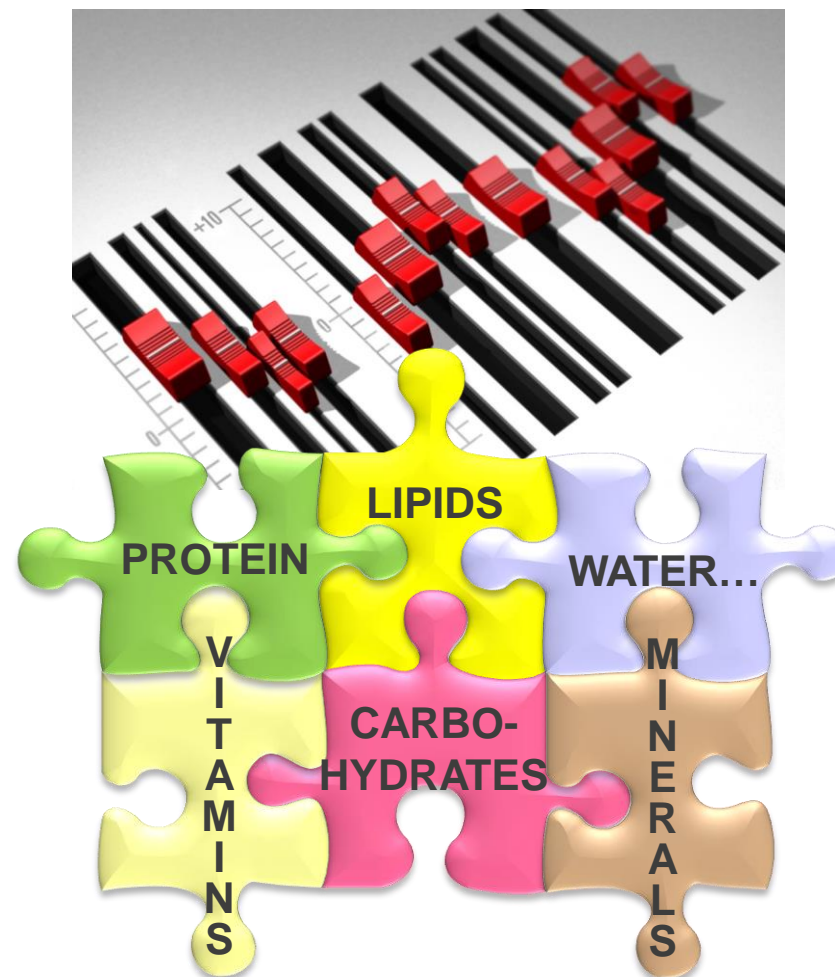
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INGREDIENTS VS NUTRIENTS

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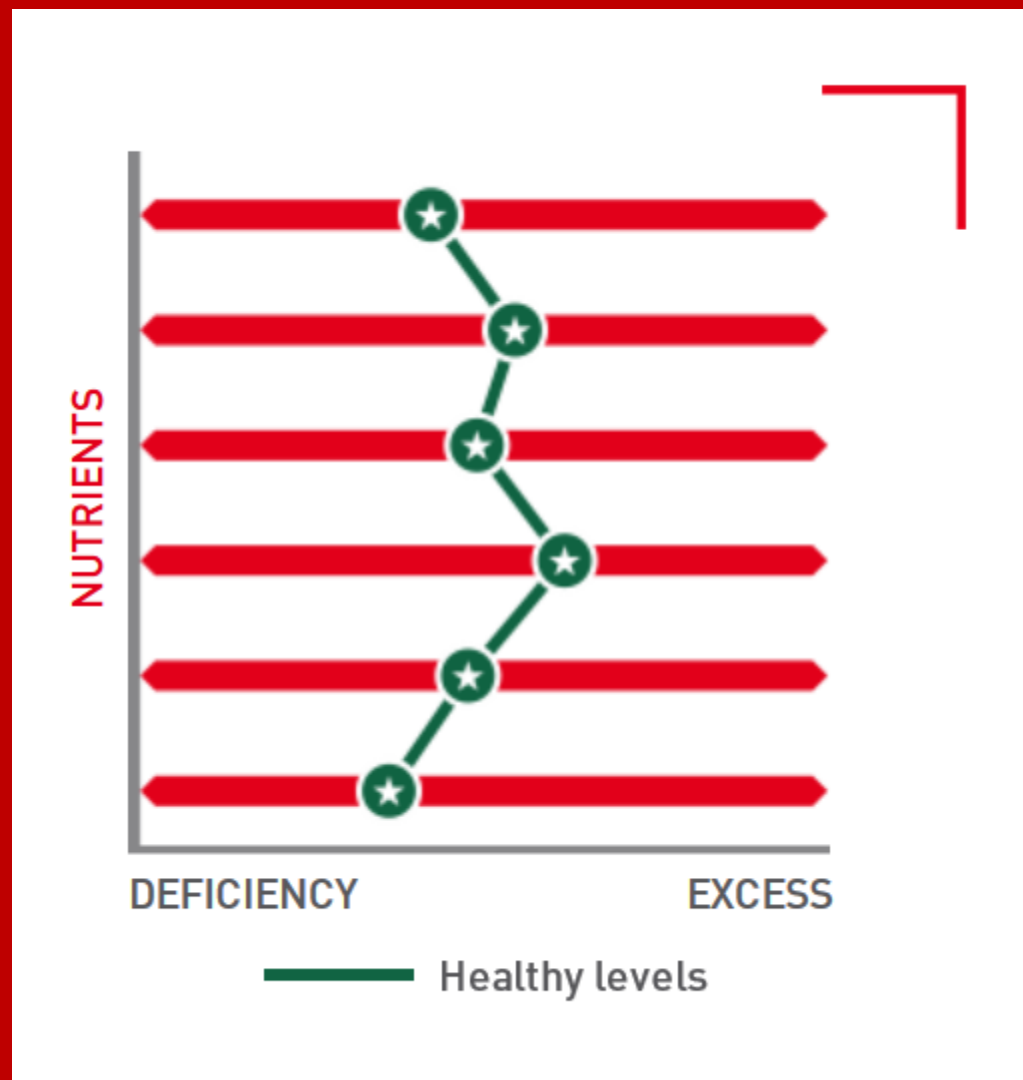
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A BALANCE OF NUTRIENTS

- Nutrients in the diet interact and work in combination with each other, so it's important to **ensure the entire diet is balanced** and not focus on only one nutrient in the formula
- **Excess nutrient levels can be just as inappropriate as deficiencies**



WHICH FOOD IS THE MOST NUTRITIOUS?

