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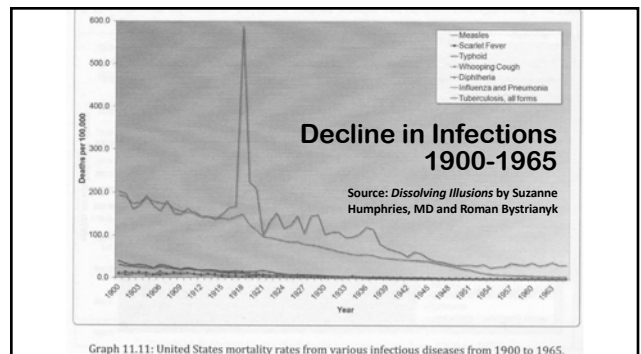


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### Just a Century Ago...

- Diseases like smallpox, typhoid, cholera, dysentery, diphtheria, scarlet fever, yellow fever, and tuberculosis (consumption) were rampant in cities in Europe and North America
- In 1900 the three leading causes of death were:
  - Influenza and pneumonia
  - Tuberculosis
  - Gastrointestinal infections
- Improved sanitation played a huge role in the decline of these infectious diseases
  - Water purification and sewage treatment
  - Waste management (garbage collection)
  - Refrigeration and other food preparation and preservation advances
  - Internal combustion engines instead of animals for transportation

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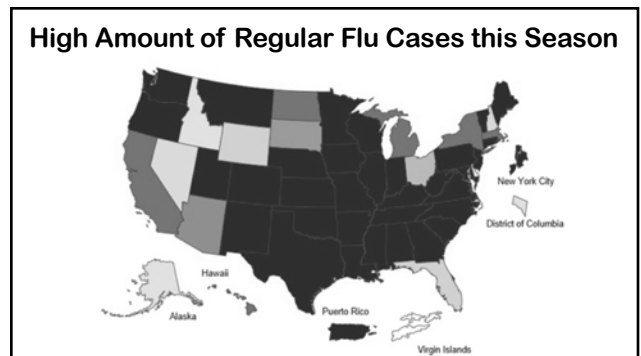


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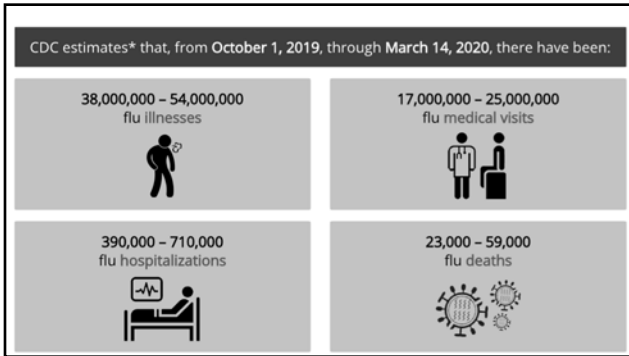
### Remember These Disease Scars?

- H5N1 (BIRD FLU)
- AVIAN FLU
- HIV/AIDS
- MRSA
- SARS
- EBOLA

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- A family of viruses that can cause illnesses such as the common cold, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS)
- The new coronavirus is known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
- The disease it causes is called coronavirus disease 2019 (COVID-19)

COVID-19  
**2019-NCOV**  
NOVEL CORONAVIRUS  
NCP

### What is a Coronavirus?

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### CDC Information on COVID-19

- Symptoms 2-14 days after exposure.
  - Fever
  - Cough
  - Shortness of breath
- Emergency warning signs include:
  - Difficulty breathing or shortness of breath
  - Persistent pain or pressure in the chest
  - New confusion or inability to arouse
  - Bluish lips or face

