



**THERAPEUTIC
MEASURES
FOR
COVID-19
INFECTION**

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The following suggestions are intended to be used for general information only and should not replace the advice of your health care provider for individual care. Do not add, delete or substitute medications or supplements without discussing the decision first with your health care provider.

MONITORING THE COURSE OF YOUR INFECTION

Keep detailed written records of your daily progress to share with your health care provider and to help both you and your care provider make decisions about when to seek further care.

WEIGHT: Weigh yourself first thing each morning before eating or drinking.

Record your weight. Call your healthcare provider if you have a weight gain or weight loss of over 3 pounds.

BLOOD PRESSURE: Take your blood pressure three times a day-- about every 8 hours and record it. An automatic blood pressure cuff can be purchased at your local pharmacy and is also available on the Internet at Amazon.com. An example of a blood pressure monitor and cuff is the **OMRON 3 SERIES®** blood pressure monitoring device with cuff.

Call your healthcare provider if the top figure (systolic) of your blood pressure is over 170 mm Hg or less than 100 mmHg. Call your health care provider if the bottom figure is above 110 mm Hg.

TEMPERATURE: Take your temperature every eight hours— early in the morning, midday, and at bedtime. Keep a written record. Use a no-touch thermometer. An example of a no-touch thermometer is *iHealth PT3®*. The thermometer is available on the Internet from Amazon.com for \$54.98.

OXYGEN SATURATION: Purchase a pulse oximeter (example: Santa Medical Fingertip Pulse Oximeter—available on the Internet at Amazon.com.)

Check your blood oxygen saturation by slipping one of your middle fingers into the oximeter clip. Perform this test a minimum of once every eight hours with the pulse oximeter or anytime that you feel short of breath.

INTERPRETATION OF OXYGEN SATURATIONS
BREATHING ROOM AIR

- **OVER 94 (NORMAL SATURATION)**
- **90--94 (BORDERLINE SATURATION) NOT DANGEROUS**
- **87--89 (LOW SATURATION) RECHECK YOUR SATURATION EVERY HOUR OR MORE IF YOU ARE SHORT OF BREATH**
- **85--86 (DANGEROUSLY LOW SATURATION) NOTIFY YOUR HEALTH CARE PROVIDER IMMEDIATELY**
- **80--84 (SEVERELY LOW SATURATION) GO IMMEDIATELY TO THE HOSPITAL**
- **LESS THAN 80 (LIFE-THREATENING) CALL 911 AND SEEK EMERGENCY MEDICAL CARE**

NOTE: These are general interpretations. Your healthcare provider may adjust these values and your course of action based on other health conditions that you may have.

OTHER "ALARM" SIGNS AND SYMPTOMS

Remain alert for any of the following signs or symptoms which may indicate a worsening of your infection. Contact your healthcare provider if any of the following occur:

- Bluish appearance of your lips or face
- Severe and constant pain or pressure in your chest
- Extreme difficulty breathing (gasping for air or cannot talk without catching your breath)
- Severe and constant dizziness or lightheadedness
- Serious disorientation (acting confused) as described by witnesses
- Unconscious or very difficult to wake up (as described by witnesses)
- Slurred speech (new or worsening)
- Signs of low blood pressure (too weak to stand up, lightheaded, feeling cold, pale, or having clammy skin)

PROBIOTICS:

No probiotics have been shown to prevent or treat COVID-19 or inhibit the growth of the COVID-19 virus. Some studies have suggested that certain specific strains of probiotics can reduce the incidence and duration of common upper respiratory tract infections, but there has not been any high quality evidence to confirm this.

AVOID THE FOLLOWING:

- Avoid medicated nasal sprays, especially those containing corticosteroids, if possible. Salt water (saline) nasal sprays are permissible.
- Avoid wearing contact lenses as much as possible. If you wear contact lenses, try to use daily disposable lenses, if affordable.
- Avoid drinking alcohol.
- Avoid using any tobacco products.
- Avoid vaping.
- Avoid recreational drugs.
- Avoid taking acid reducing medications, if possible. Examples include:
 - AcipHex (Rabeprazole)
 - Axid (Nizatidine)
 - Dexilant (Dexlansoprazole)
 - Nexium (Esomeprazole)
 - Pepcid (Famotidine)
 - Prevacid (Lansoprazole)
 - Prilosec (Omeprazole)
 - Protonix (Pantoprazole)
 - Tagamet (Cimetidine)
 - Zantac (Ranitidine)
 - Zegerid (Omeprazole/sodium bicarbonate)

Before stopping any prescription medication, confer with your healthcare provider.