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Chicken & Mashed
potato



Strawberry protein
shake



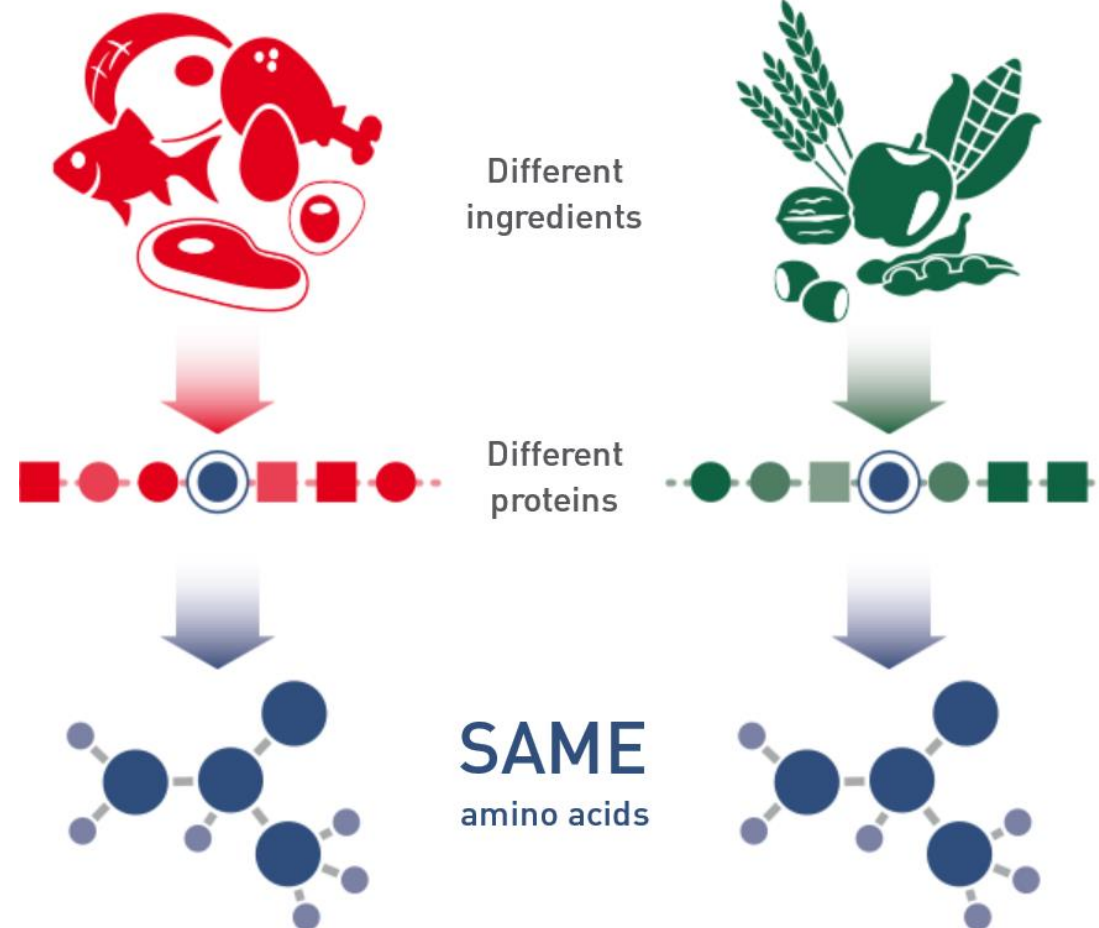
Tofu with rice &
beans

WHICH FOOD IS THE MOST NUTRITIOUS?

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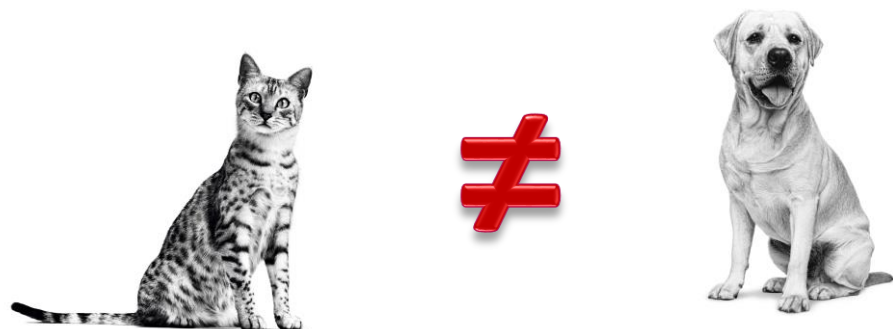


- Nutrients and ingredients are not the same, but **the same nutrients may be sourced from different ingredients**
- The **quality, digestibility, and nutrient profile** of an ingredient will determine how beneficial it is for nutrition

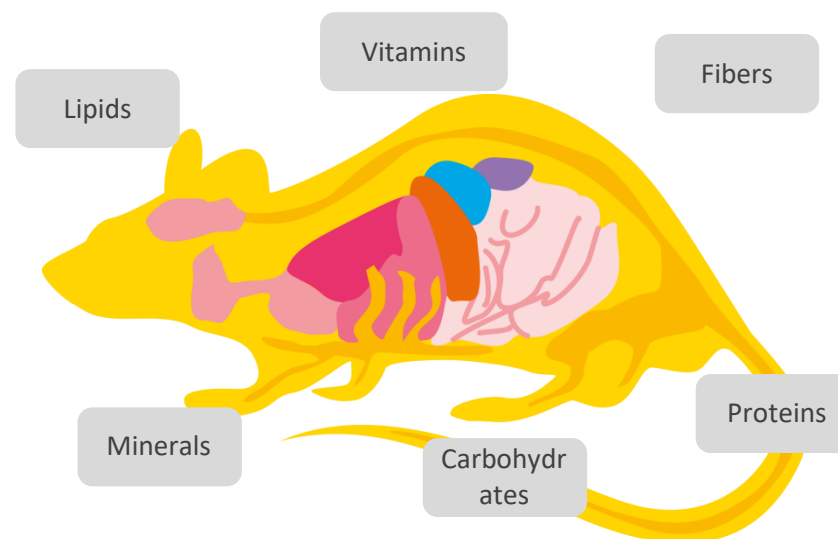


DO « CARNIVORES » NEED MEAT?

“Obligate carnivore” “Facultative carnivore”