**CORONAVIRUS : CoV**

**SYMPTOMS**

**PREVENTION**

**RISK FACTORS**

**Human to Human Transmission**

**Animals to Human Transmission**

**PNEUMONIA**

**PHLEGM**

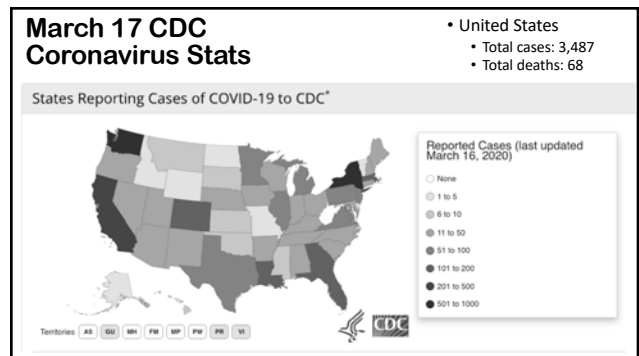
**BREATHLESS**

**COUGH**

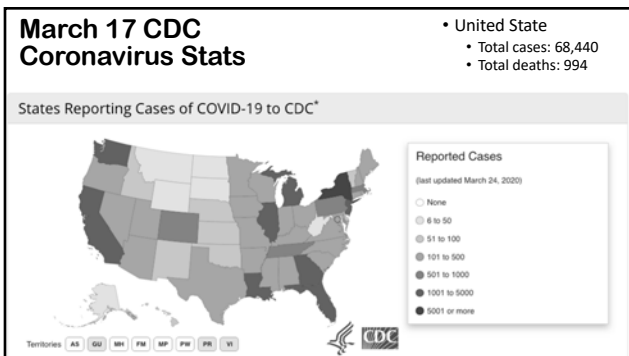
**FEVER**

**CHEST PAIN**

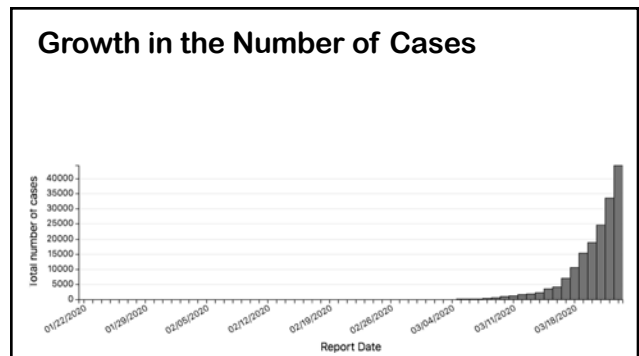
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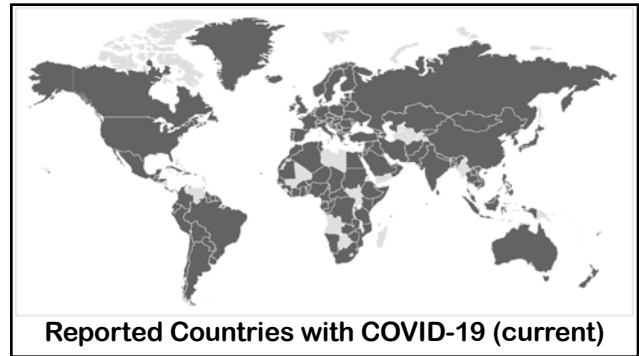
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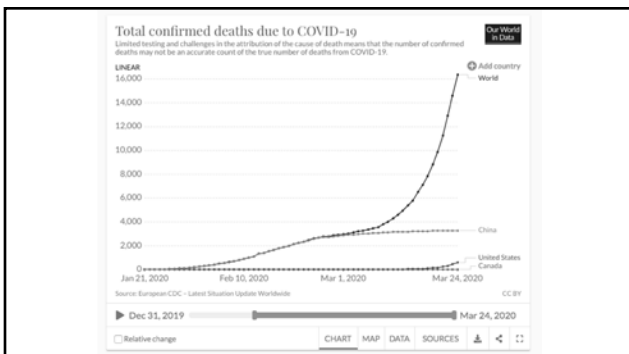
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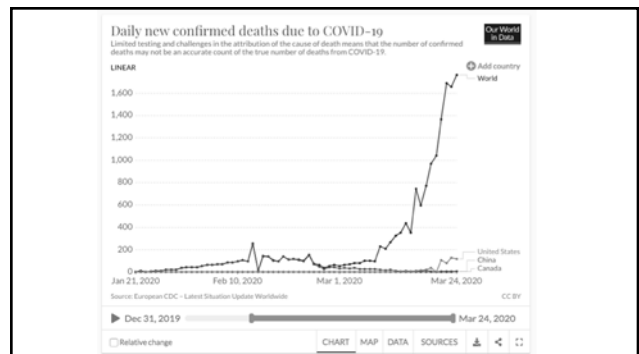
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**Some Interesting Stats (Mar 17)**

