

Viruses and Essential Oils

By Kristen Hasbun

Viruses have been in the news quite extensively lately, the topic on most people's minds being the H1N1 virus. It seems like you can not turn the television on or read a newspaper without getting bombarded with news on the virus. A lot of the information being reported about the virus is scary to most people, including me. The media is reporting about death from the virus, sicknesses due to complications from the vaccine, or even the fact that there were not enough vaccines to distribute to everyone. In the book "The Invisible Enemy" by Dorothy H Crawford, she talks about viruses and the rate of reoccurrence, "Flu pandemics occur on average every 10-40 years and since the last one was in 1968 we are surely in for another one very soon"¹. If this is true is H1N1 the pandemic we were waiting for?

The single biggest threat to man's continued dominance on the planet is a virus². With that being said, if there is an extensive outbreak it is imperative to make sure you and your family have the knowledge and are prepared to deal with the crisis.

There is an old saying, "coughs and sneezes spread diseases," I have heard this so many times and it is true. Since viruses which cause colds and flu grow in the nose and sinuses, it is not difficult to understand how quickly they spread. Viruses have an ability to adapt to changing environments and virus epidemics are no longer just a local problem. With increased air travel an infection can go from one community to a new country or continent in just one flight. When people are stressed, exhausted, or poorly nourished, they are more liable to succumb to viral infections. In our hectic day in times stress is also a big factor in people's lives. Trying to make ends meet with both parents working and children in daycare, people can't afford to get sick, literally. With stress being a major factor in lowering the immune system, no wonder why so many people get sick. Although, it is never really the case that stress makes you sick, or even increases your risk of being sick. Stress increases your risk of getting diseases that your defenses being overwhelmed by the disease, can not fight off.³

I think it is important to first learn a little about viruses so we can understand how they live and thrive. A virus is smaller than a bacteria and the smallest and simplest infectious agents identified to date.⁴ Viruses are found in almost every ecosystem on Earth, where ever there is life and they must invade a live animal, human, or plant for survival. These minute structures are the most abundant type of biological entity⁵. Viruses can spread easily in many ways, such as coughing, sneezing, in food, in water, intimate, or sexual contact with an affected person, or

exposure to infected blood. Most viral infections provoke an immune response that usually eliminates the infecting virus. So we do not get sick with every virus we come into contact with. Thankfully our immune system (immune response) gives us immunity to specific viral infections. Viruses can not be treated with antibiotics so an immune response is important in fending off the viruses. Antibiotics are often prescribed for viral infections (the common colds and flu for example) which they do nothing to help. The only thing antibiotics are helpful for are to avert a secondary infection from bacteria.⁶

Once the virus has entered into the body it goes through a replication cycle. The replication cycle is made up of different stages. The first being attachment of the virus to a specific cell surface, like puzzle pieces. If the virus does not fit it moves on to a new cell. The virus must fit in order to invade the cells of the body. The second is penetration or viral entry into the cell. The third is uncoating, where the outer coat of the virus is broken down and the viral enzymes are exposed to the host cells. The fourth is replication, where the virus makes copies of itself and combines with the host cell. Basically taking over the host cell and forcing it do what the virus wants it to, ultimately trying to shut the cell down. The final cycles are assembly of virus particles and then releasing of the viruses from the host cell by lysis, the process that kills the host cell and destroys it. If the virus is successful in the replication cycle and your body is not able to fight off the virus sickness is inevitable.⁷ The virus is very time efficient, and can infect a host within minutes or hours causing diseases and other sicknesses.

Virus examples are the common cold, influenza, chicken pox, herpes, AIDS, warts, and shingles, to only name a few. Around the world colds strike more frequently than any other viral infections.⁸ Viruses are also an established cause of cancer in humans and other species.⁹ Multiple Sclerosis is also believed to be caused by a virus. But scientists are not exactly sure what virus is to blame. Some viral infections do not cause disease at all and others kill rapidly but between these two extremes there is a spectrum of possibilities. The best strategy for each virus depends on its method of circulation, incubation period, site of infection, time taken to reproduce, and symptoms it causes. There is a category of viruses that after initially affecting you can go latent. Latency means that the virus, once burrowing into some of your cells, goes into hibernation for a while, just lurking near your own cellular DNA, but not yet replicating itself. At some later point, something triggers the dormant virus out of latency and it reactivates. After going through a couple rounds of replication the now larger number of viral particles burrows into your cells and go latent again. Such is the case with the herpes viruses. The viruses don't just reactivate at any time, they wait until your immune system is suppressed, and then replicate.¹⁰

