

ARE YOUR EXPIRED MEDICATIONS STILL GOOD?

Chances are, your medication cabinet contains some pills for you or your pets that are past their expiration date. If you've wondered whether these older medications might still be OK to use, you are not alone. Researchers from the California Poison Control System, the University of California, San Francisco and UC Irvine also wondered. They satisfied their curiosity by testing the effectiveness of eight drugs that had been sitting in pharmacies, unopened, for years after they had supposedly gone bad. Those expiration dates were anywhere from 28-40 years ago!

14 active ingredients were present in the 8 products they analyzed. Out of those 14 ingredients 12 were still at high enough concentration – at least 90% of the amount stated on the label – to qualify as having acceptable potency. Aspirin and amphetamine were the two ingredients that were no longer acceptable. Many of the drugs tested were ones contained in over-the-counter products such as acetaminophen (Tylenol), caffeine, and chlorpheniramine, which is an antihistamine. Codeine, hydrocodone and several barbiturate medications were also tested.

The expiration date on a drug is usually one to five years after it was manufactured, and those dates are often set arbitrarily. You may be surprised to learn that the Food and Drug Administration doesn't require pharmaceutical makers to test how long the active ingredients in their products will last.

The National Association of Boards of Pharmacy (NABP) has recently released a report on the analysis of on-line pharmacies. **97% of the 10,000 websites they studied were in violation of U.S. Pharmaceutical laws.** We recommend that you never buy any pet medications on-line from a pharmacy that is not accredited by the Vet-VIPPS program (Veterinary-Verified Internet Pharmacy Practice Sites). For more information, visit www.nabp.net.

The federal government has a Shelf-Life Extension Program which allows drugs in federal stockpiles to be retained for up to 278 months (23 years) after their stated expiration date if tests show they are still potent. Some of the ingredients tested in the California study remained good after 480 months – so far.

The analysis was published online by Archives of Internal medicine. The research team concluded "Our results support the effectiveness of broadly extending expiration dates for many drugs," they wrote. "The most important implication of our study involves the potential cost savings resulting from lengthier product expiration dating. Given that Americans currently spend more than \$300 billion annually on prescription medications, extending drug expiration dates could yield enormous health care expenditure savings."

Most pet owners who have multiple animals sooner or later find themselves in possession of unused medications. Many times these leftovers come in handy. If your dog comes up lame on a Sunday and you have some Rimadyl on hand or your cat is bitten and you happen to have a few days worth of antibiotics it might save you a trip to the emergency hospital. How do you know what's OK to use and what isn't?

First, call us or bring in your old medications for us to sort through. We are always happy to help advise you on what to keep and what to throw out.

Here are some rules of thumb:

- Any tablets that have absorbed moisture and turned mushy should be discarded.
- Medications kept in a bathroom, where there is repeated exposure to moist, warm, humid air, won't keep as long. Medications should be stored in a dark, dry location.
- Flavored tablets tend to get mushy and go bad sooner.
- Coated tablets that have been cut don't keep as long. The coating is usually there to keep the pill from absorbing moisture and coatings are used for drugs that degrade from exposure to moisture or light. If the coating is cracked or cut discard the pill.
- If it comes in a foil packet and the foil is punctured, cut or torn, discard it.
- If the color of a medication has changed, discard it.
- Flavored liquid medications that need to be kept refrigerated don't keep very long – a month at the most. They eventually spoil & become moldy.
- If it sits outside in a shed or garage where temperatures have fluctuated don't trust it, especially if it is a liquid formulation. Freezing or overheating can ruin medications. We see this most with flea and tick formulations that may be left in a garage or cabin over the winter.
- If you try an older medication and you don't get the results you expect it may be too old.
- None of the medications tested were antibiotics or NSAIDs used in pets (such as Rimadyl, Deramaxx or meloxicam). These are the most common pet medications that people tend to keep and we don't have any data to prove how long they last.
- Eye medications containing an ingredient that ends in the letters "one," such as dexamethasone or hydrocortisone, should never be used if there is a chance that the cornea is punctured, scratched or ulcerated. If your pet has a red or squinty eye you should never use an ointment like these or you may make the eye much worse. Be careful with leftover eye medications!

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