Seven antibiotics to stockpile and why

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Assuming your personal physician will help you stockpile antibiotics for TEOTWAWKI, which should you request? Is there a logical reason to have amoxicillin on hand rather than doxycycline?

Here's what I would suggest and why.

No antibiotic is effective against every type of microbe. Certain ones will kill aerobic bacteria, others are used for anaerobic bacteria, still others are effective against resistant strains, and certain people are allergic to or intolerant of various antibiotics. The following are all generics, running about \$10 for about a month's treatment.

- 1. Amoxicillin is the old standby for most respiratory infections (probably most of which are viral and don't even require antibiotics). It is excellent for strep throat and some strains of pneumococcal bacteria. It is also safe for children and pregnant women. It is well-tolerated, causing little stomach distress or diarrhea. The drawbacks are that some people are truly allergic, and many bacteria have developed resistance to amoxicillin (especially staph) through overuse among both humans and animals. Anyone truly allergic to amoxicillin should substitute erythromycin or another antibiotic.
- 2. Cephalexin works on most of the same bacteria as amoxicillin, plus is stronger against *Staph aureus*, which mostly causes skin infections. It rarely works against MRSA (resistant staph), however. It is also well-tolerated in children and is safe in pregnant women, causing few side-effects. Like any antibiotic, it carries the risk of allergy. People who develop anaphylaxis (a life-threatening allergy) with amoxicillin probably should not take cephalexin, as there is a good 10% cross-reactivity between the two. If I had to choose between stockpiling amoxicillin or cephalexin, I would choose cephalexin. The combination drug, amoxicillin-clavulanate (Augmentin), is as strong against staph, but more expensive and harder on the stomach.
- **3. Ciprofloxacin** is useful for anthrax (which I've never seen), urinary tract and prostate infections (which are very common), and many forms of pneumonia and bronchitis. One of the more important and selective uses of ciprofloxacin is in combination with metronidazole for diverticulitis. This potentially life-threatening infection usually (or at least often) requires two antibiotics to resolve. (Levaquin and Avelox are a bit stronger than ciprofloxacin and could be substituted for this, but are <u>much</u> more expensive.) Ciprofloxacin is not used in women or children unless the benefit clearly outweighs the risk, although the risk of joint damage (seen in animals) appears minimal. Taking ciprofloxacin by mouth is nearly as effective as taking by IV.
- **4. Doxycycline** is useful in penicillin/amoxicillin-allergic adults for respiratory infections and some urinary/prostate infections. It is avoided in children and pregnant women unless the benefit

clearly outweighs the risk (of permanent tooth discoloration in children under the age of 8). Doxycycline is sometimes effective against penicillin-resistant bacteria. If I were limited to either doxycycline or erythromycin, I would choose erythromycin for stockpile.

- 5. Erythromycin is useful for most of the same infections amoxicillin is used for, and thus can be substituted in penicillin-allergic patients. However, erythromycin tends to cause the intestine to contract, often causing cramps or diarrhea. (This property is sometimes used to help patients with conditions that impair intestinal motility.) It can be safely used in children and pregnant women.
- 6. Metronidazole is an unusual antibiotic used for very specific infections. It is aimed primarily at anaerobic bacteria, primarily those found in the intestine. It is also used for certain STDs, including trichomonas. As mentioned above, it is very useful in combination with ciprofloxacin (or SMZ-TMP, below) for diverticulitis. It is the ONLY inexpensive antibiotic effective for *Clostridium difficile (c. diff,* or antibiotic-related) colitis. It is also effective against certain amoeba. This drug is not used in children unless the benefit clearly outweighs the risk.
- **7. SMZ-TMP** is a combination drug of sulfamethoxazole and trimethoprim. The latter antibiotic is used mainly for urinary infections. The sulfa component is effective against many respiratory bacteria and most urinary pathogens, although ciprofloxacin is somewhat stronger. The main reason to stockpile SMZ-TMP is due to its effectiveness against resistant staph (MRSA).

Of course, only the most understanding fellow-prepper physician is likely to prescribe all these in quantity. The list can be narrowed a bit, by dropping doxycycline (since erythromycin covers most microbes that doxycycline would kill, and can be used in young children) and amoxicillin (because cephalexin covers most amoxicillin-sensitive bacteria and has the benefit of effectiveness against staph aureus).

My top 5 antibiotics would therefore be:

- Cephalexin
- Ciprofloxacin
- Erythromycin
- Metronidazole
- SMZ-TMP

Of these, SMZ-TMP and ciprofloxacin have the most duplicate coverage, as do cephalexin and erythromycin. Since the intolerance of erythromycin is much higher than is allergy to cephalexin, I would favor cephalexin. Ciprofloxacin is stronger for intra-abdominal infections than SMZ-TMP, and is less likely to develop resistance. Although its use in children is a bit of a concern due to the question of joint pain (although this is rare), I would favor ciprofloxacin over than SMZ-TMP, even though SMZ-TMP is effective against MRSA. However, when the use of antibiotics is severely curtailed, antibiotic resistance will also decrease, and therefore MRSA will become less of a concern.

Therefore, my top 3 antibiotics to stockpile would be:

- Cephalexin
- Ciprofloxacin
- Metronidazole

Using these three alone or in combination would cover around 90% of the infections physicians commonly encounter, as well as several less-likely threats (including anthrax and C. diff).

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