NUTRITIONAL SUPPLEMENT AND MICRONUTRIENTS

VITAMIN D3

As soon as the diagnosis of COVID-19 infection is established, begin taking Vitamin D3 (over the counter) 5000 IU softgels. For the first 5 days take 2 softgels (total of 10,000 IU) each day. On day 6, and thereafter, take 1 softgel (5000 IU) for and additional 30 days.

DAILY MULTIVITAMIN Take a daily multivitamin (examples, Centrum Silver One a Day).

TREATMENT OF FEVER

Because fever helps the body defend against infection, and because fever itself is not dangerous (unless it is higher than about 106° F (41.1° C), there is some debate as to whether fever should be routinely treated. However, those with a high fever generally feel better when fever is treated. Individuals with heart or lung disorders and those with dementia are considered to be at particular risk of complications with fever and should probably be treated.

The most widely used medications to treat fever are acetaminophen (Tylenol®) and non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, and naproxen. Most authorities suggest that treatment be initiated with acetaminophen rather than NSAIDs.

Adult dosing:

- 650 milligrams of acetaminophen every 6 hours (not to exceed 4,000 milligrams in 24 hours)
- 200 to 400 milligrams of ibuprofen every 6 hours

Many over-the-counter cold and flu preparations also contain acetaminophen. Individuals must be careful not to combine acetaminophen and other preparations containing acetaminophen. High doses of acetaminophen can be toxic and result in liver failure.

Other cooling measures to control fever include showering with tepid water. Sponging with alcohol, however, is **not** recommended since alcohol can be absorbed through the skin and has potential harmful side effects.

TREATMENT OF NAUSEA

Drugs to relieve nausea are known as antiemetics. Remedies that may be effective for home use without a prescription include the following:

- Antivert (motion sickness tablets). Follow directions on the container.
- Dramamine (motion sickness tablets). Follow directions on the container.
- Vitamin B6 (pyridoxine) may be taken 50 mg every 12 hours.
- Ginger tea
- Peppermint tea
- Blended ginger and peppermint tea
- Ginger ale
- Sea-Band® anti-nausea accupressure wristbands

Prolonged episodes of vomiting (or diarrhea—or fever) may lead to dehydration and/or electrolyte imbalance. Your healthcare provider should be notified and prescription medications may be required or administration of intravenous fluids.

TREATMENT OF DIARRHEA

A significant number of individuals who develop COVID-19 infection will experience diarrhea and/or nausea, vomiting or abdominal pain as the first symptom(s) of COVID-19 infection.

Over-the-counter drugs to treat diarrhea include adsorbents (for example, kaolin-pectin, Kaopectate), which adhere to chemicals, toxins, and infectious organisms. Some adsorbents also help firm up stool. Follow directions on the preparation.

Bismuth may also help control diarrhea. Bismuth can be found in the over the counter preparation, Pepto-Bismol®. Bismuth undergoes a normal chemical reaction that turns the stool black. Follow directions on the preparation.

Bulking agents that are commonly used for chronic constipation, such as Metamucil® and Citrucel®, can sometimes help relieve chronic diarrhea as well. Follow directions on the preparation.

TREATMENT OF COUGH

STEAM INHALATION: Steam inhalation using a vaporizer is commonly thought to reduce cough. It is a widely used home remedy that may open nasal passages and obtain relief from viral infections. Steam therapy involves the inhalation of water vapor. There is no scientific evidence, however, that steam inhalation will reduce the effects of COVID-19 infection but the treatments may offer symptomatic relief.

The warm, moist air is thought to work by loosening mucus in the nasal passages, throat, and lungs. To avoid reinfection with the virus, wash the water container and filter system every day after each use. Follow the cleaning directions on the unit. One popular model is the Vicks Steam Inhaler V1200®.