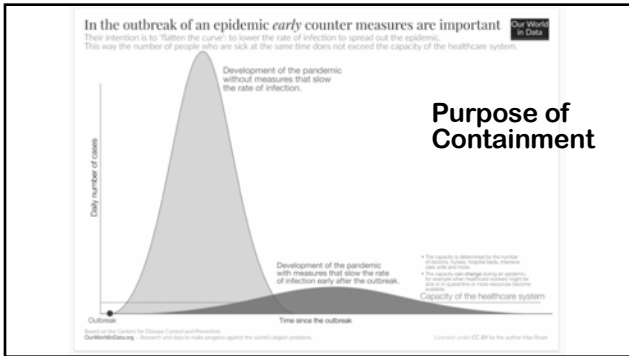
- The Italian government released numbers on the coronavirus last week. There were 1,809 new cases of the deadly disease reported in Italy on Sunday.
- The Italian government also recently released the percentage of deaths by age group.
  - 90+ years old: 6% of deaths
  - 80 – 89 years old: 42% of deaths
  - 70 – 79 years old: 35% of deaths
  - 60 – 69 years old: 16% of deaths
- 99% of the coronavirus deaths in Italy are people 60-years-old and older.
- And according to the BBC the the AVERAGE AGE of those who have died is 81!

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**Reasons for Quarantine**

- The virus is thought to be highly transmittable (contagious)
- It has a high hospitalization rate
- Death rate is higher than that for the normal flu
- There is concern that the disease could overwhelm the US Healthcare System, which is why the government wants to slow the spread of the virus
- It allows time to find treatments that can save lives

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**Chinese Coverup and World-Wide Transmission**

- It appears the Chinese government hid many of the facts about the viral outbreak, which delayed other nations from acting more quickly to prevent it's spread
- They may still be lying about what is going on in China
- Death rates in Italy, Iran and other countries with heavy Chinese tourism confirm the virus is an issue

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**Unanswered Questions?**

- How dangerous is the virus (really)?
- Was the virus man-made or a natural mutation?
- If man-made:
  - Was it released deliberately or by accident?
  - If deliberately, by who?
  - What objectives would a man-made pandemic help to further?
- Either way:
  - How do we protect ourselves from getting it?
  - What do we do if we are forced to stay in our homes for a period of time?
  - If hospital services were overwhelmed, are there things we can do to help ourselves?

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**Reducing Fear**

- Psychological (Think, don't panic)
  - Don't jump to conclusions
  - Keep present in your observations of the situation
- Knowledge
  - Understanding disease and what you can personally do about it
  - Having knowledge about how to handle emergencies
- Preparation
  - Having emergency supplies such as first aid kits, food storage and other supplies
  - Have Rescue Remedy, Distress Remedy for other aids for shock and fear on hand
- Faith
  - Having a personal relationship with God and knowing how to pray and get answers
  - Train yourself not to panic and lose your head

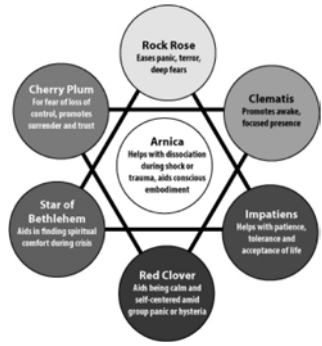
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### Distress Remedy or Rescue Remedy

- Can be very helpful for dealing with shock in acute stress
- May also be helpful for helping to resolve long term chronic stress
- Promotes clear thinking and a balanced awareness that helps a person handle stress positively



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### Herbs that Help Stress, Immunity and Respiratory Function

- Cordyceps
- Reishi or Ganoderma
- Ashwagandha
- Astragalus
- Gynostemma (Jiaogulan)
- Holy Basil



