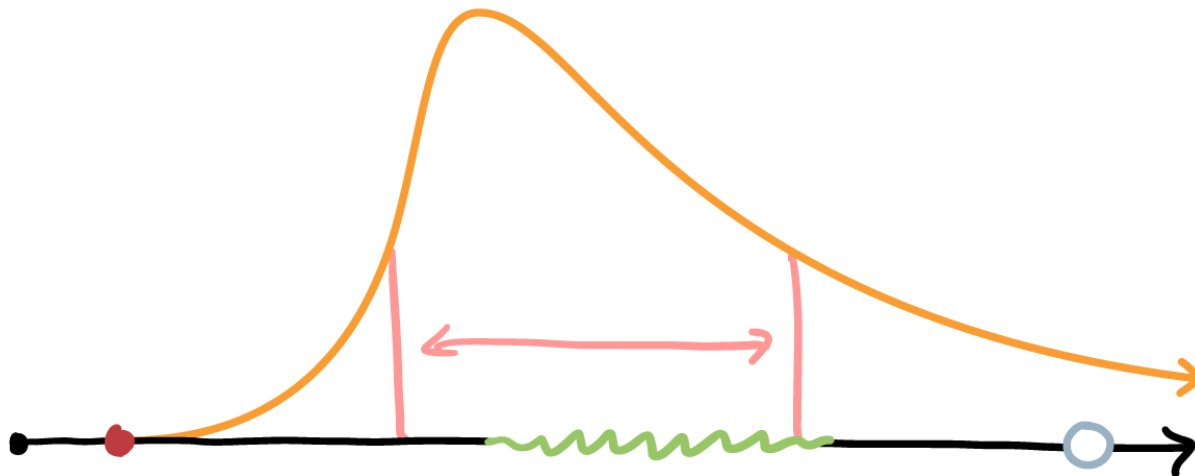


WORD VERSION OF HARRIS' MODIFICATIONS OF NYT COVID TIME LINE ARTICLE
COLOR IMPT-- INCLUDES TEST BASICS AT END

SIMPLIFYING CORONAVIRUS INFECTION AND ITS PREVENTION

(Harris Translation of the FABULOUS first article below from the NYT, simplified a bit for old folks in a hurry.)

[Charting a Covid-19 Immune Response By Katherine J. Wu and Jonathan Corum Oct. 5, 2020](#) a later version



viral load
infectious
exposure
symptoms
recovery

Charting a Coronavirus Infection

1. Exposure and Incubation

The time between initial exposure to the virus and the appearance of symptoms is known as the **incubation period**. This period is typically **four to five days**, although it can last up to 14 days, or perhaps even longer in rare cases.

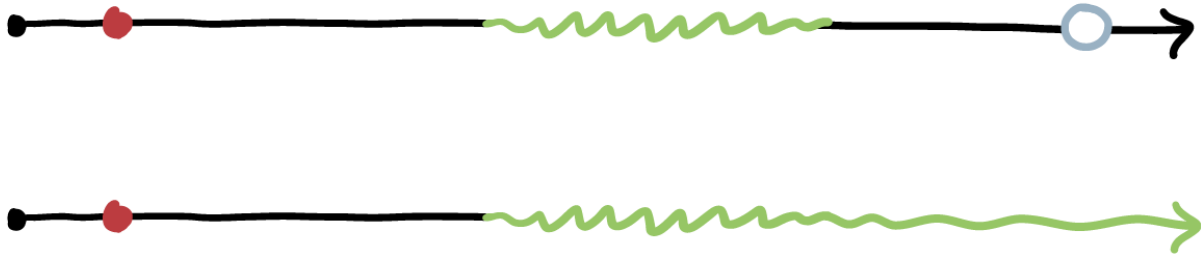


incubation
period

exposure

symptoms

Most people who come down with Covid recover within a couple of weeks and do not require hospitalization. Severe cases, however, may take far longer to resolve. And a growing cohort of coronavirus survivors, called long-haulers, has reported symptoms and side effects — including fatigue, impaired memory and heart problems — that can linger for months.

