

## **HYPOKALEMIA - LOW POTASSIUM LEVEL**

Hypokalemia is a common problem in older cats, especially those over age twelve or with kidney disease. Potassium is an electrolyte that is present in the bloodstream and within every cell in the body. It is essential for muscle contraction - muscles, including the heart muscle, cannot function without adequate potassium. When the body becomes depleted of potassium, muscle weakness will occur and gradually worsen with time. In severe cases, the potassium-depleted cat will be so weak as to be unable to walk. Hypokalemia can also occur rapidly along with dehydration or serious illness.

A mild form of hypokalemia is common in elderly cats. The symptoms are depression, inactivity, a poor appetite and haircoat, and a mild anemia. Although it used to be thought that these signs were part of the normal aging process, we now know that many of these cats simply need a potassium supplement to feel and act better.

Hypokalemia is difficult to diagnose in this mild form. Although we can measure the amount of potassium in the bloodstream, it has been found that even with a normal blood potassium level, the amount of the electrolyte in cells and tissues may not be adequate for normal function. Any cat with the symptoms just described can be put on a 4-6 week trial of supplemental potassium. If the signs improve or disappear, the supplement should be continued for the rest of the cat's life. He or she will feel better and live longer.

Cats with kidney disease are especially prone to hypokalemia. Kidney disease is the second leading cause of death in older cats and every cat over age twelve probably has at least some degree of loss of kidney function. (Kidney disease does not become apparent until about two thirds of kidney function is already lost. Remember that people do just fine with one kidney instead of two.) The older the cat the more often kidney function should be tested.

When the kidneys start to lose their effectiveness, they can no longer conserve water as efficiently. The urine becomes more dilute, so more water is lost in the urine. The water washes potassium out with it, depleting it from the body. The kidneys are in turn affected by the lowered potassium level - hypokalemia has been shown to further depress kidney function. A vicious cycle then ensues, in which more potassium loss leads to reduced kidney function, which leads to even more reduced potassium. A potassium supplement reduces stress on the kidneys and improves kidney function, again lengthening the life of the affected cat.

Potassium is available as a tablet, a powder which can be mixed into canned cat food or a tasty gel. In severe cases or during illness it can be administered along with intravenous fluids.

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2082 Cheyenne Court, Grafton, WI 53024 • phone: 262-375-0130 • fax: 262-375-4196 • [www.bestfriendsvet.com](http://www.bestfriendsvet.com)