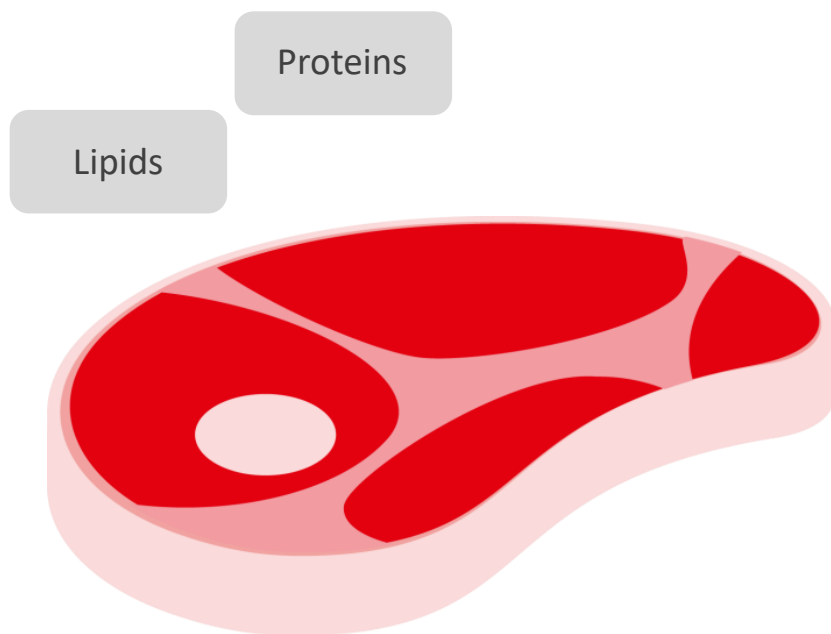


Carnivore = Prey eater

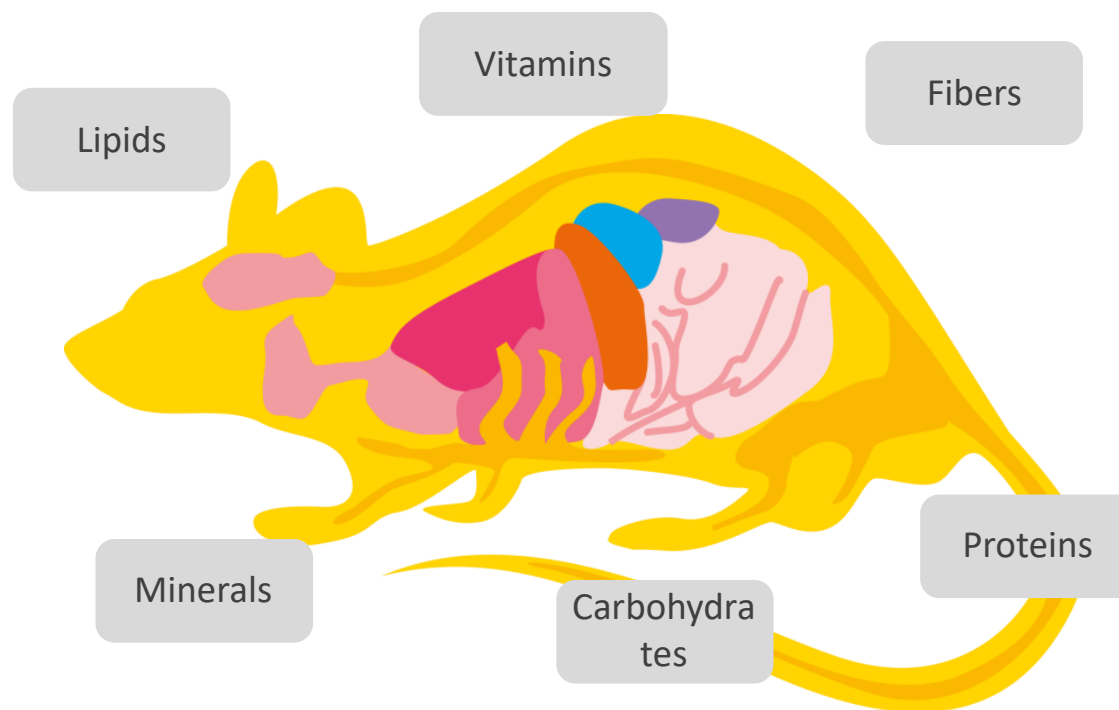


PREY IS NOT ONLY MEAT

**Meat only= Deficiency
in minerals, vitamins, fibers ...**



Prey = all nutrients

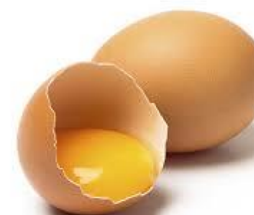




PROTEIN

SOURCES OF PROTEIN

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PROTEIN FUNCTION

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01

Structure of the body

Muscle, organs



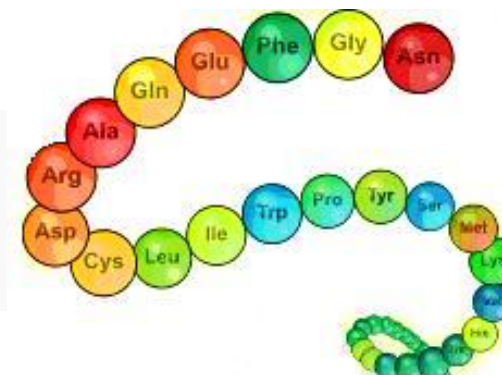
02

Energy



03

Providing essential amino acids



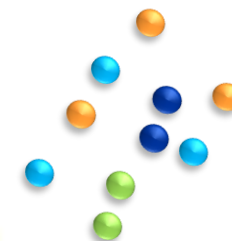
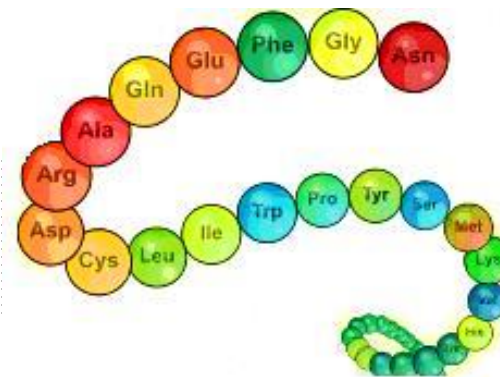
WHAT MAKES THE QUALITY OF PROTEIN?

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01

Essential amino acid content



Essentials



10

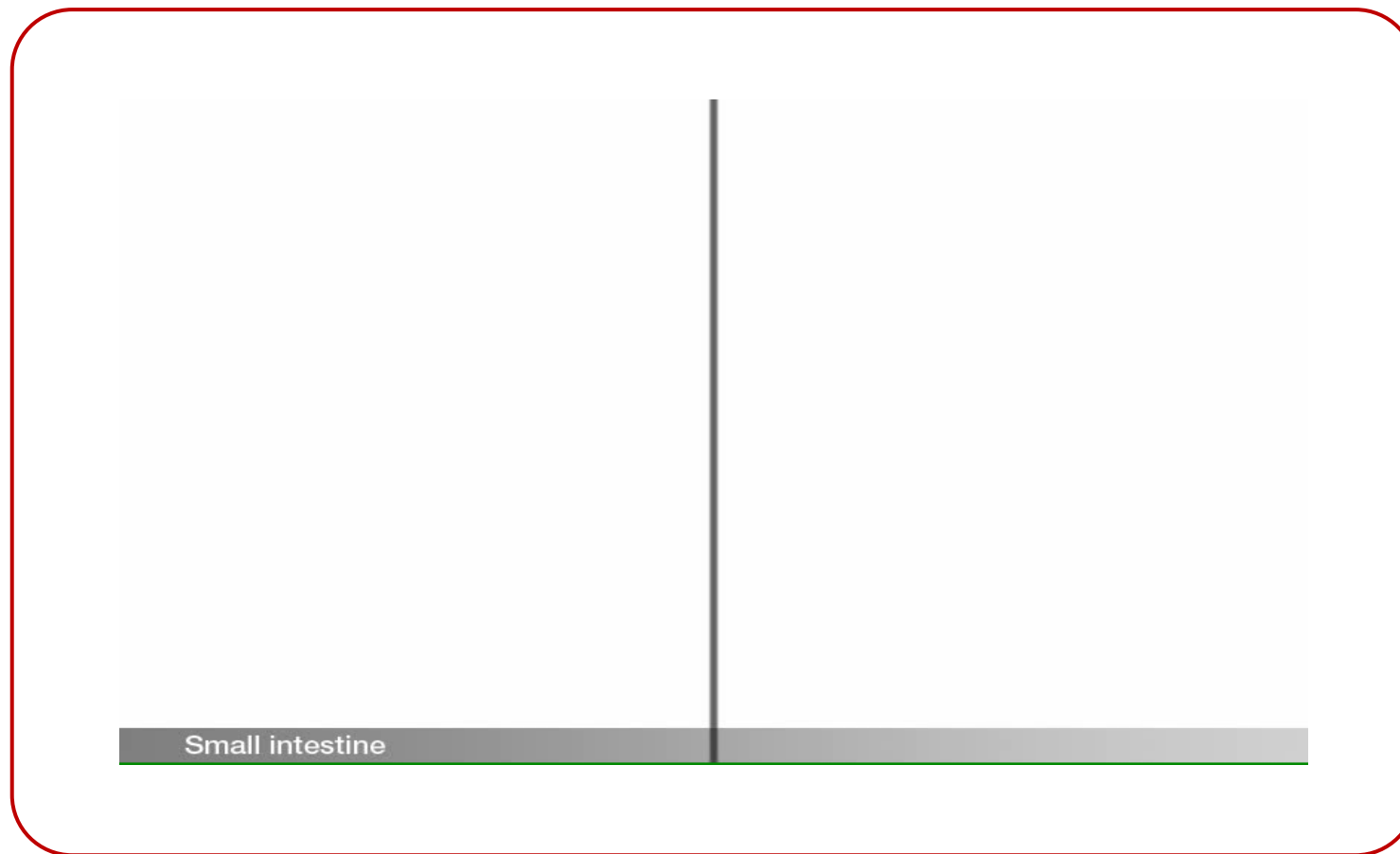


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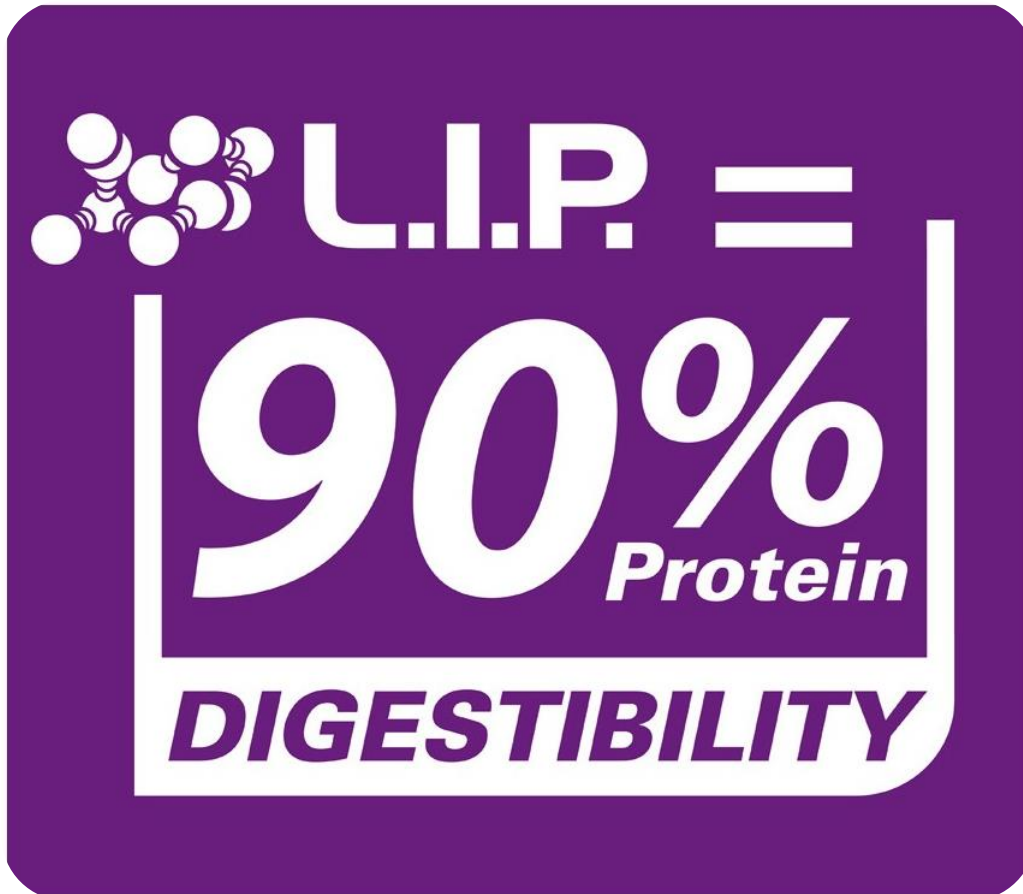
02

Digestibility

> Low vs. Highly Digestible Proteins



> Low Indigestible Proteins-L.I.P.



