Health Risks of Obesity

Drs. Foster & Smith Educational Staff

As in people, dogs carrying extra pounds of weight place extra demands on virtually all the organs of their bodies. When we overload these organs, disease and sometimes death are the consequences. The health risks to overweight dogs are serious and every dog owner should be aware of them. The more common consequences of obesity in dogs are discussed below.

Diabetes mellitus (sugar diabetes)
One of the most common complications of obesity in dogs is the development of diabetes mellitus (sugar diabetes). Obesity causes insulin resistance in which the cells of the body are not sensitive to insulin. Since insulin moves glucose from the blood into the cells, this will not occur. This causes the blood glucose level to rise. Insulin resistance causes the cells in the pancreas which produce insulin to "burn out" and stop producing insulin. The lack of insulin along with high blood glucose levels results in diabetes.

Damage to joints, bones, and ligaments
Studies have suggested that approximately one-quarter of overweight dogs develop serious joint complications. The bones, joints, muscles, and associated tendons and ligaments all work together to give the dog smooth and efficient movement. If they are required to carry excess weight, they can start to become damaged. Arthritis can develop and the pain and joint changes associated with degenerative changes can become markedly more severe.

> Approximately 25% of overweight dogs develop serious joint complications.

Extra stress on joints caused by an increased weight load can also lead to damage of certain ligaments. Ligaments are tough, fibrous strands of tissue that hold one bone in proximity to another bone in joints. One of the ligaments in the knee, the anterior cruciate ligament, is very prone to strains or tears. If this ligament is torn, the knee becomes very unstable and the dog is reluctant to use it. Surgery must be done to repair this torn ligament.

Certain breeds of dogs, such as Dachshunds are prone to develop intervertebral disc disease ('slipped disc'). Carrying extra weight increases the probability that they will develop this painful and sometimes debilitating condition.

Heart disease and increased blood pressure
As in people, overweight dogs tend to have increased blood pressure (hypertension). The heart has an increased work load since it must pump additional blood to excess tissues. This can lead to progression of heart disease.

Difficulty breathing
In overweight animals, the lungs can not function properly. The additional fat in the chest restricts the expansion of the lungs. The extra fat in the abdomen pushes against the diaphragm, which separates the abdominal cavity from the chest. This also results in less space in the chest for the lungs to expand on inspiration. To make matters worse, the increased quantity of tissue puts an increased demand on the lungs to supply oxygen. These changes are especially serious in dogs who may already have a respiratory disease.

Decreased stamina

*Unauthorized use of any images, thumbnails, illustrations, descriptions, article content, or registered trademarks of **Foster & Smith, Inc.** is strictly prohibited under copyright law. Site content, including photography, descriptions, pricing, promotions, and availability are subject to change without notice. These restrictions are necessary in order to protect not only our copyrighted intellectual property, but also the health of pets, since articles or images that are altered or edited after download could result in misinformation that may harm companion animals, aquatic life, or native species.*

Dogs who are overweight have less endurance and stamina. Carrying all that extra weight around takes a lot more work. The heart, muscles, and respiratory system are all asked to do more than they were designed for.

Heat intolerance
Fat is an excellent insulator, which is fine if you are a polar bear. But if you are an overweight dog in the heat of summer, the excess fat can make you miserable, and much less capable of regulating your body temperature.

Decreased liver function
The liver stores fat so when a dog is overweight, an increased amount of fat builds up in the liver. This is called hepatic lipidosis. This condition can result in decreased liver function.

Increased surgical and anesthetic risk
The effects of obesity on the heart and lungs have serious ramifications during anesthesia. Cardiac arrest (heart stops) and poor circulation of oxygenated blood to the tissues can occur.

Many of the anesthetics are taken up by fat, so an overweight animal will take longer to come out of anesthesia because the anesthetic must be removed from the fat by the body. In addition, many anesthetics are broken down by the liver. A fatty liver may not be as efficient at breaking down anesthetics and other drugs, so again, recovery may be delayed.

The increased fat in the tissues makes surgery more difficult. Basically it is harder to find or get at what you are looking for. The fat obscures the surgical area. For example, in abdominal surgery in an obese dog, there may be literally inches of fat between where the skin incision is made and the organ you need to work on, such as the urinary bladder. This makes the surgery technically more difficult and the procedure will also take longer, which again increases the anesthetic risk.

Reproductive problems
Overweight dogs tend to have more problems giving birth than dogs at their optimum weight. This difficult birthing is called dystocia. Dogs experiencing dystocia often need veterinary assistance to deliver their pups, and may require a cesarean section (C-section).

Digestive disorders
An overweight dog has an increased risk of developing constipation and may also have more problems with intestinal gas and flatulence, which is not pleasant for the dog or the owner.

Decreased immune function
Obesity in the dog is associated with decreased resistance to viral and bacterial infections. Canine distemper and *Salmonella* infections, especially, seem to be more severe in dogs who are overweight. The exact cause(s) of this lowered resistance to disease in obese dogs is unknown.

Skin and hair coat problems
The risk of skin and hair coat diseases are increased in dogs who are overweight. The skin may fold in on itself creating pockets, which are ideal for the accumulation of oils and the development of infections.

Increased risk of cancer
The exact link between obesity and developing certain cancers is unknown. However, there have been studies which suggest that obese dogs tend to have an increased risk of developing certain types of cancers, including a particular type of cancer of the urinary bladder. A recent study also found that dogs who were obese at one year of age were at greater risk of developing mammary tumors.

Decreased quality and length of life
It is evident from the above discussion that the health, ability to play, even to breathe, are diminished in overweight dogs. Overweight dogs may become more irritable due to being hot, in pain, or simply uncomfortable. Overweight dogs die at a younger age than those maintained at an optimum weight.

It is clear that we are not contributing positively to our dog's health when we allow them to become overweight. The next time those big brown eyes say, 'Can I please have a treat,' think very carefully first. In most cases, your answer should be 'No, and I'm doing this for your own good,' and it will be absolutely true.

*Unauthorized use of any images, thumbnails, illustrations, descriptions, article content, or registered trademarks of **Foster & Smith, Inc.** is strictly prohibited under copyright law. Site content, including photography, descriptions, pricing, promotions, and availability are subject to change without notice. These restrictions are necessary in order to protect not only our copyrighted intellectual property, but also the health of pets, since articles or images that are altered or edited after download could result in misinformation that may harm companion animals, aquatic life, or native species.*