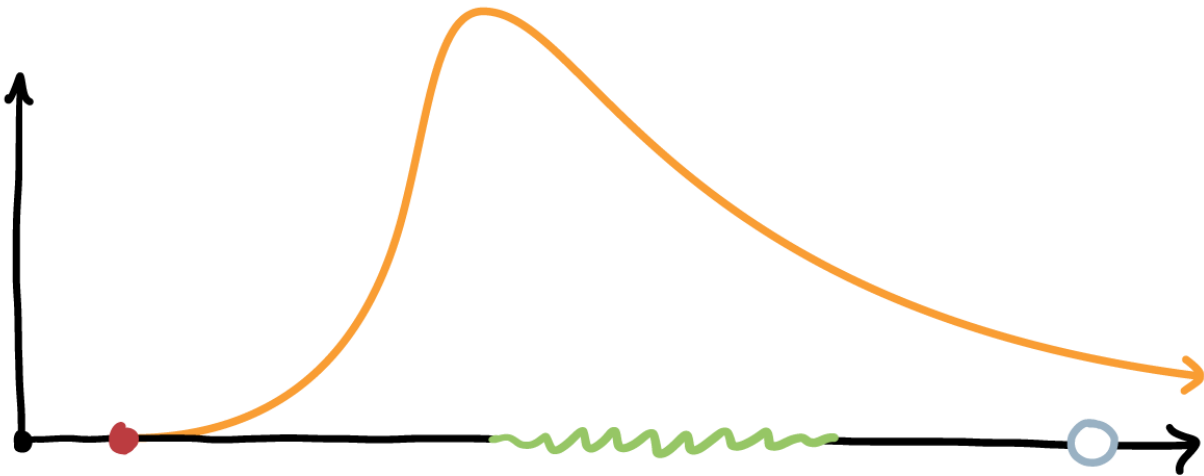


exposure
 symptoms
 recovery
 exposure
 long-haulers

People who develop **severe** cases of Covid tend to be hospitalized within two weeks or so of the emergence of symptoms. Older more obese people are at high risk of more severe disease. People with diabetes, kidney disease, COPD, and other chronic diseases as well as those with some genetic types and blood types are more likely to develop severe cases.

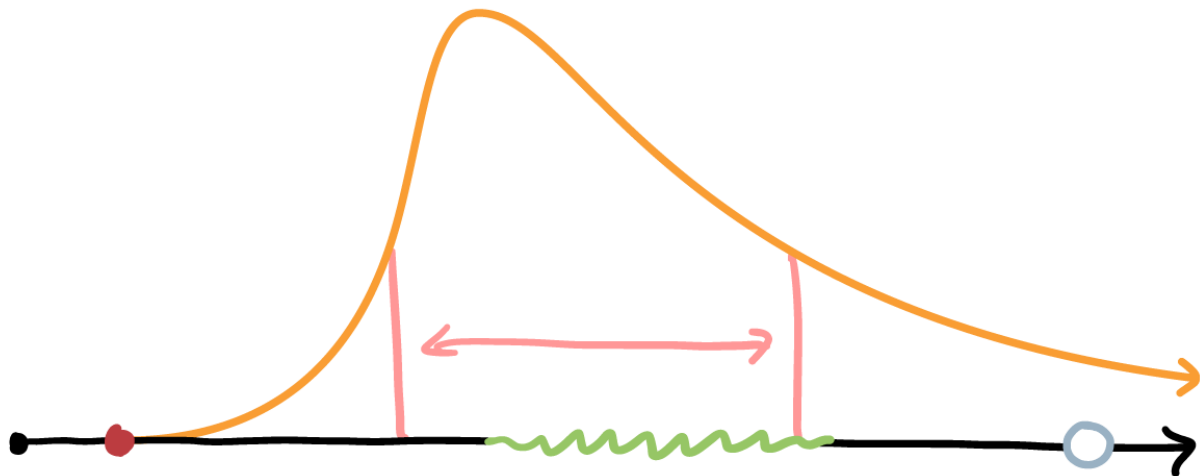
2. Viral Load

After an initial exposure, the number of virus particles in a person's body, or **viral load**, takes time to build up as the pathogen infiltrates cells and copies itself repeatedly. ***The amount of virus usually peaks before symptoms appear, if symptoms appear at all, and starts to decrease fast in the days following the first signs of illness.***



peak
viral load
exposure
symptoms
recovery

To repeat: People are more likely to be contagious when their viral loads are high. The peak infectiousness might be only a few days long, beginning a day or two BEFORE symptoms appear, and closing within a week thereafter. Remember, however, up to 40% of infected, contagious people have no symptoms or fever and do not know they are sick. This is especially true for children.