- » Low Indigestible Protein
- » Highly digestible protein
- » Digestibility = or > 90%
- » Less colonic residues
- » Less fermentations
- » Improved fecal score



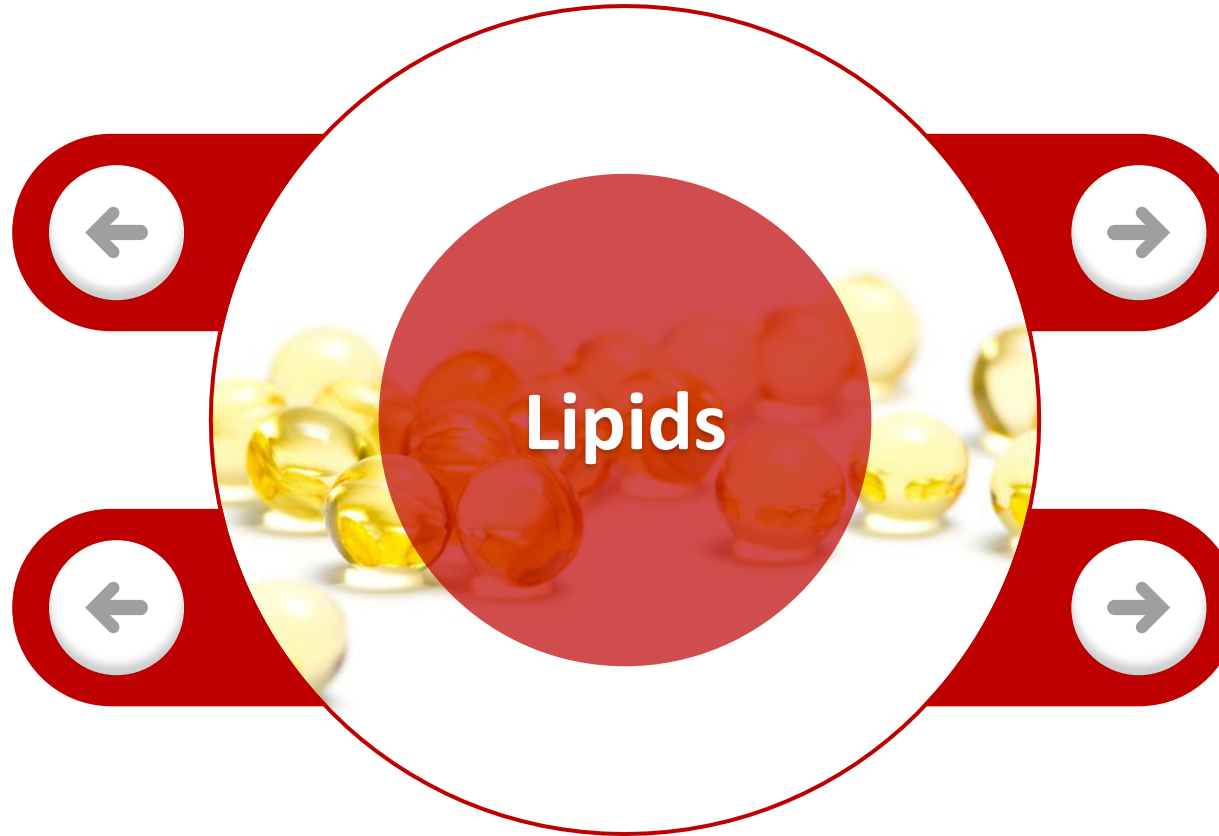
LIPIDS

> Functions of Lipids



Concentrated
energy source

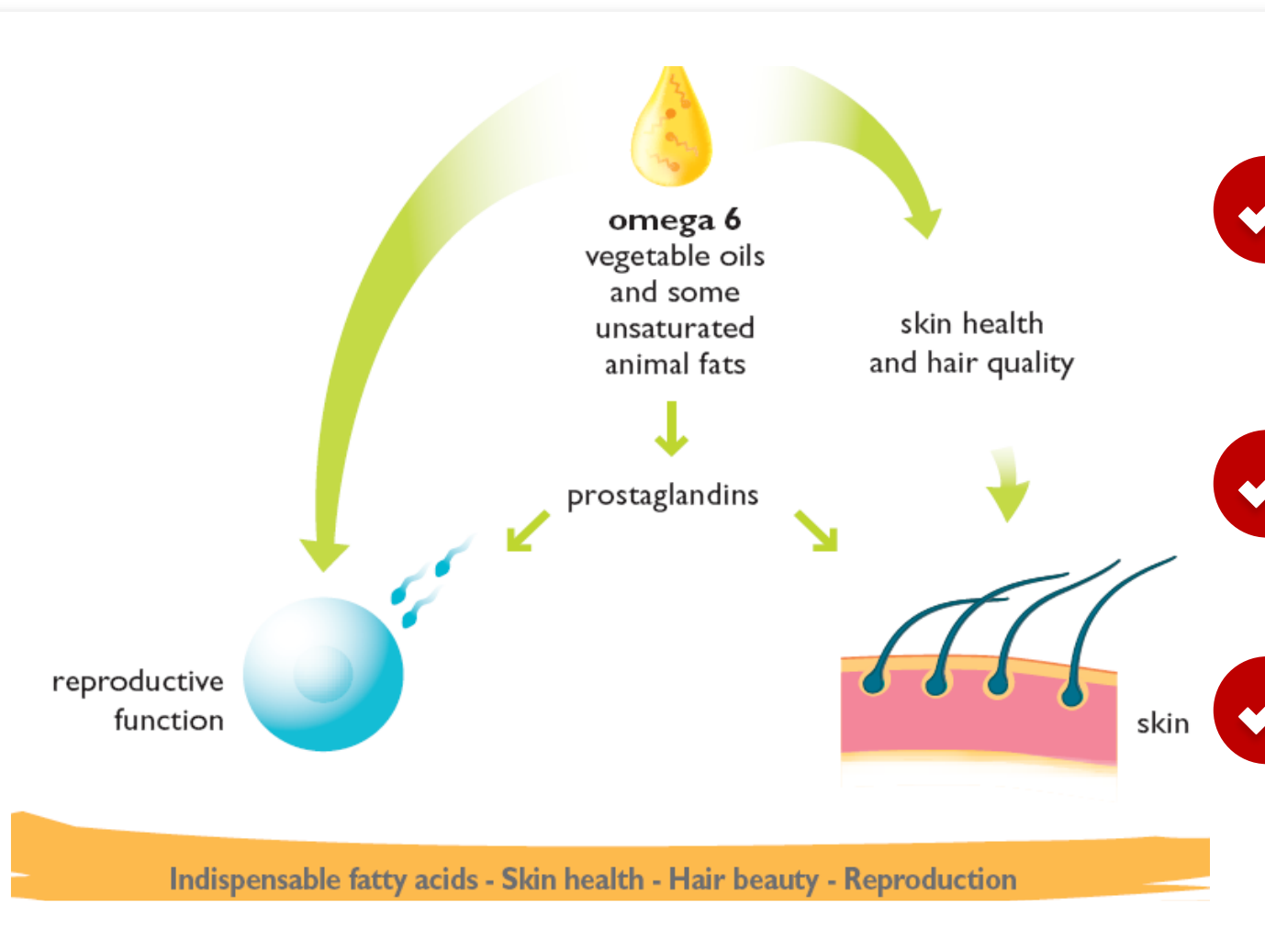
Carriers of fat
soluble vitamins
(A, D, E, K)



Source of
essential fatty
acids

Insulation and
protection of
organs

> Omega-6 Fatty Acids



A source of essential fatty acids for cats and dogs.