Other over the counter topical treatments, such as cough drops, syrups and lozenges, are also available for temporary relief of cough symptoms.

Coughing that does not respond to over the counter medications and home remedies may require prescription codeine containing medications. These symptoms should be discussed with your primary care provider.

OTHER TREATMENTS

Green Tea Formulation:

There are no published studies that have proven that green tea is effective against COVID-19 infection. Manukah honey, however, is recommended as one of the additions to the green tea formulation has been shown to have an antiviral effect in other viral illnesses. The following green tea formulation contains four active ingredients:

- **Green tea:** Studies on green tea suggest that it may reduce the permeability of the intestinal lining and reduce the chemicals that are associated with inflammation.
- **Inulin-fructo-oligosaccharides**—a prebiotic chemical that nourishes the growth of intestinal microbes.
- **Wheat dextrin**—a prebiotic that nourishes microbes (not recommended as an ingredient, however, in those who have been diagnosed with celiac disease or have wheat sensitivity.)

- **Manucha honey**—Manucha honey contains microbial accessible and fermentable carbohydrates (prebiotics) that improve the quality and microflora of the human intestinal tract.

Manuka honey comes in different grades. The grading system was developed by the United Manuka Factor Honey Association in New Zealand. Every batch of honey must be tested first by the UMF to be labelled authentic Manuka honey.

There are three key markers that UMF tracks. Based on the concentration of chemicals in the honey it is given a UMF potency score.

- Low grade Manuka honey has a UMF grade of 5+ to 10+.
- Medium grade Manuka honey has a UMF grade 10+ to 15+.
- High grade Manuka honey has a UMF grade of 15+ to 20+.

A Manuka honey with a UMF grade of 24+ is considered superior and is rarely available. Other grades of Manuka honey can be purchased at various places on the Internet. It is readily available from iHerb.com. All authentic Manuka honey will carry a UMF score on the container.

For preparing this formulation, a Manuka honey with a UMF score of 15 or more is recommended.

Potential side effects in sensitive individuals

Caffeine: The tea leaves in green tea contain caffeine. Leaving the tea bag in the water (steeping) for longer periods of time, will deliver higher concentrations of caffeine which can result in heart palpitations or jitteriness. Steeping for only about 2 minutes is recommended. The steeping time may be adjusted based on individual reactions, if any.

Benefiber® (wheat dextrin):

Sensitivity to wheat is a possible side effect as noted before.

PRONING

Proning is the process of turning from back onto abdomen (stomach) so the individual is lying face down. The maneuver may be beneficial in patients with low oxygen saturations and is frequently used for patients who are hospitalized. This position is felt to allow for better expansion of the lung and enhanced removal of secretions which may lead to improved oxygenation.

A variation that calls for repeated changes in position to improve oxygen saturation might be considered in patients at home with low, but not dangerously low, oxygen saturations who are able to adjust their own position, and can communicate on their own. Patients can follow the described changes in position shown below, as tolerated. While the evidence of improvement is far from robust, this technique is currently being recommended and has sound physiologic basis.

Avoid spending a lot of time lying flat on your back. Lying on your stomach and in different positions will help your body to get air into all segments of your lungs.

Try to change your position every 30 minutes to 2 hours. If possible, try to adhere to the following routine:

30 minutes – 2 hours: lying on your belly

30 minutes – 2 hours: lying on your right side

30 minutes – 2 hours: sitting up

30 minutes – 2 hours: lying on your left side

MEASURES TO HELP AVOID SELF-REINFECTION

- To avoid self re-infecting, change and wash sheets and pillow cases daily.
- To avoid self re-infecting, change and wash night clothes (pajamas) daily.
- Wash clothing in hot water with household washing liquid or powder.
- Take a shower daily, if possible. (Do not take baths) The effects of the COVID-19 virus may result in profound fatigue requiring enormous effort to carry out simple daily measures of hygiene and nutrition. Both are critically important, however, in overcoming this illness.
- Shampoo your hair daily.
- Wash your eyelids with Johnson and Johnson No More Tears® shampoo daily.
- Men: shave daily with a non-electric, non-battery operated, razor
 - with disposable blades. After shaving, place the razor in a glass of soapy water and allow the razor to soak in the water between each use.
- Do not share razors.
- Soak combs and brushes in a glass of soapy water between each use. Do not share combs or brushes.
- Do not share cosmetics.
- Put sterile lubricating drops in the eyes every morning and evening (Examples include Systane Ultra® Lubricating eye drops, Systane Preservative Free® eye drops, Systane Long Lasting® eye drops, Refresh Plus® eye drops). These drops are available over the counter and may be purchased at most pharmacies, drugstores and on the Internet at Amazon.com. It is best to use eyedrops that are packaged in single vials rather than a multidose bottle.
- Brush your teeth a minimum of twice daily for a minimum of two minutes each time.

