# Nutrition

## **Importance of Nutrition**

Support sick pets and pets recovering from surgery or illness.

Special diets help prevent or correct certain conditions, and can provide a healthy maintenance diet to prevent recurrence.

#### Considerations:

- Dry vs. canned
- Feeding amounts
- Caloric requirements of healthy versus sick animals
- Caloric requirements of juvenile/growing animals versus adults

# Canine Nutrition

# a/d

#### **Critical Nutrition Diet**



#### Aids in

- Supporting the immune system, offsetting oxidative stress
- Meeting the increased energy needs of sick and recovering pets

- Extra tasty to encourage appetite
- Smooth, soft, moist, and thixotropic (increasingly liquefied when stirred) for feeding flexibility

# b/d

#### **Brain Diet**



#### Aids in

- Supporting memory and learning in older dogs
- Protects heart and kidney function

- High levels of omega-3 fatty acids
- Appropriate levels of protein, Phos, Na
- Antioxidants



### **Urinary Diet**





#### Aids in

• Dissolving struvite stones

- Controlled Mg, Phos, Ca
- Low Na
- Added antioxidants, K-citrate, omega-3 fatty acids

# d/d

### **Dermatologic Diet**





#### Aids in

- Maintaining healthy skin barrier
- Skin, coat, digestion, and immune benefits

- Limited ingredients with single intact animal protein
- No soy protein
- Added antioxidants, and high levels of omega-3 fatty acids

# g/d

#### Geriatric Diet





#### Aids in

- Protecting kidney and heart function
- Supporting aging dogs

- Controlled Phos, Na (reduces kidney stress, maintains normal BP)
- Reduced protein (decreases kidney workload)
- Calculated fat levels (reduce pancreatic workload)
- Increased omega-3 fatty acids,
   controlled calories (support kidneys)

# h/d

#### **Heart Diet**





#### Aids in

- Maintaining normal BP
- Minimizing fluid retention
- Replenishing nutrients lost due to diuretics
- Supporting liver and kidney function

- High levels of L-carnitine and taurine
- Reduced Na
- Added K, Mg
- Controlled levels of protein, Phos
- Antioxidants

# i/d

### Digestive Diet





#### Aids in

- Preventing digestive upset and food sensitivities
- Restoring energy and promoting healthy immune system

- Highly digestible for easy nutrient absorption
- Prebiotic fiber to support gut bacteria
- High in electrolytes and B-vitamins
- Omega-3 and omega-6 fatty acids
- Antioxidants

# j/d Joint Diet





#### Aids in

- Preserving joint cartilage
- Maintaining healthy weight to avoid excess stress on joints

- Enriched with glucosamine and chondroitin sulfate
- Controlled calories
- Added L-carnitine
- Therapeutic levels of omega-3 fatty acids



### Kidney (Renal) Diet





#### Aids in

- Protecting kidney function
- Enhancing appetite
- Building and maintaining lean muscle

- Controlled Phos, low Na
- Omega-3 fatty acids
- Formulated to stimulate appetite
- High levels of amino acids and L-carnitine

# <u>l/d</u>

### Liver (Hepatic) Diet





#### Aids in

- Reducing liver workload, allowing liver tissue regeneration
- Avoiding nutrient deficiencies and excesses impacting the liver
- Immune system support

- Controlled levels of protein
- Low copper (minimizes accumulation in the liver)
- Antioxidants

# r/d

### Weight Reduction Diet





#### Aids in

- Metabolizing fat and maintaining lean muscle
- Providing feeling of satiety

- Therapeutic levels of L-carnitine
- Soluble and insoluble fiber blend
- Antioxidants



### **Urinary Diet**



#### Aids in

 Reducing risk of struvite stone formation

- Promotes desirable urine pH
- Low Mg, controlled Phos
- Antioxidants

# t/d

### **Dental Diet**



#### Aids in

- Cleaning surfaces of teeth
- Fighting bacteria-laden plaque

- Unique kibble shape and size
- Special fiber matrix



### **Urinary Diet**





#### Aids in

- Dissolving urate and cystine stones
- Reducing risk of urate and cystine stone recurrence

- Controlled levels of protein
- Low Na, Ca
- Promotes desirable urine pH
- Enriched with taurine, L-carnitine, antioxidants