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### Have Faith Psalm 91

- |   |  |
|---|--|
| <p>1 Whoever dwells in the shelter of the Most High will rest in the shadow of the Almighty.</p> <p>2 I will say of the LORD, "He is my refuge and my fortress, my God, in whom I trust."</p> <p>3 Surely he will save you from the fowler's snare and from the deadly pestilence.</p> <p>4 He will cover you with his feathers, and under his wings you will find refuge; his faithfulness will be your shield and rampart.</p> <p>5 You will not fear the terror of night, nor the arrow that flies by day,</p> <p>6 nor the pestilence that stalks in the darkness, nor the plague that destroys at midday.</p> <p>7 A thousand may fall at your side, ten thousand at your right hand, but it will not come near you.</p> <p>8 You will only observe with your eyes and see the punishment of the wicked.</p> | <p>9 If you say, "The LORD is my refuge," and you make the Most High your dwelling,</p> <p>10 no harm will overtake you, no disaster will come near your tent.</p> <p>11 For he will command his angels concerning you to guard you in all your ways;</p> <p>12 they will lift you up in their hands, so that you will not strike your foot against a stone.</p> <p>13 You will tread on the lion and the cobra; you will trample the great lion and the serpent.</p> <p>14 "Because he loves me," says the LORD, "I will rescue him; I will protect him, for he acknowledges my name.</p> <p>15 He will call on me, and I will answer him; I will be with him in trouble, I will deliver him and honor him.</p> <p>16 With long life I will satisfy him and show him my salvation."</p> |
|---|--|

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### God Wins



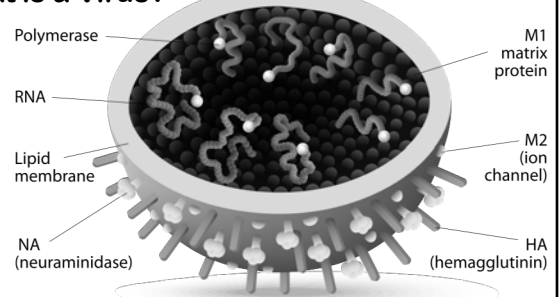
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### Understanding Viral Infections



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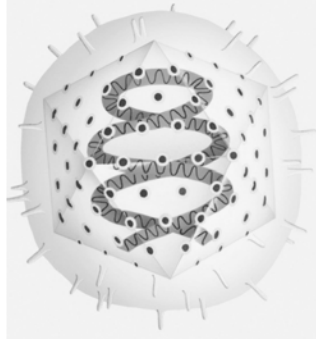
### What is a Virus?



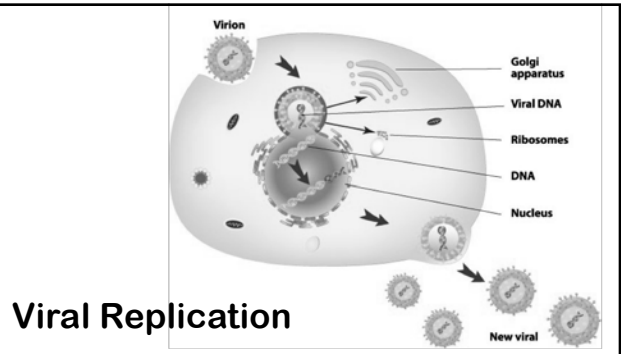
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### Are Viruses Alive?

- Viruses do not consume nutrients or produce waste
- They have no "life" outside of another cell
- Once inside a cell they hijack cellular processes that replicate DNA or RNA so they are replicated, causing disturbance of cellular function
- This means you can't "kill" a virus in the same way you would kill a bacteria or fungus



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### Viral Replication

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### Viral Diseases

- Colds
- Influenza (flu)
- Chicken pox
- Mumps
- Measles
- Herpes
- Smallpox
- Hepatitis C
- Epstein Barr
- SARS
- HIV
- Ebola
- Coronavirus (COVID-19)



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### Antibiotics Don't Work on Viruses

- Antibiotics only work on bacteria
- Most coughs, sinus problems, ear infections, sore throats and other contagious diseases are viral in nature
- There are no "broad spectrum" antivirals either in medicine or in herbalism
- The most effective "therapy" for viral infections is provided by the immune system



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### Antiviral Drugs

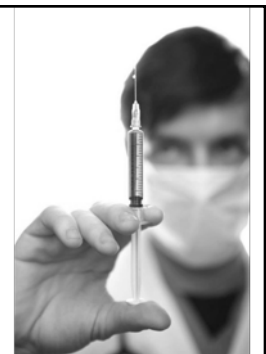
- Modern medicine has developed some antiviral drugs that can bind to specific viruses in a similar way to antibodies and render them inert or block their entry into the cell
- However, most drugs used to treat common viral infections are primarily designed to relieve symptoms and don't actually help the body get rid of the virus
- Herbs and nutrients are probably more effective than symptom relieving drugs as they help the body fight the virus



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### Vaccines

- Have been a primary tool of medicine for viral infections
- Viral fragments or "weakened" whole viruses are injected into the body so the adaptive immune system will build antibodies against them
- This can work if the immune system responds properly to the vaccine
- However, we can't depend on vaccines for every new virus that comes along