The importance of brushing teeth is not only to remove decay producing bacteria and organisms that cause bad breath (i.e., halitosis) but to remove biofilms that accumulate between the base of the teeth and gums, commonly known as plaque.

Researchers have shown that some viruses are capable of forming these complex, biofilm-like structures similar to plaque that is routinely formed by bacteria. These plaque-like structures may protect the virus from the immune system and enable the virus to spread.

Plaque forms rapidly on the teeth and may require more vigorous hygiene methods to prevent it from building up including ultrasonic water therapy administered by a dental hygienist and scraping or scaling of the teeth.

Scalers are available for purchase on the Internet (e.g. Amazon) and may be used as a home method of cleaning if done carefully without injuring the gum tissue.

Purchase five packets containing 6 soft Colgate toothbrushes in each packet (total of 30 brushes). The brushes may be purchased on the Internet at Amazon.com for less than \$4.00 per package of 6. Total cost of buying 5 packets of 6 will be less than \$20.00.

To avoid reinfecting yourself with the virus, only use the toothbrush once. Dispose of the brush in a plastic Zip-lock bag. The toothbrush will be contaminated with the coronavirus after brushing. Wipe off the toothpaste tube with an alcohol gel wipe before and after applying toothpaste.

- Wash your eyeglasses, particularly the bridge of the glasses frame with soap and water daily.
- Trim hair in the nose with a nose trimmer. Do not share the nose trimmer. After each use, isolate the trimmer in a Ziplock® bag for 14 days to destroy the virus.
- Remove all upper body piercings (earrings, nose rings, eyebrow rings, lip rings, tongue rings, nipple rings). Viruses can remain on solid surfaces several days depending on the composition of the object.
- Remove all jewelry (rings, watches, religious icons, necklaces).
- Wash your hands frequently with soap and hot water for a minimum of 20 seconds especially after coughing, sneezing, use of the bathroom, and before eating.
- After using the toilet, close the toilet lid before flushing to avoid aerosolizing the commode water and contents.
- After bowel movements and flushing, add 1/2 cup of household bleach to the water and allow it to sit in the toilet for a minimum of 15 minutes before reflushing. Close the toilet lid before reflushing. Place the bleach container or note on the toilet to signify to any other user of the bathroom that the toilet water contains bleach. Never urinate into a commode that contains bleach.

- Keep bathrooms well ventilated with an open window or ceiling fan.
- After having a bowel movement, wipe with toilet tissue then with a wet wipe (examples, Cottonelle® or Scott®) to remove any residual fecal material that may contain virus. (Put the used wet wipes in a Ziplock® sealable bag for disposal).
- Maintain as much exercise as your strength, energy and breathing capacity will allow—even short walks about the room are beneficial.
- Avoid overly strenuous exercises.
- Only use bath towels once, then launder them.
- Do not share towels.
- Use paper towels to dry hands after washing them. If a cloth towel is used, only do so once then launder the towel before reusing it. Leave a supply of paper towels in all bathrooms.
- Only use disposable plates, cups, napkins and eating utensils.
- Contact with the following objects may be problematic and precautions should be taken by wearing disposable gloves, or rubbing hands with germicidal gels, or careful handwashing.
 - Touchscreens found at ATMs, service stations, restaurants, grocery stores, and other retail outlets
 - Computer cell phones and computer tablet screens
 - Gasoline pumps at service stations
 - Common writing utensils (for example, pens and pencils) given to sign documents and sales receipts
 - Oral thermometers
 - Shopping carts
 - Contact with bathroom doors and entry doors to public buildings
 - Automobile steering wheels
 - Menus in restaurants

OTHER MISCELLANEOUS SUGGESTIONS

- Purify the air in sleeping areas with a portable air filtration unit that contains a HEPA filter.