viral load
infectious
exposure
symptoms
recovery

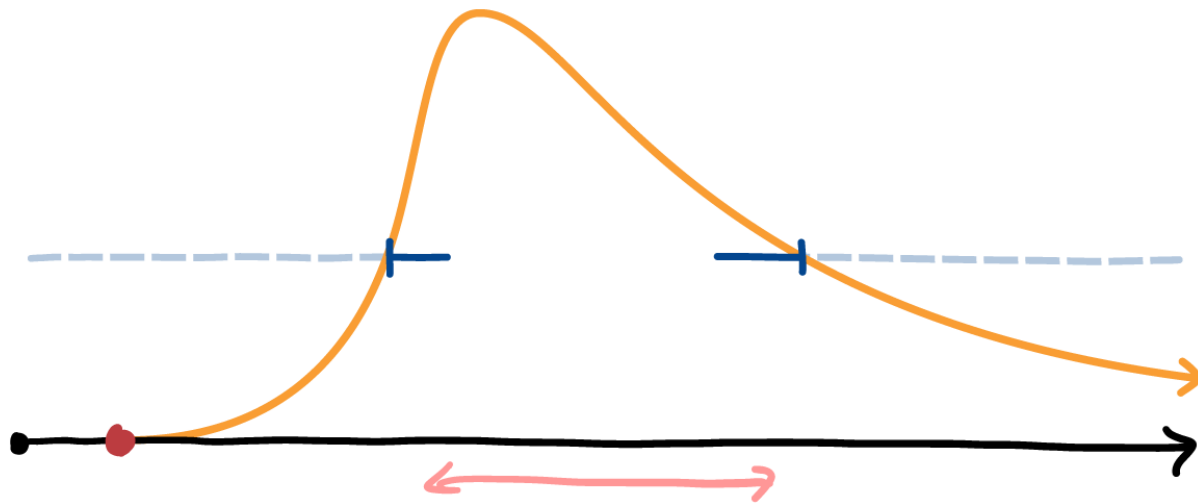
This also means that people can be highly contagious during the so-called presymptomatic stage, in the days before they develop symptoms.

Asymptomatic carriers of the coronavirus have also been repeatedly pinpointed as the source of transmission events.

3. Testing for the Virus

Many of these screenings are **rapid tests**, delivering actionable results within minutes without needing to send samples to a laboratory. Such speed and convenience can come at the cost of accuracy: **Rapid tests are worse at picking up on low viral loads and very recent infections, and more often produce false negatives or false positives.** Some experts argue that true positives from rapid tests

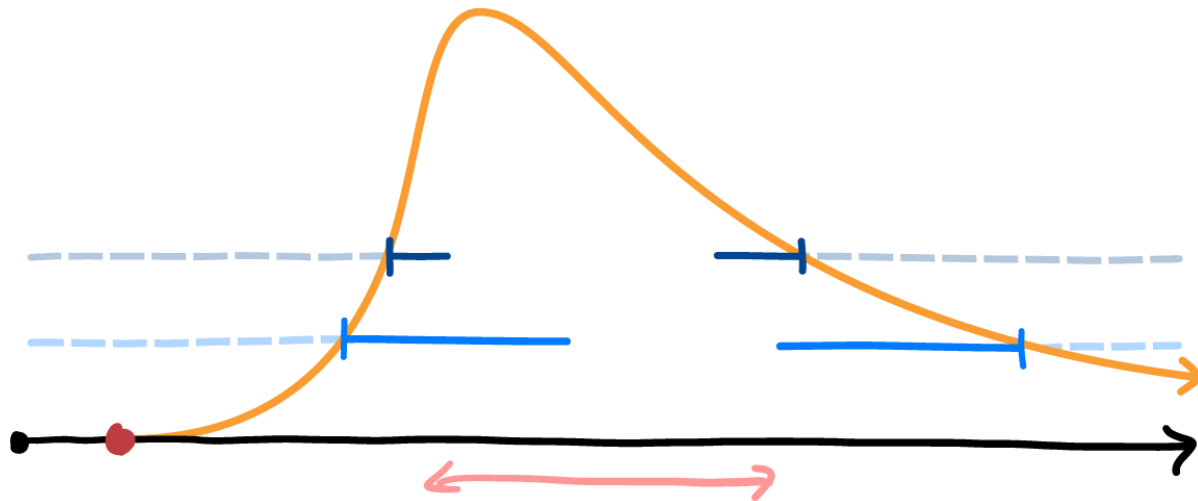
might coincide with the period in which people are most contagious, although this has not yet been confirmed.



