

# Bromides

## Potassium Bromide, Sodium Bromide

KBr and NaBr are other names for this medication.

### How Is This Medication Useful?

- Potassium bromide or sodium bromide are used to treat dogs with epilepsy, either alone, or in combination with other drugs.
- They are used in cats with epilepsy on if other drugs fail to work well.
- Bromides are a chemical rather than an FDA approved drug. American Chemical Society (ACS) grade bromide should be used for seizure therapy.

### Are There Conditions or Times When Its Use Might Cause More Harm Than Good?

- Bromides must be eliminated from the body by the kidneys. Animals with severe kidney disease may have problems with this drug, if they don't make enough urine.
- Human infants have suffered growth retardation when born to mothers who took bromides. Potassium bromide should probably not be used in pregnant or nursing mothers unless the benefit of use outweighs the risk of adverse effects.
- The intake of chloride will have to be very carefully controlled while your animal is on this drug. Do not give your animal any salty treats and always check with your veterinarian before giving new foods or snacks while on this medication.
- If your animal has any of the above conditions, talk to your veterinarian about the potential risks of using the medication versus the benefits that it might have.
- Some cats can develop fluid in the lungs while taking bromides and cats who are taking bromides should do so only when seizures can not be controlled by other drugs, and only if carefully monitored for breathing problems. If caught early, lung problems subside after bromide therapy is stopped.

### What Side Effects Can Be Seen With Its Use?

- Bromides can cause drowsiness for up to three weeks after starting the drug. Most dogs will eventually become tolerant of this effect and will not remain drowsy during further therapy.
- This drug is irritating to the gastrointestinal tract and can cause vomiting. Giving with food and/or dividing the daily dose into two smaller doses may decrease this effect. Formulating the drug in capsules rather than liquid can also help.
- Cats can develop a lower respiratory condition (like asthma) when taking potassium bromide. If potassium bromide is used in your cat, you should watch it very closely for signs of coughing and difficulty breathing.
- This drug can also cause excessive thirst, excessive drinking and excessive urination, and has also been known to cause lack of appetite or increased appetite, vomiting and constipation.
- Rashes have been reported in both humans and dogs receiving this drug.
- Rear end weakness and tremors can indicate that your dog's bromide dose may be too high.
- When given with phenobarbital, bromides have been associated with increased risk of pancreatitis.

### How Should It Be Given?

- Potassium bromide should be given with food. If capsules are given, care must be taken to ensure that the animal completely swallows the capsules and that sufficient food or water is given to carry the capsule all the way to the stomach. Capsules getting "stuck" between the mouth and stomach can cause severe irritation and damage to the throat and esophagus.

- **Loading Dose.** When you first start bromide therapy, your veterinarian may instruct you to give doses that are up to 5 times the normal dose. This is to get bromide into your animal's bloodstream more quickly. This is called "loading." You should follow your veterinarian's instructions very carefully during this period to achieve maximum response to therapy as well as to avoid any side effects. If your animal develops any muscle pain or twitching, behavior change or uneven pupils during this loading period, you should contact your veterinarian immediately.
- The successful outcome of your animal's treatment with this medication depends upon your commitment and ability to administer it exactly as the veterinarian has prescribed. Please do not skip doses or stop giving the medication. If you have difficulty giving doses consult your veterinarian or pharmacist who can offer administration techniques or change the dosage form to a type of medication that may be more acceptable to you and your animal.
- If you miss a dose of this medication you should give it as soon as you remember it, and give the next scheduled dose next time it is due.
- Some other drugs can interact with this medication so tell your veterinarian about any drugs or foods that you currently give your animal. Do not give new foods or medications without first asking your veterinarian.
- Dogs and Cats: Dogs usually receive this drug orally once or twice daily for life. It can be given as a capsule, a liquid or a chewable treat.

#### **What Other Information Is Important About This Medication?**

- Unless the "loading dose" (explained above) is used, it can take up to 6-8 weeks or more for bromides to reach "steady state" in the body and become fully effective.
- Bromides must be given daily for long periods of time in order to be effective. They are not effective given "as needed," because they take so long to take effect.
- Bromides should be stored in a tight, light resistant, childproof container away from all children and other household pets.
- Bromide dose can vary a great deal from dog to dog. In order to determine the right dose for you dog, blood must be tested for bromide levels periodically. Ideal levels are between 1-3 mg/ml in the blood. Levels are sometimes pushed to 4 in dogs with severe seizures.
- Potassium bromide (KBr) contains 67% bromide, and sodium bromide (NaBr) contains 78% bromide. So mg dose will be about 15% lower with NaBr as compared to KBr.
- Diuretics can increase elimination of bromides from the body. If your dog takes diuretics in addition to bromides, bromide dose may need to be increased.
- Blood tests for the electrolyte chloride will be falsely elevated by bromide therapy.
- If crystals form in the bromide solution, gently warm the solution by running the sealed bottle under warm water to dissolve again.

#### **References:**

1. VETERINARY DRUG HANDBOOK - Client Information Edition. Gigi Davidson and Donald C. Plumb.
2. Plumb's Veterinary Drug Handbook, 5<sup>th</sup> edition.