- Do not drink well water if it has not been tested for bacterial contamination in the last 12 months by your county health department.
- Drink a minimum of 1 Liter (1000 ml) roughly 32 ounces of distilled water every day.
- Do not drink Alkaline water.
- Do not take any over the counter supplements without the approval of your health care provider.
- Avoid using sucralose, aspartame or saccharin as sugar substitutes or drinking diet, low calorie, no calorie, or “zero” calorie beverages.

DISINFECTING GUIDELINES

- The U.S. Centers for Disease Control and Prevention recommends daily disinfection for frequently touched surfaces such as tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets and sinks. Cell phones, laptop computer keyboards, and iPads should be wiped with alcohol wipes at least daily. Avoid getting any of the alcohol into the phone, keyboard or pad.
- The CDC also recommends the use of detergent or soap and water on dirty surfaces prior to disinfection.
- Regularly disinfect objects in your home since the COVID-19 virus has been shown to survive for 16 hours on plastics. Whatever cleaning solution you use, let it remain in contact with the surface long enough to kill viruses and other pathogens. The time needed will depend on the chemical.
- Avoid using different cleaning agents at the same time. Some household chemicals, if mixed, can create dangerous and poisonous gases.

BLEACH

- Bleach can be diluted with cold water to make an effective disinfectant against bacteria, fungi and many viruses including coronaviruses. You can typically use ¼ cup of bleach per 1 gallon of cold water – but be sure to follow the directions on the label of your bleach.
- Make dilute bleach solution as needed and use it within 24 hours, as its disinfecting ability fades with time.
- Non-porous items like plastic toys can be immersed in bleach for 30 seconds. Household surfaces that will not be damaged by bleach should get 10 or more minutes of exposure.
- Bleach solutions can irritate the skin and should not be used as a substitute for handwashing and/or hand sanitizer.

ALCOHOL

- Alcohol in many forms, including rubbing alcohol, can be effective for killing many pathogens. You can dilute alcohol with water (or aloe vera to make hand sanitizer) but be sure to keep an alcohol concentration of around 70% to kill coronaviruses. Many hand sanitizers have a concentration of about 60% alcohol, and Lysol contains about 80%; these are all effective against coronaviruses.
 - Solutions of 70% alcohol should be left on surfaces for 30 seconds (including cell phones – but check the advice of the phone manufacturer to make sure you don't void the warranty) to ensure they will kill viruses. Do not use pure (100%) alcohol or any alcohol with a concentration of 90% or higher since it evaporates too quickly to be effective against a virus.
 - Containers of 70% alcohol should be sealed to prevent evaporation. But unlike bleach solutions, they will remain potent as long as they are sealed between uses.
 - A 70% alcohol solution with water will be very harsh on your hands and should not be used as a substitute for handwashing and/or hand sanitizer.

HYDROGEN PEROXIDE

- Hydrogen peroxide is typically sold in concentrations of about 3%. It can be used as is or diluted to 0.5% concentration for effective use against coronaviruses on surfaces. It should be left on surfaces for at least one minute before wiping.

HOW TO PREPARE A 1:100 CONCENTRATION OF BLEACH SOLUTION FOR DISINFECTING

The following is the United States Communicable Disease Center (CDC) recommended formula for preparing a 1:100 concentration of bleach to use on surfaces. Apply the bleach solution with a cloth or sponge.

To make 1 gallon of a 1:100 concentration bleach solution:

Mix one gallon of water with 1 ounce of household bleach (equivalent to 2 tablespoons of bleach). Put the bleach in first. Mix in a well-ventilated area. Always wear rubber gloves and eye protection when mixing bleach.

AVOID SPREADING THE INFECTION

- Avoid contact with others as much as possible.
- Avoid contact with pets.
- Stay in a separate room, if possible.
- Sleep alone in a separate room, if possible.
- Use a separate bathroom from all other household members, if possible.
- Wear a N95 rated mask and disposable gloves when in the presence of others.