rapid tests
exposure
infectious

Rapid tests with negative results **does not** rule out an infection or contagiousness.

People with known exposure to an infected person or who have already developed symptoms may need to take a more sensitive test. Experts often recommend laboratory tests that rely on a technique called **P.C.R.** (polymerase chain reaction) that can detect very small amounts of the virus, but that usually takes several hours to run on sophisticated, expensive machines.



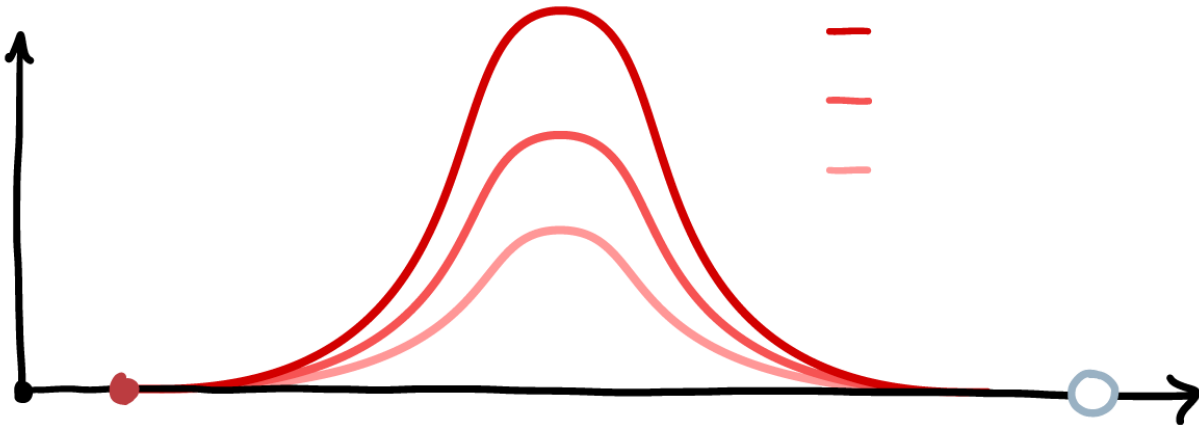
rapid tests
 PCR test
 exposure
 infectious

Because a P.C.R. test is more sensitive to low viral loads, it may be able to detect a coronavirus infection very early on. But the diagnostic test can also pick up harmless bits of the virus that linger in the body after symptoms have resolved, and perhaps after a person stops being contagious.

Antibodies are produced by the body in response to an invading pathogen, starting about a week or so into an infection, and can persist in the blood for months. Antibody Tests (as opposed to antigen tests) are BLOOD TESTS called **SEROLOGY** tests. They look for these antibodies instead of the virus or pieces of virus. Serology tests show that you have had Covid-19 in your body. However, you may not still be contagious. It is not a good test to show if you are infectious. The presence of antibodies (positive Serology Test) may or may not mean you have some immunity.

4. Preventing Infection

Public health measures to combat its spread. While no single tactic can confer complete protection, combining actions like mask-wearing, physical distancing, frequent handwashing and avoiding crowded spaces significantly lowers risk.



no protection

wearing a mask

infectiousness

mask and

physical distance

exposure

recovery

Masks and face coverings that fit tight and a cover the nose and mouth can block much of transmission from contagious people and also block nearby people wearing masks from inhaling some if not all viruses. The lower the number of viruses in the exposing dose, the less likely infection is to be transmitted, and, if it is, it will be milder.

Infected people can also reduce the chance of passing on the virus by isolating themselves for **at least 10 days after symptoms appear**, as long as they continue to improve.