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### The Two Theories About Infection

<p><b>Germ Theory</b></p> <ul style="list-style-type: none"> <li>• Germs are a direct and immediate cause of illness</li> <li>• Healthy tissue is attacked by germs and weakened</li> <li>• Killing microbes will both prevent and cure disease</li> <li>• The type of “germ” (virus, bacteria, etc.) is important in deciding therapy</li> </ul>	<p><b>Biological Terrain Theory</b></p> <ul style="list-style-type: none"> <li>• Germs are a secondary effect of disease</li> <li>• Tissues become weakened, which allows germs to invade</li> <li>• Keeping tissues healthy will both prevent and cure disease</li> <li>• Strengthening the immune system will help the body fight off the infection whatever the “germ” is</li> </ul>
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### How the Body Deals with a Virus

<ul style="list-style-type: none"> <li>• <b>Innate Immunity</b> <ul style="list-style-type: none"> <li>• Macrophages in mucus membranes recognize viral material and eat it</li> <li>• Membranes flush irritants through coughing, sneezing, diarrhea, skin eruptions, etc.</li> </ul> </li> <li>• <b>Adaptive Immunity</b> <ul style="list-style-type: none"> <li>• Fever slows viral replication</li> <li>• If the virus makes its way past the innate immune system, the adaptive immune system produces antibodies that attach themselves to the virus to deactivate it</li> <li>• The adaptive immune system can also recognize cells that are hosting viruses and destroy them</li> </ul> </li> </ul>	
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### Preventing Infection

<ul style="list-style-type: none"> <li>• <b>Standard practices of good sanitation</b> <ul style="list-style-type: none"> <li>• Washing your hands</li> <li>• Keeping things clean</li> <li>• Covering your mouth when you cough</li> </ul> </li> <li>• <b>Keeping your innate immune system healthy</b> <ul style="list-style-type: none"> <li>• GI tract health</li> <li>• Good nutrition</li> </ul> </li> </ul>	
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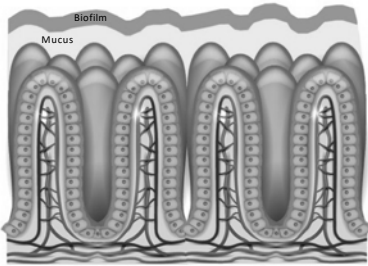
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### Mucus Membranes

- Also form a physically protective barrier against infection
- Mucus mechanically traps bacteria and viruses and prevents them from entering the body
- Coughing, sneezing, clearing your throat, sinus drainage and runny noses are part of this process
- Staying properly hydrated helps mucus membranes flush irritants properly

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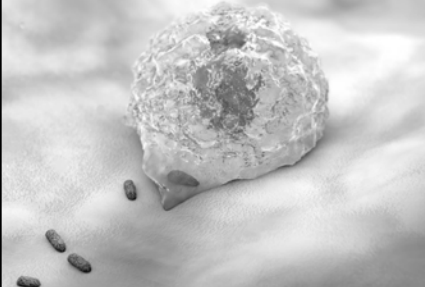
### Probiotics



- Bacterial biofilm is also part of mucus membrane protective barrier
- Good bacteria secrete lactic acid, which inhibits the growth of harmful bacteria and fungi
- They also compete with harmful organisms
- Eating fermented foods and keeping a good gut microbiome is a key to avoiding all infections

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### Macrophages



- The "big eaters" of the immune system
- They engulf and digest cellular debris, bacteria, viruses and other materials to eliminate them
- Present in large numbers in the mucus membranes
- They determine if something harmful has bypassed the first line of immune defense
- If so, they go on high alert and start gobbling up the offending material
- They can also call for backup from neutrophils and natural killer (NK) cells from the blood stream to assist the process

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### Natural Remedies to Boost Innate Immunity



- Vitamins A, C and D
- Zinc and Selenium
- Echinacea
  - Increases macrophage activity
  - Inhibits enzymes used by bacteria to break down connective tissue
- Astragalus
  - Helps resistance to viral infection
- Medicinal Mushrooms (Cordyceps, Reishi, Maitake)
  - Balance and regulate immune reactions to fight infection and reduce allergies and autoimmune reactions