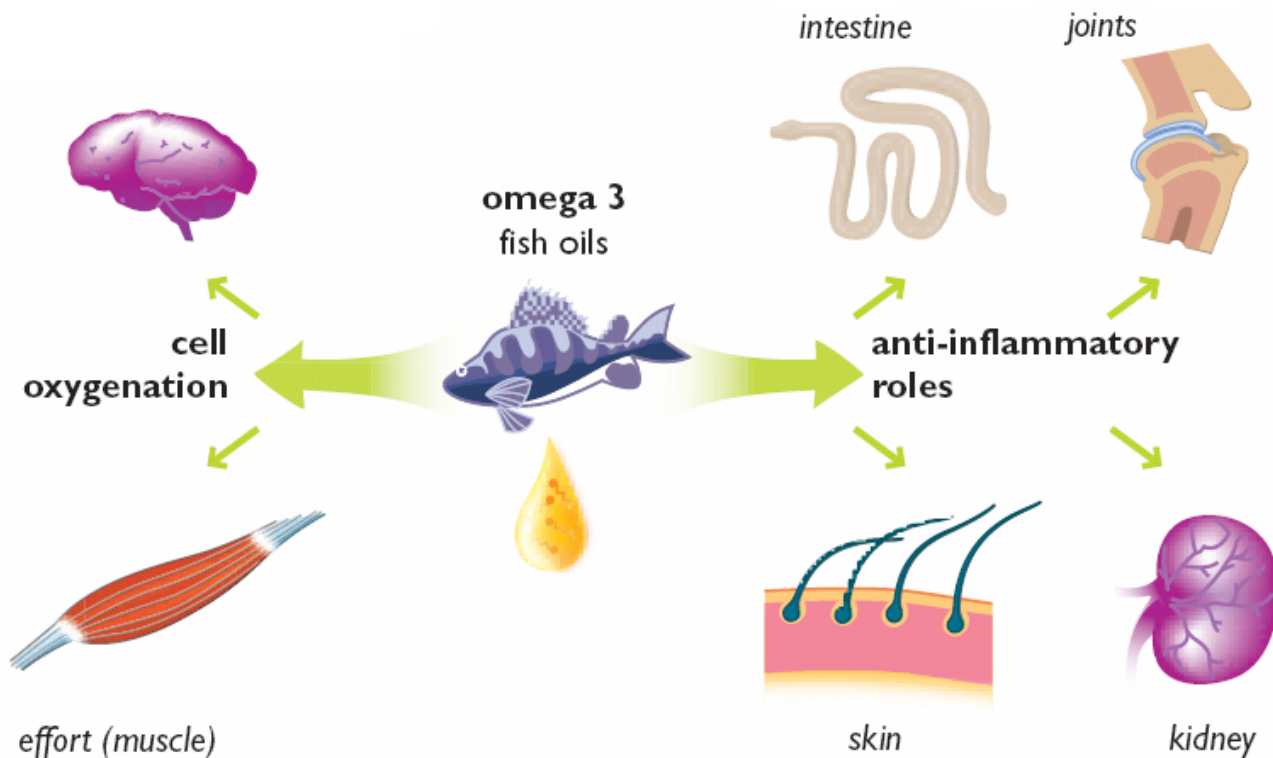


Important for skin and coat health.



Vegetable oils are a rich source of omega-6 fatty acids.

➤ Omega-3 Fatty Acids – EPA and DHA



- EPA and DHA have anti-inflammatory properties.
- They are beneficial to kidney, cardiac and GI functions.
- DHA is Important for vision and neurologic development.
- Marine fish are excellent source.
 - Omega-3 fatty acids from vegetable oils are not EPA and DHA



CARBOHYDRATES

Carbohydrates

Starch



Fiber



FUNCTIONS OF CARBOHYDRATES



STARCH

Energy

- Easily digestible

Texture

- Binds kibble together

Flavor

- Palatability



FIBER

Intestinal motility

- Helps move food through the GI tract

Fermented by beneficial bacteria

- Prebiotic effect

Dilutes calories

- Aids in weight loss

Satiety

- Feeling full



VITAMINS

VITAMINS

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Fat soluble

- A,D,E,K



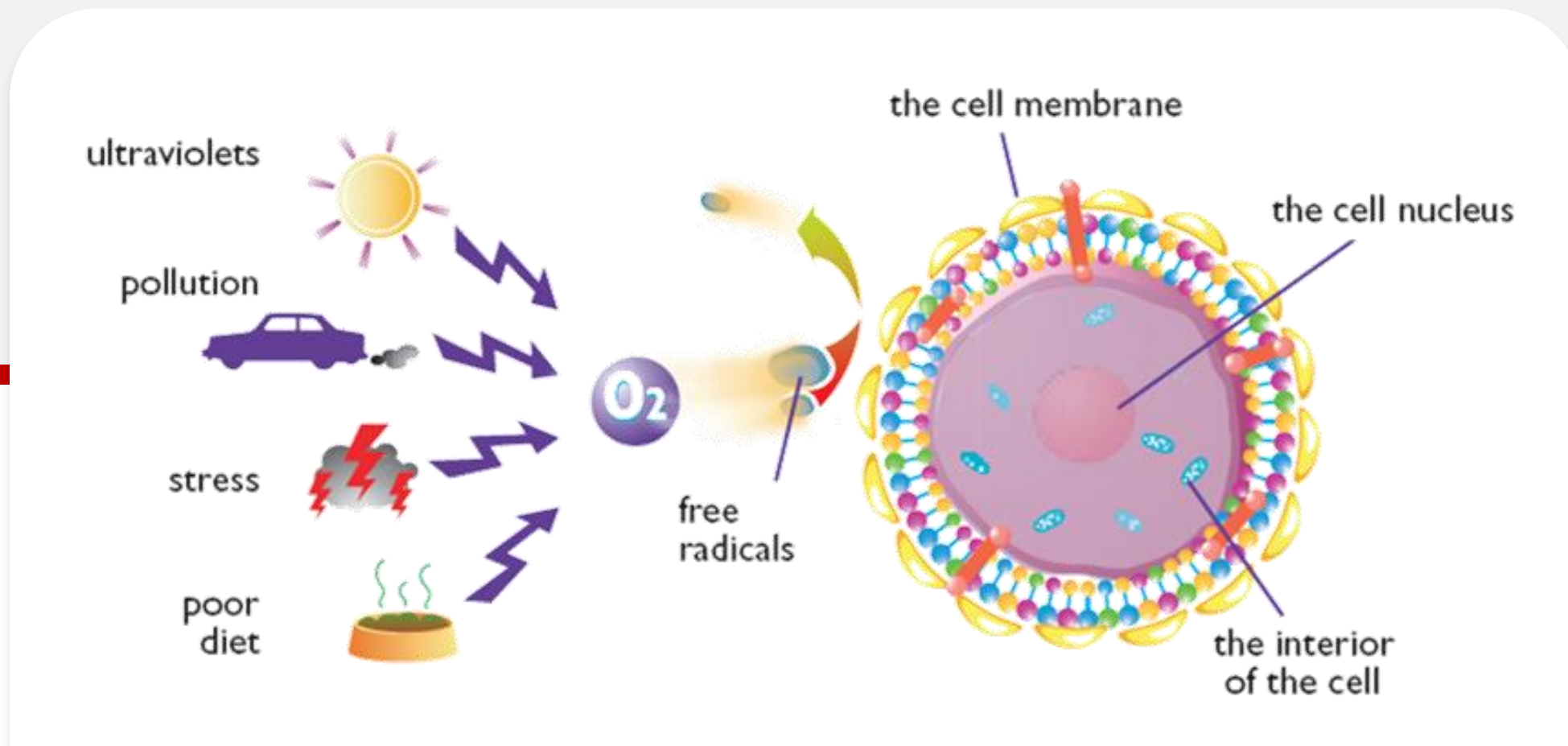
Water soluble

- B & C



Can act as antioxidants

FREE RADICALS



ANTIOXIDANTS: FREE RADICAL SCAVENGERS

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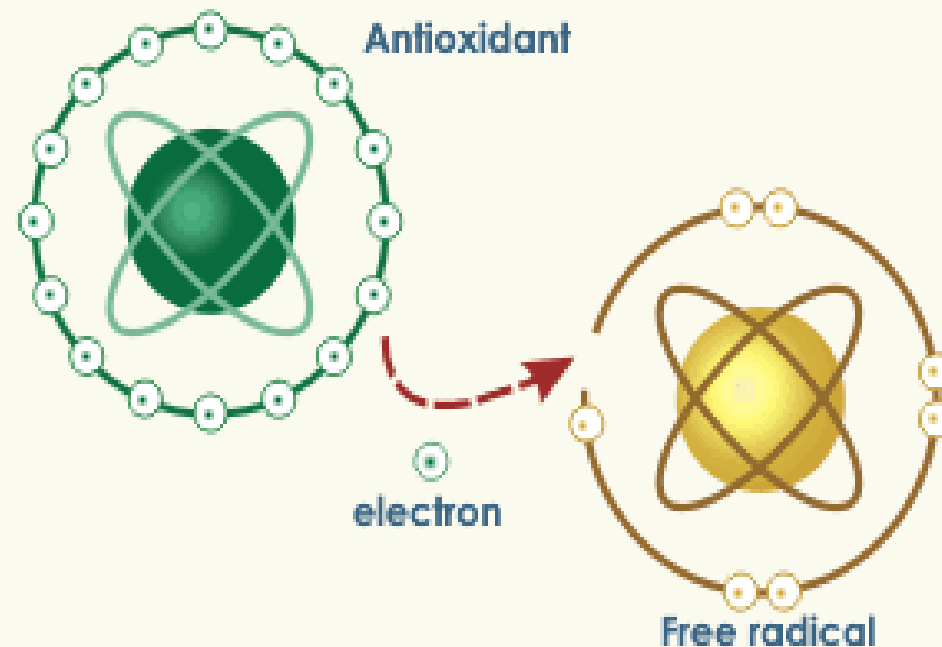
Antioxidants are sometimes called free radical scavengers



