

National Park Service
U.S. Department of the Interior

Zion National Park



The Bad

Disease, Prevention, and Treatment



**Diseases, Prevention, and
Treatment Activity**

Cut apart for classroom activity.

Lyme disease
(bacteria carried by ticks)

Malaria
(protozoa carried by mosquitoes)

E. coli bacteria that
affects the intestine

Giardia
(protozoa that lives in water)

Athlete's Foot (a fungus)

Smallpox virus

Prevention: wear long pants and sleeves and
use a bug net when in tropical or
sub-tropical areas

Rhinovirus (common cold)

Prevention: boil or filter water

Strep Throat (bacteria)

Prevention: vaccine

Streptococcus
(bacteria in the mouth)

Prevention: wash your hands and keep your
immune system strong by eating healthy and
getting plenty of sleep

Prevention: wash your hands regularly and do not share toothbrushes or drinks with someone who is sick

Treatment: no treatment except vaccination

Prevention: brush your teeth regularly and cut back on sugary and starchy foods

Treatment: drink lots of liquids and get plenty of rest

Prevention: wear long pants and avoid walking through tall grass

Treatment: antibiotic such as penicillin

Prevention: make sure to wash all fruits and vegetables and fully cook meats, especially chicken

Treatment: antibiotic such as penicillin

Prevention: keep your feet clean and dry and change your socks regularly

Treatment: antibiotic such as penicillin

Treatment: chloroquine or another medicine that inhibits a parasite from using the host's blood cells

Treatment: drink lots of liquids and do not take any antidiarrheal medication to make sure the infection leaves your system as soon as possible

Treatment: filling or removing a dead tooth

Treatment: antifungal cream

Disease, Prevention, and Treatment – Answer Key

Note: Students will likely mix up some of the treatments between the bacteria and protozoa. Antibiotics such as penicillin will work for most of these though malaria is the exception. As long as the students can articulate good reasons for how they matched up the three parts, the exact answers can vary a bit. The most important thing is to make sure the answers make sense according to what the students know about microorganisms, i.e. an antibiotic cannot help treat a virus.

Disease	Prevention	Treatment
Malaria (protozoa carried by mosquitoes)	wear long pants and sleeves and use a bug net when in tropical or sub-tropical areas	chloroquine or another medicine that inhibits a parasite from using the host's blood cells
<i>Giardia</i> (protozoa that lives in water)	boil or filter water	antibiotics
Smallpox virus	vaccine	no treatment except vaccination
Rhinovirus (common cold)	wash your hands and keep your immune system strong by eating healthy and getting plenty of sleep	drink lots of liquids and get plenty of rest
Strep Throat (bacteria)	wash your hands regularly and do not share toothbrushes or drinks with someone who is sick	antibiotic such as penicillin
<i>Streptococcus</i> (bacteria in the mouth)	brush your teeth regularly and cut back on sugary and starchy foods	filling or removing a dead tooth
Lyme disease (bacteria carried by ticks)	wear long pants and avoid walking through tall grass	antibiotic such as penicillin
<i>E. Coli</i> bacteria that affects the intestine	Make sure to wash all fruits and vegetables and fully cook meats, especially chicken	drink lots of liquids and do not take any antidiarrheal medication to make sure the infection leaves your system as soon as possible
Athlete's Foot (a fungus)	Keep your feet clean and dry and change your socks regularly	antifungal cream