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### Vitamins A & D



- Vitamin A strengthens mucus membranes making them more resistant to infection
- Vitamin D, and D3 in particular, also strengthen immunity and make a person less prone to viral infections
- Take 1-2 4,000 IU tablets of D3 and 1-2 Vitamin A&D (10,000 IU A/400 IU D)

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### Zinc and Selenium



- Low levels of zinc make you more susceptible to viral infections
- Studies suggest zinc can shorten the duration of colds and flu
- Zinc is involved in DNA replication
- Selenium may also be helpful for inhibiting viral infections

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### Vitamin C



- Vitamin C may also be helpful for combating viral infections
- Vitamin C is antioxidant and aids production of interferon, which the body uses to combat viral infections
- Although research results are mixed, many people find vitamin C helpful in combating colds and flu
- It is likely high doses of vitamin C will help most viral infections

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### Traditional Approaches to Disease

“Traditional medicine treats fever and other diseases by opening and closing the peripheral ‘vents’ of the body—the sweat pores, sebaceous glands, and capillaries. It does not attempt to ‘kill microorganisms’ directly. Instead, it dooms these critters by changing the environment in which they live.”

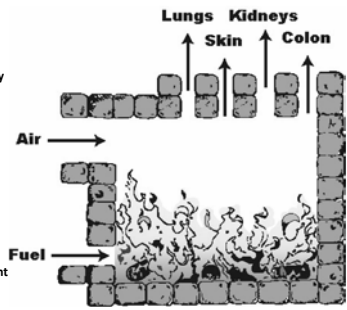
“...the medical knowledge of traditional healers is treated with disdain, as if they had no capacity for dealing with acute viral or bacterial fevers before the advent of antibiotics.”

—Matthew Wood, RH (AHG)

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### Support Eliminative Channels

- If the body has a low fever (101-103)
  - Don't try to bring down the fever
  - Use diaphoretics and sweat therapy
- If body is cleansing through the respiratory system
  - Expectorants and decongestants
  - Steam inhalation EOs
- If body is cleansing through the digestive system
  - Emetics
  - Charcoal or fiber
- If the body is cleansing through the skin
  - Drawing baths, cold sheet treatment
  - Blood purifiers or alteratives



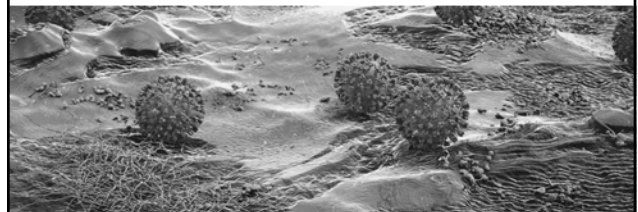
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### Sweat Therapy

- Sweating is the traditional therapy for viral diseases
- Use a hot tub, sauna, sweat bath or other technique to raise a sweat
- Use sudorific herbs like:
  - Yarrow, elderflower, peppermint
  - Boneset, blue vervain, vervain
  - Catnip, chamomile
  - Capsicum, ginger, horseradish

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**We Have No Practical Experience with COVID-19, So All Recommendations Are Speculations, Anyone Who Says Otherwise Probably Doesn't Know What They are Talking About**



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### My Specific Ideas



- Prevention
  - Use silver gel as hand sanitizer
  - Diffuse EOs in home or office
  - Take Immune Boosters
    - Medicinal Mushrooms
    - Vitamins A, C, D
    - Zinc
    - Immune Formulas
- Active Infection
  - Sweat bath therapy
  - Expectorants and Decongestants
  - Inhaling EOs in steam
    - Eucalyptus, Pine, Raventsara

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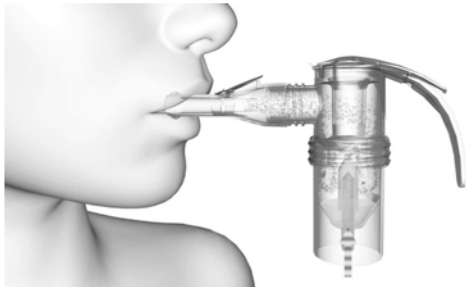
### Expectorants and Decongestants

- Dry Cough
  - Mullein
  - Marshmallow
  - Licorice Root
  - Astragalus
  - Cordyceps
- Damp Cough
  - Garlic
  - Horseradish
  - Wild Cherry bark
  - White Pine Bark



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### Nebulizing Silver



- The best way to use silver would be to nebulize it and inhale it several times a day
- Gretchen Mendell in New York told me about this and it seems to be the best idea for using silver

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### Being Prepared



EMERGENCY PREPARATION CHECKLIST

Section 1: Emergency Survival Items

- Water Containers
- First Aid Kit
- Torch
- Battery Operated Radio
- Batteries
- Tinned Food (non-perishable)
- Opener

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### Self-Reliance versus Dependence

“The extent to which people believe they have power over events in their lives. A person with an *internal locus of control* believes that he or she can influence events and their outcomes, while someone with an *external locus of control* blames outside forces for everything.”

