

# Colds, Sore Throats, & Common Infections

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**Rule 44- "First things first, hide the women and children"**

*- Leroy Jethro Gibbs, NCIS*

**C**ommunicable diseases are common when people are packed close together, particularly in the late fall into deep winter.

The prepper should keep in mind two guiding principles of wintertime sickness: most contagious illnesses occurring in North America are caused by viruses, and viruses aren't killed off by antibiotics.

The black plague and cholera may reappear in Europe and parts of the third world, but hopefully won't surface in

America. Viral infections like Measles, Mumps, and Rubella are also unlikely to become a threat. Most of us and our children have been immunized.

Washing your hands and coughing into your elbow crease do more to prevent infections, than wearing surgical masks or isolating people with minor illness. Most of the viruses we are talking about are either spread by contact with an infected surface, or are airborne and carried by respiratory droplets. This is why soap and water and correct coughing technique are so important.

### **Common Eye Problems**

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Pink eye and corneal abrasions are among the most common ocular conditions encountered in the field.

**Pink eye** is usually caused by a virus, though rarely bacteria can be responsible. The white part of the eye, the sclera, becomes reddened from inflamed blood vessels that are normally invisible. The sclera is covered by a transparent layer, underneath which these vessels run.

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*Most colds and flu will appear after the initial stress of the disaster is over, and preppers have settled down and into a routine. The general stress a person is under until then, winds up the immune system and protects them for as long as possible. However this is a debt that eventually must be paid back. Illness becomes more prevalent at this stage.*

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Treatment involves anti-inflammatory eye drops, sometimes with antibiotics mixed in. These probably won't be available in times of global disaster, so patching the eye for a few days is the best that can be done. Wearing cotton gloves can help remind the person not to touch their eye, and inadvertently spread the disease to others.



Scratched eye, stained to take up green dye.

Looks bad but is harmless. Sub-conjunctival bleed

Pink eye! Note the streaks of red over the white area (sclera) and the watery to puss like discharge.

**Corneal abrasions** occur when the clear part of the eye, the cornea, sustains a minor scratch but produces major pain and tearing. We discussed this injury earlier, and said that patching for 24 hours is generally all that's needed for its resolution. Physicians will sometimes stain the eye with fluorescein, a dye which is taken up by the scratched area, and reveals the percentage of cornea damaged. If greater than 50%, the patch should be left on for 48 hours instead of 24. Because the dye won't be available to us, you'll have to decide on symptoms alone. So injuries consistent with larger abrasions should be patched for two days instead of one.

**Subconjunctival hemorrhages** look horrific, but are harmless. They can result from even the most minor of

traumas, including coughing. One of the blood vessels running between the clear covering and the white sclera breaks open, and a very small amount of blood spreads out encircling the cornea. It will change colors like a bruise before resolving in the following weeks.

**Sore Throats** Most people get these from time to time, especially if they have small children in public schools. Kids are walking petri dishes, often bringing germs home for everyone's enjoyment. Most causes are viral, but can sometimes be bacterial.

Medicine has struggled with how and when to treat sore throats for the past 50 years, but finally a global recommendation has been made: even if the sore throat is caused by bacteria, it should not be treated with antibiotics, unless it's strep.

Studies have clearly been shown **not** to speed the person's recovery. The exception is strep throat. But it's not treated to help the person get better, it's treated to reduce the incidence of related diseases that *streptococcus* can cause. Scarlet fever, rheumatic fever, post-streptococcal glomerular nephritis (inflammation of the kidneys,) even nervous tics and movement disorders can all result from a strep infection. This is why when you bring the kids to the doctors for a sore throat, they do a rapid strep test in the office. If it's negative, antibiotics aren't prescribed.

In the field it might be wise to give the person amoxicillin, as rapid strep tests are not going to be available. Remember to ask the person if they are allergic to penicillin

beforehand. Allergic reactions usually result in skin rashes, but in rare cases a type of shock called anaphylaxis can occur.



When you look into someone's throat, you may find they've had their tonsils removed, but they can still get strep and other types of infections. Tonsils are really aggregates of small lymph nodes, and some people have more than others (shown in the third picture to the right.) Unfortunately you can't tell what's causing the infection: virus, strep, or another bacteria. Not from its appearance alone.

Finally, remember that children younger than two don't get strep. The bacteria can't adhere to the throat without a special protein receptor the child makes. And that doesn't happen until they're about two-and-a-half years old.

***Ear Infections*** As with pink eye and sore throats, ear infections are usually self-limiting; meaning they'll resolve on their own without treatment. The reason we're considering all three, is because they make children cry. Military history is full of heartbreaking stories where children have given away the position of those hiding. And

of little ones suffocated by their parents to prevent it from happening.



Normal ear drum. No infection.

Perforated ear drum. Do not use lidocaine.

Infected middle ear. Note redness and puss.

Infected outer ear. Note the puss on outside

**Middle Ear Infections** While you probably won't be looking in the ears of children, an infection can be presumed from a fussy child tugging on the lobe. Most parents have sat up with a child through the night due to the pain infections cause. There's a solution. It's unapproved and unconventional... but it works.

If the child does not have ear tubes, or a suspected perforation of their eardrum, you can drop lidocaine into the ear canal while they lay on their side. Insert a cotton ball or foam hearing protector to help keep the anesthetic in. Mixing lidocaine with long acting bupivacaine can extend the pain relief for up to six hours. The anesthetics numb pain receptors on the eardrum, allowing everyone to sleep, or at least keep quiet in times of trouble.

This treatment should not be used if there's a hole in the eardrum, either from a perforation, or from an ear tube. The lidocaine will get into the middle ear where small bones transmitting sound are located. The medication may injure or even dissolve these structures.



In emergencies, and if you're sure the eardrum is intact, drop lidocaine in to numb the tympanic membrane.

For outer, or external ear infections, you can make up something similar to cipro drops by mixing Fish Flox in saline or lidocaine. Or you can use a topical antibiotic, and place it in the external ear canal.

Amoxicillin can be used for treating middle ear infections, but as with most antibiotics, bacterial resistance to the drug can be high.

**External Ear Infections** When you see crusting or puss like material coming out of the ear, the infection is probably not in the middle ear, but in the external canal. It can be from the middle ear, but only if the eardrum has ruptured releasing the material. In this case, the person commonly has some degree of pain relief, as the pressure causing the pain has been relieved. External ear infections usually cause swelling you can see, helping tell the difference between outer and middle ear infections. Adults typically get external ear infections, whereas middle ear infections are the domain of children.

**Dizziness and Vertigo** The last consideration of ear troubles involves one of the scariest conditions... vertigo. Colds and other conditions can cause inflammation in the balance centers of the inner ear. The person may feel fine,

when suddenly the world literally spins. Balance is lost, and person may become nauseated. The sudden and severe nature of this condition makes people think they're having a stroke, or that they have a brain tumor.

The anxiety this produces can uncouple a person, especially in the context of the collapse of civilization. The good news is that the worse the symptoms, the less likely it's anything serious. Tumors grow slowly, producing symptoms over time. Strokes can cause similar symptoms, but are rare and usually accompanied by other obvious neurological symptoms. Reassure the person. While the symptoms can last several weeks, they diminish and disappear over time. The vomiting they cause can lead to dehydration, and in the early stages fluid and electrolyte replacement may be necessary.

*The most violent vomiting, the kind with a calculable velocity of its own, is usually caused by food poisoning. Unlike other illnesses, this one is always preventable. But that fact alone still doesn't stop people from getting it. Let's see how it works:*