They protect against free radical damage



Vitamins act as antioxidants



Antioxidant neutralizing a free radical

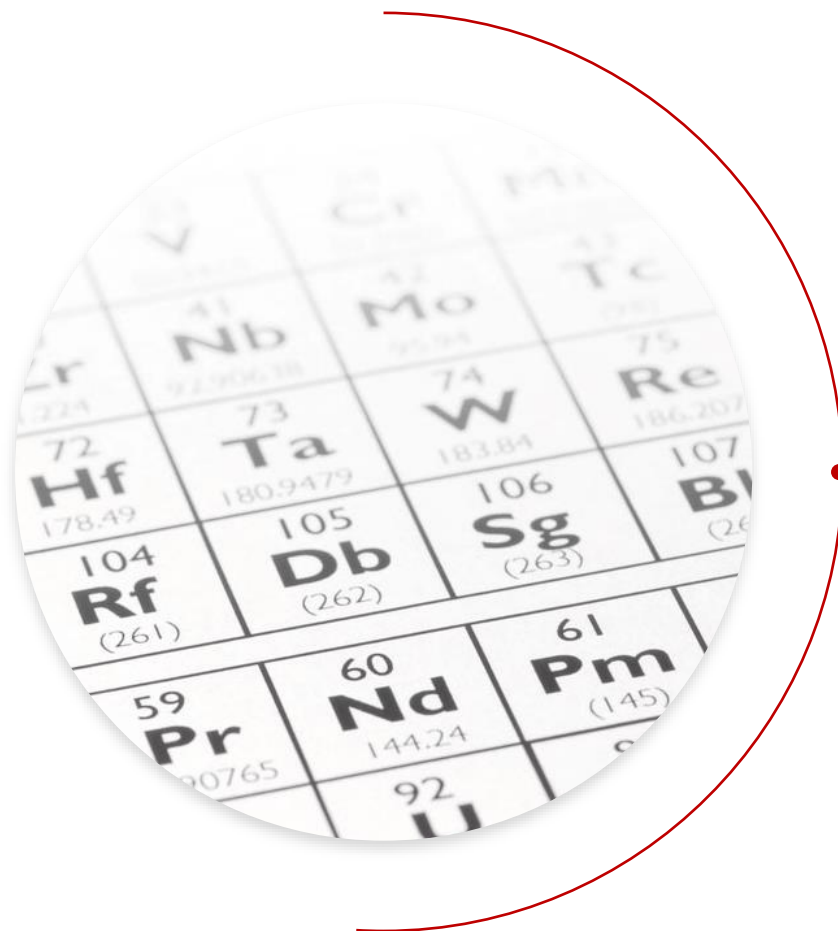




MINERALS

MINERALS

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Inorganic elements



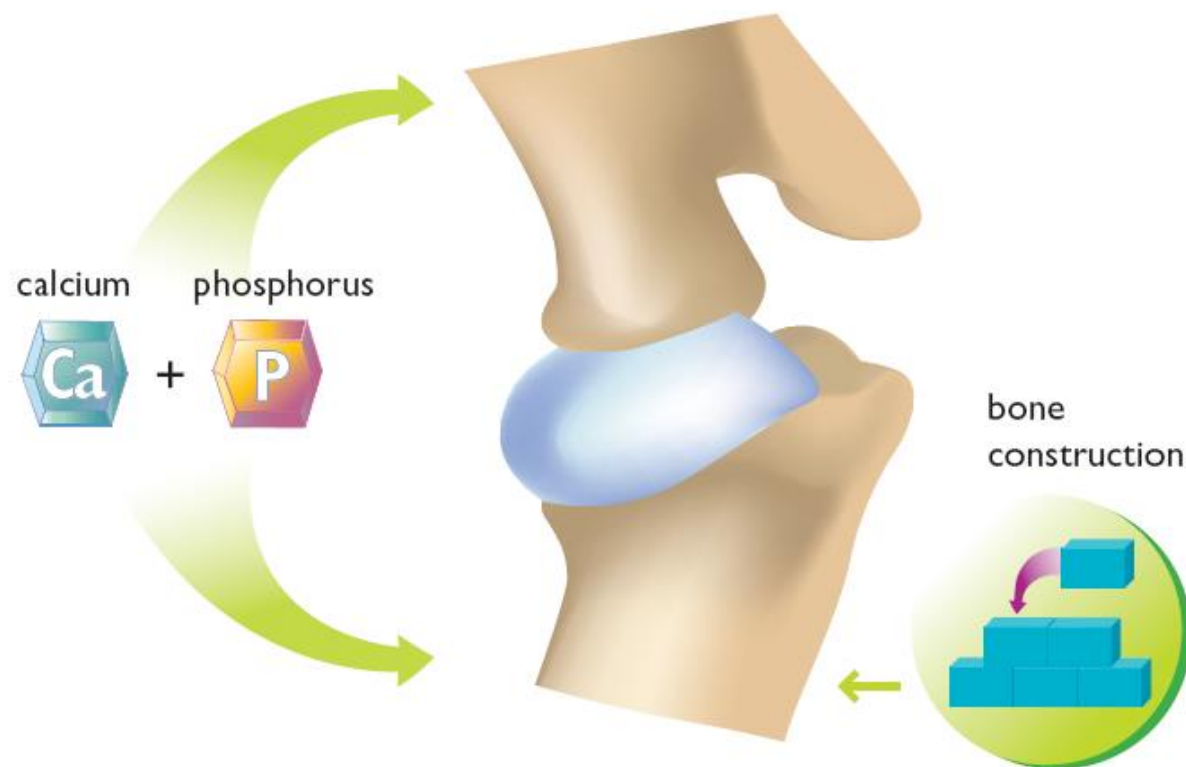
Important for proper muscle
and nerve function

CALCIUM

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Calcium (Ca)



99% Ca is stored in the bone.



Puppies absorb at least 30-40% calcium passively, so puppy foods must be properly balanced



Excess Ca in the diet can harm puppies' skeletal development.

EFFECT OF EXCESS CALCIUM

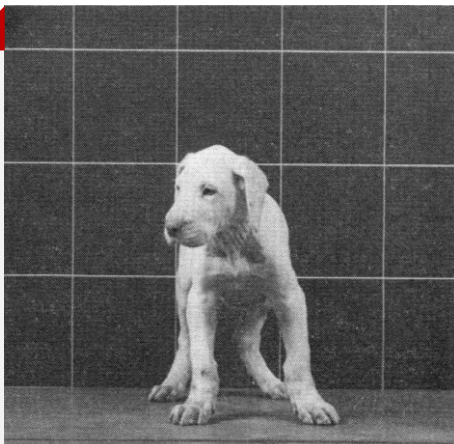
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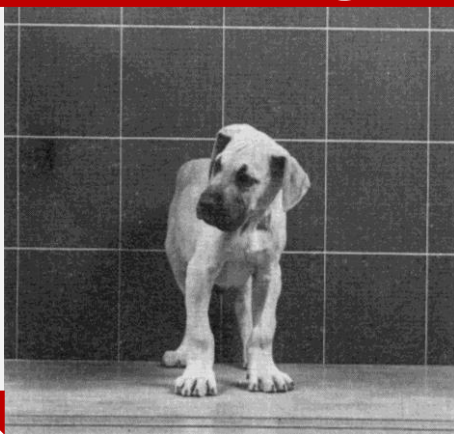
Hazewinkel et. al. (1991): J. Nutr. 112: S99

EFFECTS OF HIGH PROTEIN VS HIGH CALCIUM

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Weaning



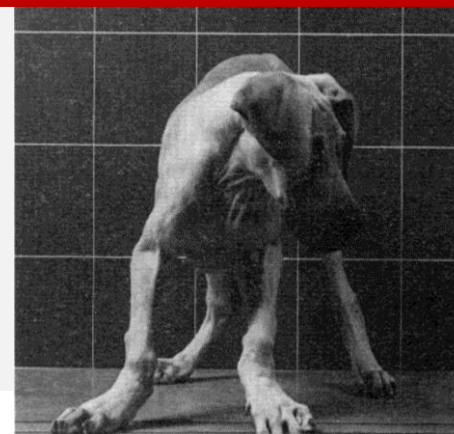
**High Protein/
Normal
Calcium**

**High Calcium/
Normal
Protein**

Hazewinkel (1985, 1991)

