

Alkaline Phosphatase Level

- Although alkaline phosphatase is considered a “liver enzyme,” it is produced by other cells, too.
- Alkaline phosphatase levels can be affected by many things, including certain medications and a variety of illnesses.
- If your pet’s alkaline phosphatase level is abnormal, additional tests may be recommended to determine the cause.

What Is Alkaline Phosphatase?

Alkaline phosphatase (ALKP) is an enzyme that is produced by many cell types. Although it is considered a “liver enzyme,” it is mostly made by the liver and bones.

The ALKP level is an important part of a blood screening test (known as a chemistry panel), so it is often evaluated during routine wellness checkups or pre-surgery screening in healthy pets.

Because a variety of illnesses can affect the ALKP level, your veterinarian may recommend testing your pet’s ALKP level if your pet has any of the following signs of illness:

- Vomiting
- Diarrhea
- Appetite loss
- Lethargy (tiredness)
- Increased drinking and/or urination
- Weight loss or weight gain
- Abdominal pain or enlargement

How Is the Alkaline Phosphatase Level Measured?

To test your pet’s ALKP level, your veterinary team must obtain a small blood sample. This procedure is usually very quick; it may take only a few seconds if the patient is well behaved. For patients that are very frightened or not well behaved, your veterinary team may want to use a muzzle, towel, or other gentle restraint device. In some cases, such as in patients with very thick fur, it may be necessary to shave the

hair from the area where blood will be drawn. The hair will grow back, and this is often a good way to find the vein quickly.

Sometimes, blood can be drawn in the examination room because some pets are comforted and well behaved when their owners are present. However, some pets are more excited and unruly when their owners are present, so your veterinarian may recommend that your pet be taken into a separate treatment area for blood to be drawn.

Some veterinary offices have in-house blood analysis equipment, so they can perform the test for ALKP in the office and have results the same day. Other offices send blood samples to an outside laboratory for the test to be performed. If an outside laboratory is used, results are generally available within 1 to 2 days.

Because a recent meal changes the blood and may affect the ALKP level, your veterinarian may recommend that your pet not eat for 12 hours before drawing blood to perform the test. In most cases,

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you can still give your pet water. Please let your veterinarian know if this temporary fast will be a problem for you or for your pet.

Be sure to tell your veterinarian about any medications or supplements your pet may be receiving, as some products can alter the ALKP level.

What Does the Alkaline Phosphatase Level Tell Your Veterinarian?

Many factors can affect the ALKP level. Certain medications, such as steroids, can cause this level to increase. Additionally, a variety of medical conditions can affect the ALKP level.

Tests and Procedures

There are no significant medical conditions that cause the ALKP level to be too low. Most of the conditions that affect this enzyme cause the blood level to become elevated. The following are a few conditions that cause an elevated ALKP level:

- Rapid growth (young animals)
- Pancreatitis (inflammation of the pancreas)
- Gall bladder disease
- Hepatitis (inflammation of the liver)
- Liver failure
- Cancer affecting the liver or bones
- Hyperadrenocorticism (Cushing's disease)
- Diabetes
- Toxic injury to the liver

If your pet has an abnormal ALKP level, your veterinarian will combine that information with other vital information about your pet to decide if further diagnostic testing is recommended to investigate the

abnormal result. Depending on your pet's overall condition, your veterinarian may recommend medications, diet therapy, or other management.

If your pet has a history of having an elevated ALKP level (with or without signs of illness), your veterinarian may recommend rechecking the level at some point to monitor whether it is changing. Additional testing may be advised if the level does not return to normal.

Are There Risks Associated With Testing the Alkaline Phosphatase Level?

There are very few risks associated with testing the ALKP level. Drawing blood takes only a few seconds, and your veterinary team will take precautions to ensure that your pet is not injured during this procedure. Once blood is obtained, all further processing is performed at the veterinarian's office or at a diagnostic laboratory, so there is no risk of harm to your pet.