• <https://psychcentral.com/encyclopedia/locus-of-control/>




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### Things to Consider about a Pandemic

- People’s over-reliance on antibiotics, disinfectants and vaccines to protect their health means they often give little thought to maintaining a healthy immune system
- A novel virus in a population of stressed, junk-food junkies could overwhelm the health care system
- It’s good to have some first aid supplies and herbs to be prepared to handle things in an emergency
- Even if you don’t get sick, what happens if there is a quarantine? Do you have supplies of water, food, toilet paper, etc. for 2-4 weeks?

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### Think Ahead



- Based on the area where you live, what are the most likely emergencies you might face?
  - Weather: Tornados, hurricanes, severe winter storms
  - Natural Disasters: Earthquakes, fires, flooding, tidal waves
  - Man-Made: Financial collapse, riots, shortages, quarantines
- Plan your supplies based on the most likely problems in your area

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### Assembling an Emergency First Aid Kit



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### Basic First Aid Supplies



- Bandages (small, medium & large – 10 of each)
- Sterile gauze pads (6 or more)
- Butterfly strips (10 or more)
- First-aid tape (2-inch width – one or two rolls)
- Latex gloves (5 - 10 pair)
- Kling wrap (self-adhering roller bandage – one roll)
- Elastic bandage – 3-inch width (one roll)
- Moleskin (for blisters) four 4" squares
- Safety pins (5 to 10)
- Syringe (1)
- Nettle and tweezers for slivers

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### Other Supplies



- Lip balm, sunscreen and insect repellent
- Small scissors
- Sharp knife
- Bandanas (can be used as a dust mask, sling or bandage)
- Antiseptic wipes or hand sanitizer
- Enema bag or syringe
- Hydrogen Peroxide and Rubbing Alcohol
- Over-the-counter pain medication
- Sterile gloves and face masks
- Matches, lighter, fire starters
- Flashlight, headlamp
- Prescription medications
- Emergency radio

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### Basic Natural Remedies

- Something for Stress: Distress Remedy, STRESS-J, Nutri-Calm
- Capsicum and lobelia (extracts or capsules)
- Activated charcoal (for diarrhea, food poisoning and insect bites)
- Homeopathic arnica (tablets and ointment)
- Iodine (Potassium Iodide, Iodoral, Lugol's Solution)
- Something for pain and inflammation (CBD, IF Relief, curcumin, etc.)
- Remedies for helping the immune system: Elderberry D3fense, Immune Stimulator, My Immune Defense
- Herbal Laxative: Cascara sagrada or LBS II
- Infection remedies: High potency garlic (and raw garlic), goldenseal, echinacea, berberine, Silver Shield and Silver Shield Gel
- Essential oils: Tea tree oil, peppermint, Tei Fu, eucalyptus, pine, myrrh, lavender
- Other remedies based on family needs


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Learn Some Local Herbs

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### Elderberry and Elderflower



- Traditional folk remedy for viral infections like colds and flu
- May also be helpful for fevers, sinusitis, viral bronchitis, coughs and congestion
- Inhibits Herpes Simplex virus
- Appears to work to inhibit viral reproduction in cells
- Research suggests it shortens duration of a cold

Photo by Steven Horne

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### Concern About Elderberry

important update about elderberry syrup and COVID-19 (coronavirus) from sacred ground herbals

Many people safely use Elderberry Syrup during cold and flu season to assist their immune function and lessen the severity & duration of symptoms.

COVID-19, the novel coronavirus, is new to us, to herbalists, and to the health care system. Recent discussion has led much of the herbal community to offer the following information and advice about its use during this time:

\*\*\*With COVID-19, severe disease occurs when the immune system goes into "overdrive" as it tries to control the infection. You may have heard this called a "cytokine storm". (Cytokines are cell signaling molecules that aid cell to cell communication in immune responses and stimulate the movement of cells towards sites of inflammation, infection and trauma)

\*\*\*Elderberry (the berries) may increase that response in patients experiencing severe COVID-19 illness. This is theoretical, based on its chemical compounds.

