

Nutrition – What is involved in a good pet food?

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Labels

- Look first to the ingredient panel...
- Ingredients are listed by weight in descending order
- Watch for tricks (splitting of ingredients to move certain ingredients to the top)
- Number of protein sources does not mean more protein – production limitations determine quantity of protein in a diet

Modified Atwater Formula

Used to calculate energy content of food:

$$\text{ME(kcal/kg)} = 10[(3.5 \times \text{CP}) + (8.5 \times \text{CF}) + (3.5 \times \text{NFE})]$$

$$\text{NFE} = 100 - \text{CP} - \text{CF} - \text{fibre} - \text{moisture} - \text{ash}$$

ME – Metabolizable Energy

CP – Crude Protein

CF – Crude Fat

NFE – Nitrogen Free Extract

Protein Sources

- Bioavailability: Fish > Porcine > Chicken > Bovine
- However::
 - Depends on the quality of the ingredient
 - Fresh is better
 - The less processing the better
- Source of allergens

Fat Sources

- Comes either in fresh meat added, or as direct addition to the kibble, typically post extrusion.
- Fat carries the flavor, the mouth-feel and most of the energy
- EFA are important – Omega 3s and 6s

Carbohydrates

- Provides same amount of energy as Proteins
- Slow or quick burning (Glycaemic Index)
- Dogs can't tolerate raw starch
- Functional properties in extrusion process (holds the kibble together)

Other Ingredients

- Fiber sources – Insoluble and soluble sources
- Moisture – low to inhibit mold growth
- Vitamins – Need to be adequate (AAFCO Standards for canines)
- Minerals – Chelated minerals versus inorganic
- Ash

Supplements

- Can work when there is a deficiency or over use of one metabolic substance or at certain life stages
- Typically unsubstantiated claims.
- Typically considered GRAS (Generally Regarded As Safe)
- Glucosamine/Chondroitin is a very common supplement

What to look for?

- Depends on many factors
- Canadian Manufacturers are typically very good compared to typical US based
- Depends on the dog, activity levels, and dog's function (working dog versus family pet)
- Dog's Environment

Thank You!

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