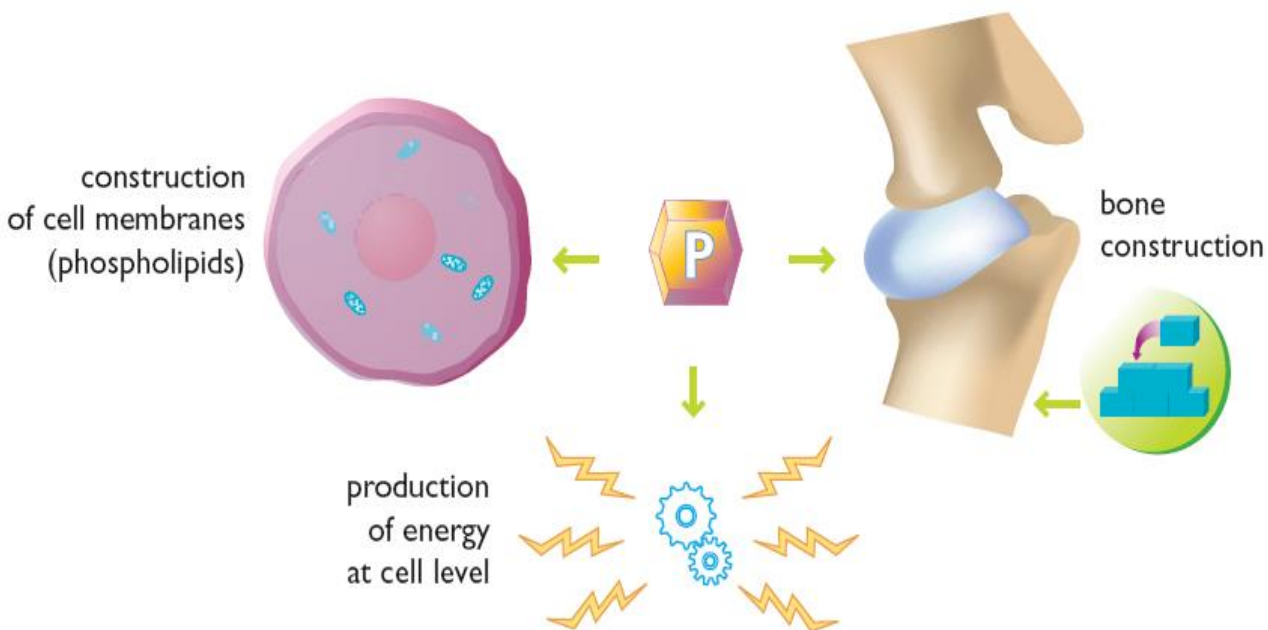


3 months



PHOSPHORUS (P)

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Bone structure - Constitution of cell membranes - Cell energy



86% of body's phosphorus is in the bones.



It is important part energy producing compound



Meat is rich source of Phosphorus

PHOSPHORUS & KIDNEY DISEASE

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High levels of phosphorus in the blood causes progression of kidney disease



Dietary phosphorus restriction

- Slows progression
- Prolongs survival



NUTRITIONAL REQUIREMENTS VARY BETWEEN PETS

WHICH PARAMETER(S) IMPACT NUTRITIONAL NEEDS?

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THEIR NEEDS VARY ACCORDING TO:

Bodyweight/Size

Breed

Sexual status

Age

Sensitivities
Medical condition

Activity ...



DO THEY HAVE SIMILAR NEEDS?

> WHO NEED MORE ENERGY?

Life Stage



Size



Activity



THE IMPACT OF STERILISATION

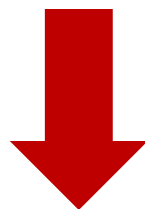
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Increased food intake

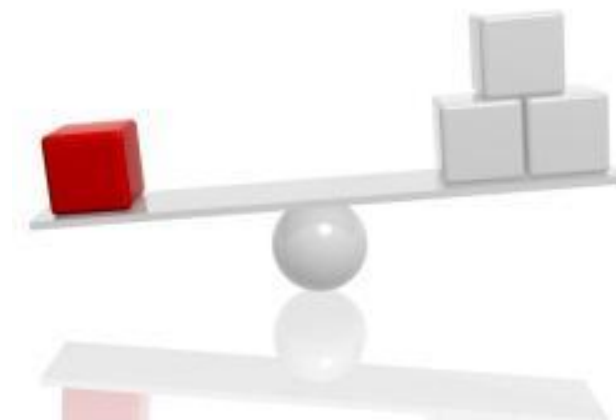
Decreased activity

Decrease in metabolic rate



Fat accumulation

Obesity risk x3

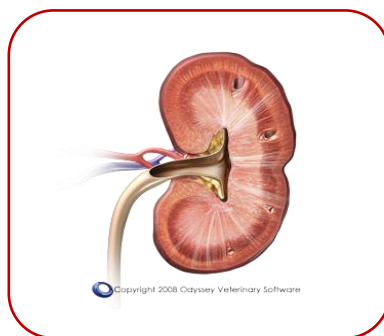


THE IMPACT OF AGE

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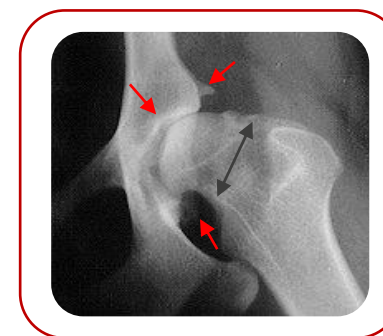


➤ Health Risks for Senior Pets



KIDNEY DISEASE

Third leading cause of death in older dogs*



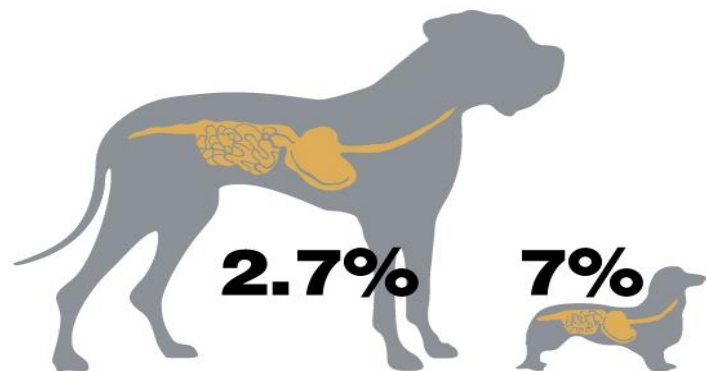
OSTEO ARTHRITIS

Affects over 90% of dogs over 5 years of age **

*Morris Animal Foundation Animal Health Survey 1997

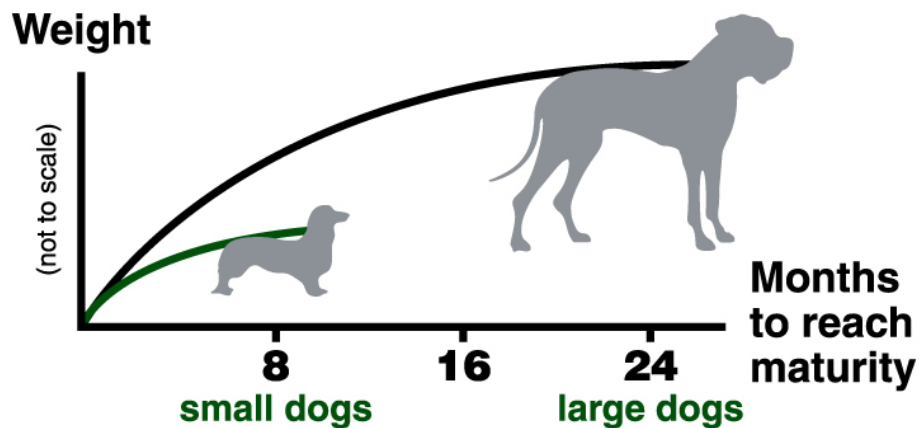
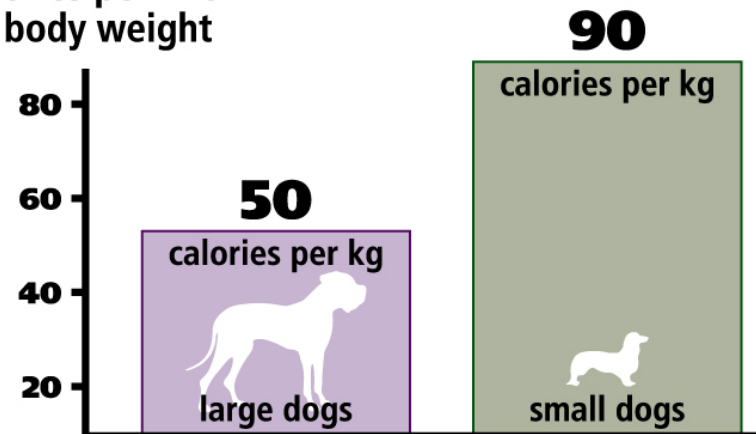
**Bennett D., 1991

THE IMPACT OF SIZE

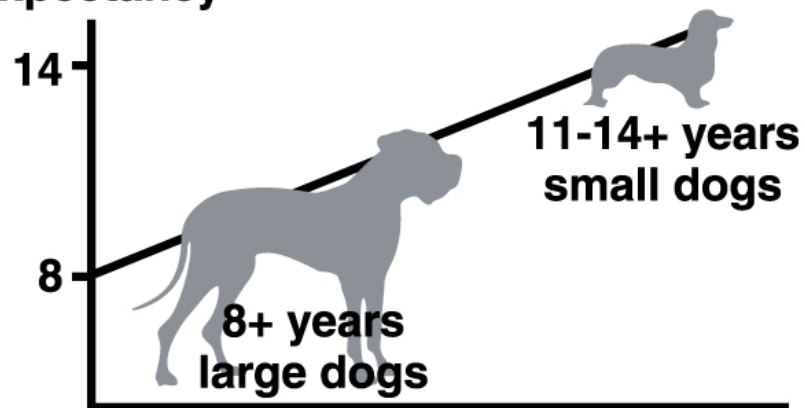


Digestive tract expressed as a % of total body weight

Calories per kilo of body weight



Average life expectancy



THE IMPACT OF BREED

➤ Persian Cats

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THE IMPACT OF BREED

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Match the kibble!