\*\*\*To be cautious, you may decide to stop taking Elderberry Syrup (gummies, etc) now, or if you have exposure to COVID-19 or fall ill with symptoms.

\*\*\*This syrup can be saved for several months by freezing it in a plastic container until you want to use it. Washing you all a safe and healthy Spring as we work together to get through this difficult time.


*Judith Millar, Herbalist Sacred Ground Herbals*

- This is theoretical, since we don't have real life experience with this, but the concern is that it will increase symptoms by upregulating the inflammatory responses
- My experience with elderberry is that it is a mild decongestant
- I usually use muscle testing to help determine remedies, which helps screen for bad reactions

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### Yarrow


- One of the best sudorific herbs
- Very helpful for acute viral infections, where there is fever present
- Combines well with elderflower and peppermint for this purpose
- Use with sweat therapy



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### Lomatium


- A very good antiviral agent helpful for:
  - Sinus, nasal and lung congestion
  - Sore throats
  - Hay fever, asthma
  - Bronchitis, pneumonia, tuberculosis
- Also used for chronic viral conditions:
  - HIV, HPV
  - Chronic fatigue
  - Mononucleosis
  - Viral pneumonia
  - Stubborn viral infections



Lomatium sp. from Wikipedia

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### Thuja or Arbovitae




- Primarily used for immune stimulation and as an antiviral agent for bronchitis, influenza, and cold/damp pneumonia
- Respiratory decongestant and expectorant for colds, coughs, bronchitis and other respiratory ailments
- Component of Vick's Vapor Rub
- Use small doses of tincture internally or use essential oil in steam inhalation

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### Basic Emergency Preparedness

#### Survival Priorities


1. Stay Calm
2. Stay Warm (or Cool)
  - Shelter
  - Clothing
  - Fire
3. Stay Hydrated
  - Water Storage
  - Emergency Sources of Water
  - Purifying Water
4. Stay Well
  - Primitive sanitation
  - Preventing infection
  - First Aid




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### Constructive Use of Fear

- Fear is a powerful tool of social control
- Most people willingly turn over their liberty to others who promise to "save them"
- Don't panic! Use fear to take thoughtful, constructive action
- Don't listen to rumors, research and get the facts
- Put things in perspective



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### "Be Prepared" Attitudes

- Awareness – learn to observe people and situations without preconceived ideas
- Self-Reliance – don't depend on others for your prosperity, protection, happiness, etc.
- Positive Attitude (Faith) – without denying the negative side, see the good side of people, situations, etc. and focus on that
- Simplicity – learn to separate needs from wants and what really creates happiness

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### Triple 4-40 Priorities


- 4 minutes (Air)
- 4 hours (Protection)
- 4 days (Water)
- 40 days (Food)



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### Basic Survival Supplies

- Air
  - Dust masks or bandanas
- Water
  - Store 2-3 gallons of water per person
  - Have something to purify water
- Protection
  - Clothing that can be worn in layers (cotton is good for hot weather; wool is a great insulator for cold weather; nylon is good for an outer layer or windbreaker, etc.)
  - Also have some materials for emergency shelter and warmth:
    - A tarp and some cord for pitching a shelter or a groundcover
    - Wool blankets or a sleeping bag



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### Emergency Food

- 72 hour supply of ready to eat food that can be put into a pack and taken with you
- 2-4 week supply of food in case you are stuck at home
- Store foods you eat and rotate them
- Most food lasts way beyond the "best by" date



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### Good 72-hour kit foods to store


- Crackers
- Nut butters
- Canned meat (tuna, sardines, etc.)
- Energy bars
- Nuts, trail mix
- Dried fruit (raisins, dates, etc.)



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### Other Supplies to Consider

- Emergency lighting
  - Flashlight, candles, lantern
  - Extra batteries
- Fire Starters
  - Lighters, matches
- Emergency Heating and Cooking
- Emergency cell phone charger
- Tools
  - Multi-Tool, knife, shovel
- Emergency Money
  - Cash, silver or gold coins
- Guns for hunting or self-defense



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### Question and Answer Period



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