### Weight Control Diet





#### Aids in

- Metabolizing fat and maintaining lean muscle
- Maintaining healthy body weight

- Therapeutic levels of L-carnitine
- Soluble and insoluble fiber blend
- Antioxidants
- Appropriate fat and calories
- Helps manage blood glucose



#### Food Sensitivities Diet





#### Aids in

- Normalizing stool
- Improving skin and coat
- Promoting healthy skin barrier
- Supporting a healthy immune system

- Highly hydrolyzed animal protein
- Purified carbohydrate sources
- High levels of Vitamin E and fiber
- No gluten, soy protein, lactose
- No artificial coloring, flavoring, or preservatives
- Antioxidants and essential fatty acids

# Feline Nutrition

# a/d

#### **Critical Nutrition Diet**



#### Aids in

- Supporting the immune system, offsetting oxidative stress
- Meeting the increased energy needs of sick and recovering pets

- Extra tasty to encourage appetite
- Smooth, soft, moist, and thixotropic (increasingly liquefied when stirred) for feeding flexibility



### **Urinary Diet**





#### Aids in

- Dissolving struvite stones
- Promoting desirable urine pH

- Controlled Mg, Phos, Ca
- Added antioxidants, K-citrate, omega-3 fatty acids

# d/d

### **Dermatologic Diet**





#### Aids in

- Maintaining healthy skin barrier
- Skin, coat, digestion, and immune benefits

- Limited ingredients with single intact animal protein
- No soy protein
- Added antioxidants, and high levels of omega-3 and omega-6 fatty acids

# g/d

### **Geriatric Diet**



#### Aids in

- Maintaining normal blood pressure
- Minimizing fluid retention

- Low Na
- Moderated protein levels
- Controlled calories
- Enriched with taurine
- Antioxidants

# i/d

### Digestive Diet





#### Aids in

- Preventing digestive upset and food sensitivities
- Restoring energy and promoting healthy immune system

- Highly digestible for easy nutrient absorption
- Prebiotic fiber to support gut bacteria
- High in electrolytes and B-vitamins
- Omega-3 and omega-6 fatty acids
- Antioxidants



### Kidney (Renal) Diet





#### Aids in

- Protecting kidney function
- Enhancing appetite
- Building and maintaining lean muscle

- Controlled Phos, low Na
- Omega-3 fatty acids
- Formulated to stimulate appetite
- High levels of amino acids and L-carnitine

# m/d

# Glucose & Weight Management Diet





#### Aids in

- Reducing body fat
- Maintaining lean muscle

- Therapeutic L-carnitine levels
- Balanced protein and carbohydrates
- Antioxidants

# r/d

### Weight Reduction Diet





#### Aids in

- Metabolizing fat and maintaining lean muscle
- Providing feeling of satiety

- Therapeutic levels of L-carnitine
- Soluble and insoluble fiber blend
- Antioxidants



### **Urinary Diet**





#### Aids in

 Reducing risk of struvite stone formation

- Promotes desirable urine pH
- Low Mg, controlled Phos
- Antioxidants

# t/d

### **Dental Diet**



#### Aids in

- Cleaning surfaces of teeth
- Fighting bacteria-laden plaque

- Unique kibble shape and size
- Special fiber matrix



### Weight Control Diet





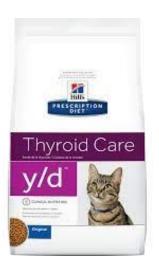
#### Aids in

- Metabolizing fat and maintaining lean muscle
- Maintaining healthy body weight
- Supporting urinary health
- Supporting immune system

- Therapeutic levels of L-carnitine
- Soluble and insoluble fiber blend
- Antioxidants
- Appropriate fat and calories
- Helps manage blood glucose
- Balanced minerals



### Thyroid Diet





#### Aids in

- Decreasing thyroid hormone (T4) production
- Supporting kidney, heart, and urinary health
- Maintaining lean muscle mass

- Limited iodine
- Controlled Phos, low Na
- Omega-3 and omega-6 fatty acids
- High levels of L-carnitine



#### Food Sensitivities Diet





#### Aids in

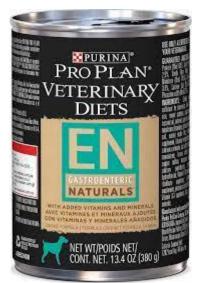
- Improving digestion and stool
- Eliminating food-related causes of skin irritation
- Promoting healthy skin barrier
- Supporting a healthy immune system

