



### **Is It Safe To Take an Expired Medication?**

Most health care professionals will advise you not to do so since this is the safest response. However, I suspect many of us have done it. This information is provided to help you make the best decision when faced with the same situation again.

The two main concerns with using expired medications are:

1. Loss of potency
2. The drug may become toxic as it degrades.

Loss of potency results in decreased effectiveness. Solid dosage forms (tablets/capsules) tend to be more stable than liquids. Liquids reconstituted from a powder and requiring refrigeration are least stable. These are typically children's antibiotics, which would leave an infection under treated if used past the expiration date. It is also unwise to use an expired medication for what could be a life-threatening condition. Examples of this include Epi-Pen for anaphylactic allergic reactions and nitroglycerin tablets for chest pain. However, using the expired medication is certainly better than no treatment!

The one report of a medication becoming toxic as it degrades dates back to 1963. This was a case of kidney damage that may have been caused from taking expired tetracycline (an antibiotic). Since then tetracycline has been reformulated and no similar problems have been reported.

Consideration should also be given as to whether the medication contains preservatives. This is usually true for eye drops and injectables. A loss of effectiveness for the preservative could result in diminished protection from bacterial contamination.

You may be surprised to learn that the manufacturer is not required to determine *actual* length of potency. It is left up to them to select a desired date for testing. For example, if they choose a 2 year expiration date, they do not have to test it beyond that date. The FDA requires that a drug maintain 90-110% of original potency, as indicated on the label, under proper storage conditions at the expiration date.

Most literature on the issue quotes a study initiated by the FDA many years ago at the military's request which resulted in the Shelf Life Extension Program for the Department of Defense. Replacing expired drugs in their emergency stockpiles is a significant expense to the government. This study found that 88% of the lots tested for 122 medications should have their expiration date extended by *more than* a year. (Extensions averaged 5.5 years to maximum of 23 years.) It should be noted that the drugs were stored in their original packaging and according to the manufacturers' recommendations.

Once a drug is removed from the original packaging, the manufacturer's date can no longer be relied on according to regulations. When the pharmacy removes a prescribed amount to dispense in another container, an expiration date of one year from the dispensing date may be applied or the date on the original bottle if shorter than a year.

General guidelines are that you should not take an expired product:

- for any drug that must be monitored by checking a blood level
- that is injected
- that has not been stored properly
- that looks old (crumbly, powdery, or dried up creams/ointments) or has a strong smell (especially true for aspirin).

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