> **Labrador**



Persian



Boxer



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TAILOR MADE KIBBLE

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English Bulldog



French Bulldog



Ease prehension

Cavalier King Charles



Promote dental health



Labrador



Beagle

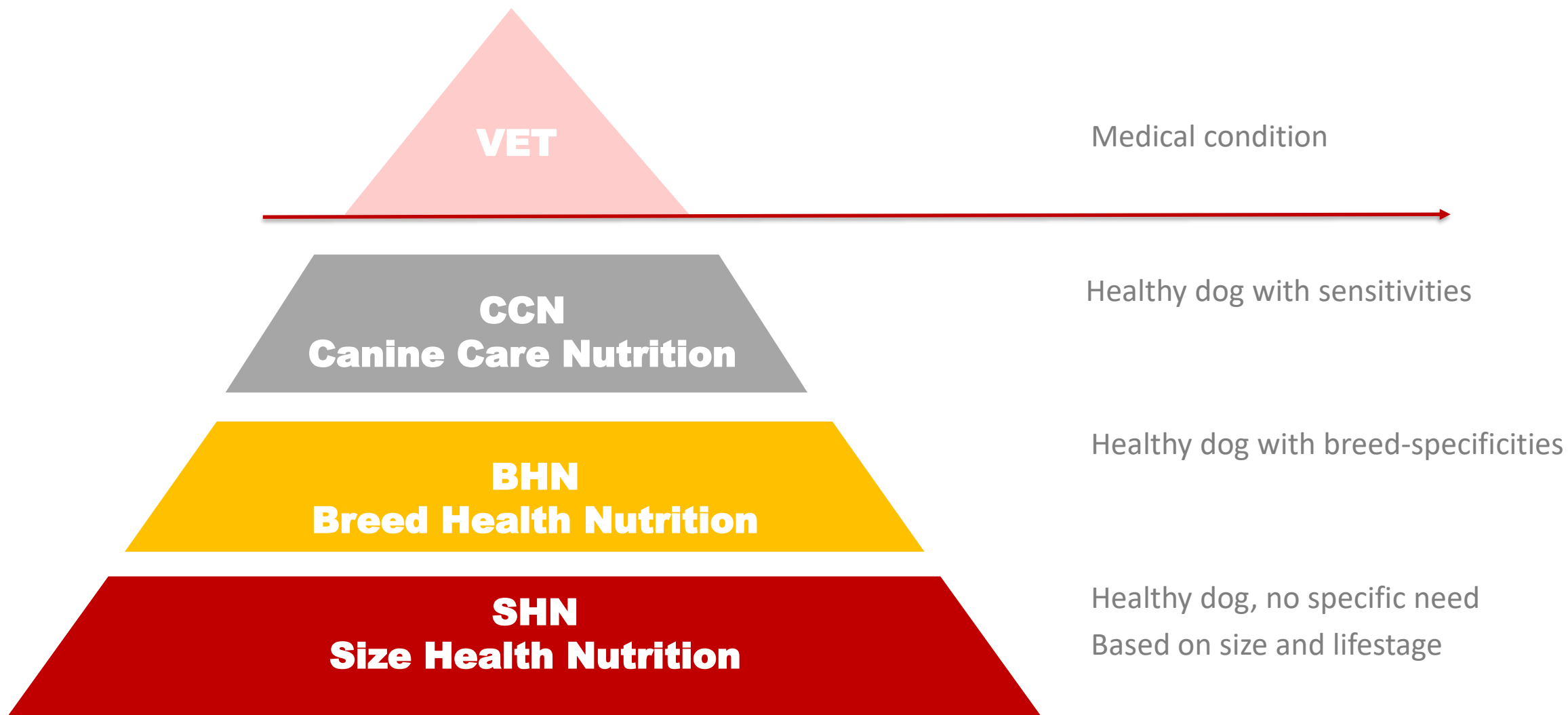
Increase meal duration
to better satisfy
appetite



ROYAL CANIN SPT DOG PORTFOLIO

RANGE STRUCTURE ADAPTED TO THE HIERARCHY OF DOGS' NEEDS

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SIZE HEALTH NUTRITION PUPPY RANGE

SECURED GROWTH FOR ALL DOGS

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SHN



0 to 2 months



0 to 2 months



0 to 2 months



0 to 2 months



2 to 10 months



2 to 10 months



2 to 15 months



2 to 8 months



Up to 10 months



2 to 12 months



2 to 15 months



8 to 18/24 months



8 to 18/24 months

SHN: SIZE HEALTH NUTRITION



Based on their dog's ideal adult bodyweight, the owner can explore our Size Health Nutrition Range and identify the ideal diet based on the individual's size and age.

- X-Small: 1-4 kg
- Mini: 1-10 kg
- Medium: 11-25 kg
- Maxi: 26-44 kg
- Giant: 45+ kg

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Wet

Dry



Adult



Mature

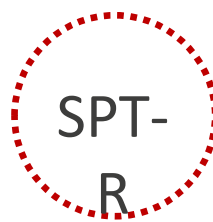


Ageing

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BREED HEALTH NUTRITION PUPPY RANGE

BHN



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Up to
15months



Up to 10
months



Up to 12
months



Up to
15months



Up to
15months



Up to 10
months



Up to 10
months



Up to 18
months



Up to 10
months



Up to 12
months



Up to 8
months



Up to 10
months



Up to 12
months



Up to
15months



Up to 15
months



Up to 10
months



Up to 10
months



Up to 10
months

BHN: BREED HEALTH NUTRITION

For dogs with breed-related
needs
Developed with breeders



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Wet **ROYAL CANIN**



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CANINE CARE NUTRITION

For adult dogs with sensitivities
Proven benefits



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dry



wet



IS, INC.

WITH A GRADUATION IN OUR SPT-R PORTFOLIO

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HEALTHY

SENSITIVITIES

DISEASE

1st sign of sensitivities
Low signs/Undistinct

Subclinical Disease
Early symptoms

Sickness
Severe Condition



ROYAL CANIN SPT CAT PORTFOLIO

BIRTH & GROWTH KITTEN

FHN

FBN

SPT-
R

1st age

2nd age



1 to 4
months

Up to 12
months

6 to 12
months



Up to 12
months



Up to 15
months



Up to 12
months



Up to 12
months

FHN : FELINE HEALTH NUTRITION

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Mars Petcare



EMBLEMATIC
NUTRITIONAL
ANSWER



Available in 400g,
2kg, 4kg, 10kg



TOP product range



Lifestyle
Home life
Active life

INDOOR reducing odor in the litter
OUTDOOR for active cats



Regular
Sterilised

Weight management
and urinary health!



Regular
Adult Maintenance



Feline
Preference

The fussiest cats!



Senior
Age

Healthier longer !



dry

wet



RS, INC.

FCN: FELINE CARE NUTRITION



Adult cats with sensitivities
Proven results

EMBLEMATIC NUTRITIONAL ANSWER



NATURALLY HELPS
REDUCE HAIRBALL
FORMATION



TOP product



dry



wet

FBN: FELINE BREED NUTRITION



For cats with breed-related needs
Developed with breeders



EMBLEMATIC NUTRITIONAL ANSWER

Special Sphynx jaw



HIGH ENERGY INTAKE



TOP product



adult



wet



FOOD TRANSITION

Food transition is recommended for any switch of product, to avoid any digestive upset and potential food refusal.

DAY
1 & 2



- 75% of current diet
- +25% of new food

DAY
3 & 4



- 50% of current diet
- +50% of new food

DAY
5 & 6



- 25% of current diet
- +75% of new food

DAY
7 and after



- 100% of current diet



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QUESTIONS?