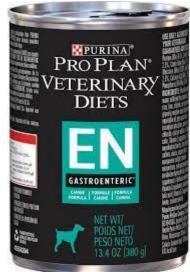
- Highly hydrolyzed animal protein
- Purified carbohydrate source
- High levels of Vitamin E and fiber
- No soy protein or lactose
- No artificial coloring, flavoring, or preservatives
- \_\_\_\_Antioxidants and essential fatty acids

# Other, Non-Hill's Diets

### **Bland Diets**









### **Hypoallergenic**

Hydrolyzed Protein

**Limited Ingredient Diets** 





# **Urinary Diets**





### **Renal Diets**



### **Diabetic Diets**



Weight Management

Diets



# **Critical Nutrition**



# Liquid Diets and Supplements

### <u>Liquid Diets and Supplements</u>









# Tube Feeding

### **Type of Feeding Tubes**

- 1. NE = <u>n</u>aso<u>e</u>sophageal
- 2. NG = nasogastric
  - a. <a href="https://vetgirlontherun.com/videos/how-to-place-a-nasogastric-feeding-tube-in-your-veterinary-patient-vetgirl-veterinary-continuing-education-videos/">https://vetgirlontherun.com/videos/how-to-place-a-nasogastric-feeding-tube-in-your-veterinary-patient-vetgirl-veterinary-continuing-education-videos/</a>
  - b. <a href="https://vetgirlontherun.com/videos/veterinary-continuing-education-place-nasogastric-tube-patient-vetgirl-videos/">https://vetgirlontherun.com/videos/veterinary-continuing-education-place-nasogastric-tube-patient-vetgirl-videos/</a>
- 3.  $E = \underline{e}$ sophagostomy
  - a. <a href="https://vetgirlontherun.com/videos/how-to-place-esophagostomy-tube-cat-vetgirl-veterinary-ce-videos/">https://vetgirlontherun.com/videos/how-to-place-esophagostomy-tube-cat-vetgirl-veterinary-ce-videos/</a>
- 4. G, PEG = gastric, percutaneous endoscopic gastrostomy
- 5. J-through-G = **i**ejunostomy-through-**g**astrostomy

<sup>\*\*</sup> What kind of diets can go through each?

# **Tube Feeding**

### Type of Feeding Tubes

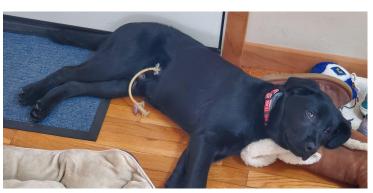
- 1.  $NE = \underline{n}aso\underline{e}sophageal$
- 2. NG = <u>n</u>aso<u>g</u>astric
- 3. E = esophagostomy
- 4. G, PEG = gastric
- 5. J-through-G =

  <u>J</u>ejunostomy
  through<u>g</u>astrostomy









# Juvenile Diets and Milk Replacers

### Juvenile Diets and Milk Replacers

Similar Base (Vacality) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000

← KMR (Kitten Milk Replacement)

Esbilac (Puppy Milk Replacement) →

- Comes as pre-made liquid solution (can)
- Comes as dry powder you can reconstitute with water



- Cans need to be refrigerated and used within 72 hours
- Unopened powder is shelf-stable in a cool, dry place.
- Once opened, powder in the canister can be refrigerated for 3 months.
- Reconstituted powder should be refrigerated when not in use and discarded after 24 hours.





# Diets for Exotics

# **Diets for Exotics**













### Lagomorphs, Rodents

- Timothy hay
- Assorted pellet diets

### **Avian**

Various seed diets

### **Diets for Exotics**





### ← Critical Care (Herbivore)

- Comes as dried/powdered formula
- Reconstitute with water for syringe or other assisted feeding
- High fiber, low fat
- Minerals and prebiotics, as well as Vitamin C
- Refrigerate unused portion

### ← Critical Care (Carnivore)

- Comes as dried/powdered formula
- Reconstitute with water for syringe or other assisted feeding
- Omega fatty acids, amino acids, proteins (egg and poultry sources)
- Calorie-dense, grain-free
- Refrigerate unused portion

# Thanks!