There are 3 different parts of your immune system that will attempt to render the viruses inoperable, the innate immune system, adaptive immune system, and cell mediated immunity. The body's first line of defense against viruses is the innate immune system. This includes cells and other mechanisms that defend the host from infection in a non-specific manner. These cells recognize and respond to pathogens. But unlike the adaptive immune system, it doesn't give long-lasting protective immunity to the host. With the innate immune system, inflammation is one of the first responses of the immune system to infection or irritation. Inflammation response is characterized by the following symptoms: redness, heat, swelling, and pain.¹¹ The Adaptive immune system is where cells and processes in the body eliminate or prevent disease causing cells from taking over and causing sickness. Your body prepares itself for future challenges by recognizing and remembering specific disease causing cells, and mounting a stronger attack each time the virus is encountered. Your body will produce specific antibodies that bind to the virus and render it non-infectious. The first time you are infected by a virus it takes 5 to 10 days to produce antibodies so the virus has time to multiply sufficiently to cause symptoms. But once the antibodies are established they survive a lifetime and are ready to react quickly and prevent disease the next time the same virus comes along.¹² Cell mediated immunity involves T cells. T cells, or T lymphocytes, play an important role in cell-mediated immunity. They are white blood cells that are activated when a foreign cell is present. They attack and kill the invading cell.

Prevention and treatment of viruses include vaccines when or if available to provide preventative immunity to infection and antiviral drugs that selectively interfere with viral replication. But the vaccinations and anti-viral drugs do not guarantee that you will not get sick, i.e. a flu vaccines, and sometimes cause serious side effects. The problem with vaccinations is that they are strain specific so when a new strain appears the current vaccine is useless. But several strains can be included in a vaccine. For the vaccine to be effective it must include the upcoming winter's viral strain. This requires a certain amount of guess work on scientist part. Producing a vaccine is difficult and expensive. Even today production of a new vaccine takes several months to manufacturer.¹³ In February of each year, scientists meet in Geneva to consider their data (on flu viruses) and recommend the cocktail of flu strains to be included in the world wide vaccine for use the following winter. Once this is agreed upon it takes 6-8 months to prepare the vaccine and then in October each year a new vaccine is released.¹⁴

There are other ways to help protect yourself against viruses and to maintain a strong immune system to fight off the viruses. Some of them include eating a healthy diet (no processed foods), regular exercise, frequently washing hands, taking vitamins, herbal remedies and plant based essential oils. The use of herbs and essential oils has been used for many thousands of

years to help prevent the spread of diseases and alleviate symptoms of sickness. From the Egyptians, Greeks, Romans, and Persians, the use of aromatherapy has been historically proven and documented. Hypocrites, “the Father of Medicine”, studied the beneficial effects of hundreds of scented plants and herbs. He believed that good health can be promoted with aromatic baths and (essential) oil massage”.¹⁵ The utilization of plant essences to harmonize, balance, and promote the health of the body, mind and spirit is called Aromatherapy. Aromatherapy is both a preventative approach as well as an active treatment during acute and chronic stages of illness or 'dis'-ease. It is a natural, non-invasive treatment designed to affect the whole person not just the symptom or disease and to assist the body's natural ability to balance, regulate, heal and maintain itself by with the correct use of essential oils.¹⁶ Aromatherapy is best suited for treating infectious illnesses such as viruses. If we take into account how quickly essential oils are both absorbed by and eliminated from the body, it is not surprising that Aromatherapy is most effective when quick intervention is needed, as is the case with infectious illnesses.¹⁷

