## OBESITY

## BASICS

## OVERVIEW

An excess of body fat, frequently resulting in adverse health effects
Even a moderate excess in body fat can increase incidence of disease (known as "morbidity") and reduce lifespan
SIGNALMENT/DESCRIPTION of ANIMAL

## Species

Dogs and cats

## Mean Age and Range

All ages, with the greatest prevalence (nearly $50 \%$ ) in middle-aged dogs and cats

## Predominant Sex

Most common in neutered, indoor pets
SIGNS/OBSERVED CHANGES in the ANIMAL
Weight gain
Exercise intolerance may be reported
Excess body fat and high body condition score or "BCS" (estimate of weight status [under or overweight] as compared to normal weight)

## CAUSES

Obesity is caused by an imbalance between calorie or energy intake and calorie or energy expenditure, with intake exceeding expenditure
Neutering, decreased opportunities for activity, and age can reduce expenditure of energy
Overfeeding of high calorie foods, frequently alternating foods, and provision of excess treats contribute to excess calorie or energy intake
Low levels of thyroid hormone (known as "hypothyroidism"), insulin-secreting tumor (known as an "insulinoma"), or high levels of steroids produced by the adrenal glands (known as "hyperadrenocorticism" or "Cushing's disease") are infrequent causes of obesity

## TREATMENT

## HEALTH CARE

Weight loss, induced by reducing calorie intake below calorie or energy expenditure Successful weight loss also requires long-term maintenance of the reduced weight Weight loss and maintenance of reduced weight depend on changes in the way the owner feeds and interacts with the pet The owner should assess and monitor the body condition score (BCS; estimate of weight status [under or overweight] as compared to normal weight) of his or her pet

## ACTIVITY

Calorie or energy restriction results in compensatory decreases in basal energy expenditure or metabolism; increased activity helps compensate for this decrease in metabolism and provides alternate opportunities for owner-pet interactions Leash walking for dogs and trained cats-at least 15 minutes twice daily Activities such as "fetch", interactive toys for cats, or playing with a laser light
Food balls-built to hold treats or kibbles and randomly release them while the dog or cat plays; food used in the ball must be included as part of the daily calorie allowance

DIET
Get written instructions regarding specific amounts to provide, using the agreed upon reducing diet (a "cup" of food refers to an 8-oz measuring cup)
Increased dietary protein facilitates loss of body fat, while minimizing loss of lean body mass (LBM), which is the metabolically active tissue-preserving LBM should help with long-term weight control by maintaining a higher resting energy requirement; protein also stimulates metabolism, increases energy expenditure, and contributes to the feeling of being full or satisfied (known as "satiety")
Dietary fiber provides little dietary energy, so it helps reduce total calories in the diet; fiber also stimulates intestinal metabolism and energy utilization, and contributes to the feeling of being full or satisfied (satiety)
Fat is calorie or energy dense, so low-fat diets are lower in energy
Calories should be restricted, without excessive restriction of essential nutrients; a low-calorie therapeutic diet with an increased nutrient-to-calorie ratio is recommended for weight loss

Amount fed should target a $1 \%$ to $2 \%$ loss in body weight per week; faster weight loss may stimulate weight rebound once weight loss is achieved
High moisture diets can be used to reduce calories per serving; this approach appears to be more effective for cats versus dogs, as cats tend to control their intake based on volume
If the client is not willing to use a therapeutic diet, severe calorie restriction should be avoided; a food diary can be used to record current intake over several days-subsequently, the pet should be fed $10 \%$ to $20 \%$ less than it previously received Treats are often part of the owner-pet bond; complete avoidance of treats is a hurdle to compliance with weight loss programs-instead, offer a "treat allowance" of $10 \%$ of the daily calories and use low-calorie treats suitable for dogs or cats, as directed by your pet's veterinarian

## FOLLOW-UP CARE

## PATIENT MONITORING

Frequent communication is important during the weight management program
Telephone call from clinic to the owner to address any minor questions and to reinforce the importance of the program Patient should be weighed in the clinic on a monthly basis; if needed, adjustments in food allowance guidelines should be made at this time
Once the patient has achieved an ideal body condition score (BCS; estimate of weight status [under or overweight] as compared to normal weight) guidelines should be provided for weight maintenance; continue to measure food, monitor BCS or body weight, and adjust food allowance as needed to maintain the goal weight

## PREVENTIONS AND AVOIDANCE

Monitor food intake, weight, and body condition score (BCS; estimate of weight status [under or overweight] as compared to normal weight) throughout life to prevent weight gain and obesity
Maintain a healthy diet and reduce caloric intake if pet starts gaining weight (even small weight gains of one-to-two pounds can be significant in small- and medium-size dogs and in cats)

## POSSIBLE COMPLICATIONS

Obesity leads to increased risk for diseases (such as osteoarthritis, diabetes mellitus) or shortened life span

## KEY POINTS

Obesity leads to increased risk for diseases (such as osteoarthritis, diabetes mellitus) or shortened life span Weight loss and maintenance of reduced weight depend on changes in the way the owner feeds and interacts with the pet Monitor food intake, weight, and body condition score (BCS; estimate of weight status [under or overweight] as compared to normal weight) throughout life to prevent weight gain and obesity
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