

Do we believe Drug Expiry Dates ?

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It may come as no surprise, that drug expiry dates are not all they are cracked up to be. Some drugs are still effective for a long time after their printed drug expiry date. Hoarding of drugs has been metaphorically placed in the same category as stacks of old newspapers, magazines, broken equipment, empty boxes and unused clothes. However, some drugs are still safe and effective for some time after their so-called 'drug expiry date'.

Most of the time, this long life does not matter, as sick people are generally given a script, go to the pharmacy, get the medicine and take it. However, this potential longevity of drugs does matter to travellers. We get our medical kit and carry it overseas 'just in case', then bring it home, and put it in the cupboard, awaiting our next adventure. If the drugs have 'expired', it is rather painful to throw out drugs that cost hard earned dollars, and buy new ones to carry on the next trip, bring them home and repeat the cycle. Admittedly, not using the drugs is not such a bad thing, and is better than getting sick and needing the drugs.. but you get my drift.

Although the printed drug expiry date guarantees the length of stability, authorities do not require manufacturers to do longevity testing. Drug manufacturers want to get their bouncing baby drug onto the shelves as soon as possible, to start earning money for them. There is no economic imperative for them to sit their precious 'cash cow medicine' on a dusty shelf and see how long it lasts. Who can blame them, they spend billions getting drugs to market these days. It is much appreciated that we have these lovely medicines to cure our illness. However, if we had accurate information about the true long-term stability of drugs, it would save travellers money, decrease waste, and probably be better for the environment, as fewer drugs would be thrown away.

(A plug here for the [excellent drug disposal service](#) run by the government in Australia, so you don't have to throw medicines into the garbage or down the toilet and hence potentially degrade the environment.)

The US military has a huge stockpile of drugs (and better resources than most travellers) so they did some work on checking just how useless, the expired drugs really were. Lo and behold, they

found that the average drug lasted about 4 years past its expiry date, and Ciprofloxacin (step one for travellers diarrhoea) lasted a joyous 10 years from manufacture. Some drugs were, however, dead.

Before we get too excited, however, remember that the military have very fancy drug storage facilities. Drugs like their surroundings cool and dry. The importance of temperature on the chemical stability of a medicine cannot be over-emphasised. The rate of chemical reactions - and hence deterioration - roughly doubles for every 10°C rise in temperature, so allowing your medicines to get overheated is likely to kill them. Most particularly, drugs stored in a bathroom medicine cabinet have likely gone to meet their maker. Warm, moist, bathroom environments are the arch enemy of extending drug expiry dates.

Also, there are many drugs, notably heart drugs, that deteriorate very quickly. Of course if you have any life-threatening illness, it is strongly recommended to have drugs that are in tip-top condition.

As always, ask your travel medicine professional about your medical kit contents and what might be able to be used for the next trip. Don't throw them out before your consult - Take them with you to the travel medicine consultation.

Further reading

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1377417>

<https://www.health.harvard.edu/staying-healthy/drug-expiration-dates-do-they-mean-anything>

[http://www.mayoclinicproceedings.org/article/S0025-6196\(15\)00667-9/fulltext](http://www.mayoclinicproceedings.org/article/S0025-6196(15)00667-9/fulltext)

<http://archive.defense.gov/news/newsarticle.aspx?id=44979>

Courtney B, Easton J, Inglesby TV, SooHoo C. Maximizing State and Local Medical Countermeasure Stockpile Investments through the Shelf-Life Extension Program. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*. 2009;7(1):101-107. doi:10.1089/bsp.2009.0011.

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