Influenza/Cold/Fever

The first thing to remember is that treatment is most effective if started at the very first signs of infections. A lukewarm bath with 3 to 4 drops of anti-viral essential oil (Lavender, Ravensara, Eucalyptus, or Tea tree, or you can use a mixture of Lavender and Eucalyptus, using 2 drops of each), will usually provoke profuse sweating, followed by a deep, restful sleep. This treatment alone very often will be enough to avert a full blown attack of flu completely, although it is a good idea to repeat the bathing for the next 2 to 3 days. These essential oils act in two ways, by both attacking the virus itself, and stimulating the immune response. Between the time when the virus enters the body and the time when the person begins to feel ill, the virus reproduces itself rapidly. No reaction is experienced until the number of viruses in the body reaches a certain level. If the immune system is working at maximum efficiency, the invading virus may be neutralized before it can reproduce sufficiently to make the person feel ill. A person is said to have good resistance to infection if sickness is averted, and this explains why some people catch colds or flu in an epidemic and others do not. At this point where the first symptoms of illness are felt, all the defense mechanisms of the body will be working at full tilt, and an antiviral essential oil will reinforce that effort. The effect of an essential oil bath can be increased by taking a steam inhalation, or this can be done if you are unable to take a bath. If this sort of intervention does not stop a flu attack from developing it will almost certainly reduce its length and severity. This will also help to prevent secondary infections of the respiratory tract by bacteria. Bacterial infections are the greatest risk of true influenza, and were responsible for thousands of deaths in

past epidemics. Clove essential oil, which has been used in epidemics for hundreds of years, can be used to diffuse (by a diffuser or a few drops on a tissue) in the sick persons room.¹⁸ I like to diffuse a blend of Sweet Orange, Lemon, Clove, and Bergamot. It is uplifting, cleansing, immune stimulating, and helpful to prevent spreading of the infection to other family members. A few essential oils are powerfully anti-viral, the most important being Bergamot, Eucalyptus, Ravensara, and Tea Tree. Of these Ravensara and Tea Tree are probably the most powerful. They also stimulate the body's immune response to infection.¹⁹ Fevers are a normal response to your body defending itself from infections and activating your body's immune system. It is not always best to medicate a fever. The reason for the fever in the first place is to fight off the infection, as the infection can not survive in the body's high temperature. Most of the bacteria and viruses that cause infections in thrive best at 98.6°F temperature. So unless the fever is higher than around 103°F it is generally safe to allow the fever to take its course. (If you have a fever higher than 104°F it is best to seek medical attention.) There are essential oils that will actually help to reduce the body's temperature. They are Basil, Chamomile, Cypress, Juniper, Lavender, Peppermint, Rosemary, and Tea tree will all induce sweating if the body needs to sweat. It is interesting to note that none of these will make you sweat excessively when the body is on a normal state.²⁰ Again, a bath taken in lukewarm water, not too hot or too cold, with a few drops of any of the above essential oils (or a blend of two or three oils) will help with the fever. Or a few drops of body cooling essential oils such as Eucalyptus, Lavender, or Peppermint can be placed on the bottom of each foot. Patient's feet can also be placed in a lukewarm foot bath with a few drops of the above essential oils added to the water. Foot baths are very good for conditions of the head such as headache, migraine, colds, and facial neuralgia. They are also good for fatigue and congestive disorders. When taking a foot bath, care should be taken to keep the rest of the body warm.²¹ In general, the essential oils noted to be most useful for influenza are Cinnamon, Eucalyptus, and Black Pepper.²²

Other Viruses

Chicken Pox and Shingles -Bergamot and Eucalyptus oils, which are both anti-viral, were widely used against chicken pox before Tea tree essential oil, although it is also a good plan to alternate Tea tree oil with the other two oils. If the child is old enough to be treated with essential oils (4 years old) you can use any of these essential oils in baths, sprays, and dabbing lotions to reduce the itching. With a small child, it is easier to immerse the whole body in a lukewarm bath every few hours than to try to dab lotion on each blister. Use 2 drops of Tea tree with 2 drops of Chamomile to reduce itching or try 1 drop of each Bergamot, Eucalyptus, Chamomile, and

Lavender. For older children you can make a lotion with 5 drops each Tea tree, Chamomile, and Lavender added to 50 ml of witch hazel. Shake thoroughly and add to 50 ml of rosewater (rose hydrosol) or distilled water and dab on the blisters as often as needed to reduce itching. Blisters treated in this way heal much faster than with traditional remedy of calamine lotion which clogs the pores and in fact slows down the healing.²³ Tea tree essential oil can be dabbed on the first signs of a burning sensation that precedes the blisters. Tea Tree is also effective when mixed with alcohol (vodka). Blisters of shingles and chickenpox can both be treated the same way.²⁴ Shingles, often appears in a band around the torso. It is caused by the same virus as chicken pox (herpes zoster) which can lie dormant in the body after an attack of chicken pox, and flare up many years later, usually in adult life, and most often when the person is stressed or physically run down. The viruses affect sensory nerves before they enter the spinal cord, and cause clusters of blisters on the area of the skin by the affected nerves. These blisters can be very painful, and the pain is usually felt before the blisters appear. It might be accompanied by a fever for a few days, but this is not always the case. After the blisters have disappeared, pain may persist, sometimes for many weeks or months with fatigue and general debility. The essential oils of Bergamot, Eucalyptus, and Tea tree are very helpful in easing pain and drying the blisters. These oils are analgesic, and have an anti-viral action, and they seem to work better in combination with each other rather than individually. Bergamot is also an antidepressant and used for anxiety associated with shingles and is also active against the Herpes zoster virus. If the area of blisters and pain is small a 50/50 blend of Bergamot and Tea tree can be applied neat. A Soft paintbrush can be used and will cause the least amount of pain when applied. If a large area is affected, you might either make a solution of these essential oils in alcohol, or use them to add to a bath. A combination of painting the blistered and painful area several times a day, and an aromatic bath at night is probably the most effective. Where pain persists long after the blisters have disappeared, Lavender and Chamomile oils can be alternated with, or substituted for Bergamot, Eucalyptus or Tea tree or a blend such as Bergamot and Lavender can be used.²⁵

Verrucae and warts – Lemon oil or Tea tree can be used neat directly on the warts and then covered with bandage tape. This should be reapplied 3 times a day if possible. It may take several weeks before the wart is gone. The wart will raise and look like it is getting bigger. But in reality it is coming up from the root and will eventually fall off or disappear if you are consistent with treatment.

Immune stimulants

Ravensara (*Ravensara aromantica*) is an antiviral and immuno-stimulant essential oil. It is a multi-action oil, like Lavender. Ravensara is safe and can be used on anybody, including children. It is particularly effective against the flu virus, especially if used on the first signs of shivering.

It is good for all respiratory tract infections, such as sinusitis and catarrh (also earache when it has originated with nasal catarrh)²⁶ I have had great success with blending the essential oils Frankincense, Palmarosa, Tea Tree, Eucalyptus radiata, and Ravensara aromantica together. The scent is pleasant and does not smell as medicinal. It will help keep away sickness and boost the immune system at the same time.

It is important to note that two people may receive the same treatment for the same condition, one gets healed and the other does not. There must be a difference between the two, and since it is not in the disease or its treatment it must be in the patients themselves. Our personalities, our attitudes, and our bodies are so varied, it is surely not surprising to expect that we need individual treatment when we are sick. When using essential oils we must consider all the present symptoms and other factors, whether psychological or physical. There is an essence – or blend of essences to match every disease pattern. Our task is to find the correct one for each individual.²⁷

Viruses do not discriminate. The color of your skin, your ethnic background, whether you are rich or poor does not matter. If you are infected with a virus and your immune system can not fight it off you will inevitably get sick. Having a few key essential oils in your household can help to protect you and your family against unwanted sickness. Lavender, Eucalyptus radiata, Tea tree, and Lemon essential oils are used the most in my family. It is advantageous to have plant essences on hand in your medicine cabinet. They have multiple uses, affordable, and not harmful to our bodies or the environment.

End Notes

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2. Crawford, Dorothy, “The Invisible Enemy, A Natural History of Viruses” (2000) Quote from Nobel Prize Winner Joshua Lederberg, pg.2
3. Why Zebras don’t get ulcers? Robert Sapolsky third edition 2004, pg 15
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6. Aromatherapy A-Z Patricia Davis revised 1995 and reprinted 1997 Pg 27-28
7. Wikipedia, www.wikipedia.com, Definition of a virus.
8. Crawford, Dorothy, “The Invisible Enemy, A Natural History of Viruses” (2000) pg 108
9. Crawford, Dorothy, “The Invisible Enemy, A Natural History of Viruses” (2000) pg 144-145
10. Why Zebras don’t get ulcers? Robert Sapolsky third edition 2004, Pg 169-170
11. Wikipedia, www.wikipedia.com, Definition of an innate immune system
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14. Crawford, Dorothy, “The Invisible Enemy, A Natural History of Viruses” (2000) pg 100
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