Those who have been exposed to someone with a known case of the coronavirus should **quarantine for two weeks** (addendum- or a little less) and seek a test. Unfortunately, **40 percent of infections might lack symptoms**, although some estimates have been even higher. CDC says infected individuals are unlikely to be infectious for more than **10 to 20 days** after their symptoms start. (

In summary, to prevent getting sick or making others sick, YOU MUST:

1. Protect yourself, protect your family, protect your friends and your community. Don't go anywhere or do anything you can avoid — until the virus is again checked and vaccinations are available.
2. Avoid crowds, gatherings, celebrations — even avoid family members who don't live with you. Avoid bars, restaurants, parties, weddings, funerals, unmanaged churches, sports events, doctor's offices, barber shops, dental offices, buses, airplanes, automobile travel with people other than your family.
3. When forced to be out or when at essential work, keep at least 6 foot spacing and don't let others crowd you.
4. Wear the best mask you can find anytime you are around people other than your immediate family with whom you live.
5. Wash your hands (or sanitize) every time you think about it, especially when coming in or going out. Wear gloves when you are handling things others have touched or been close to.
6. Assume that anyone you encounter outside your personal secure area is contagious. Protect your space.
7. Pay attention to good medical advice from physicians and scientists who are reliable; avoid medical people or quacks who are selling something or bragging about their unscientific "cures," or who are acting outside of recognized historically reliable organizations such as the CDC and NIH and your doctor, your county and state health authorities, and those of your local officials who you know to be trustworthy.

8. Avoid medical advice given by politicians (and most preachers), especially those in the heat of an election. Generally, avoid medical advice on Facebook and similar publications. (But chicken soup is always alright.)

COVID TEST BASIC SUMMARY(HARRIS EDITED)

THE FREQUENT QUESTION IS: “[Could Vaccination Cause Me To Test Positive For Covid-19?](#)”

NO, NOT ON AN ANTIGEN TEST SUCH AS NASAL SWABS AND PCR TEST FOR ACUTE DISEASE.

THE VARIOUS VACCINES WILL HOPEFULLY MAKE YOUR BLOOD ANTIBODIES APPEAR OR GO UP. THIS IS HOW THEY WORK. THEY STIMULAT ANTIBODIES.

IF YOU HAVE BEEN VACCINATED AND GET SICK, YOU WILL TAKE AN ANTIGEN TEST TO SEE IF YOU HAVE VIRAL PARTICLES IN YOUR UPPER AIRWAYS.

MORE ON TESTS: TWO BASIC TYPESI

1.RAPID INFECTION TESTS (FOR ACUTE or CURRENT or IMMEDIATE OR NEW) INFECTIONS Are designed to tell you if you have Covid-19 RIGHT NOW, not yesterday, not tomorrow. They are not 100% accurate and have false positive and false negative results, often related to the amount of virus in the samples and the time in the patient’s clinical illness (early, middle, late).THERE ARE TWO TYPES OF ANTIGEN TESTS:

A. Antigen tests with quick or immediate results on site: This type test detects bits of coronavirus proteins called antigens. Antigen tests are fast, taking as little as five minutes, but are less accurate than tests that detect genetic material from the virus.

B. Polymerase Chain Reaction (PCR): is another type of quick test: Scientists use PCR to make millions of copies of viral mRNA (genetic material) in a sample. Tests that use PCR enable researchers to detect the coronavirus and can detect the virus within days of infection, even in those who have no symptoms. PCR testing is considered the "gold standard" in SARS-CoV-2 detection, and it is better than a quick test, but neither are not 100% reliable.

2. ANTIBODY (SEROLOGY, BLOOD) TEST:

Antibody: A protein produced by the immune system that can recognize and attach precisely to specific kinds of viruses, bacteria, or other invaders...they detect antibodies attached to specific coronavirus. Antibodies begin to appear in the blood about a week after the coronavirus has infected the body. Because antibodies take so long to develop, an antibody test cannot reliably diagnose an ongoing infection. **However, it can identify people who have been exposed to the coronavirus in the past or who have been vaccinated for Covid.**

Positive Covid-19 **Antibody Test** means:

1. You have the disease or have been vaccinated.
2. Or, you have had the disease.
3. You may or may not be contagious (likely not).
4. You may or may not be immune to reinfection with the disease.
5. The antibodies most commonly are IgM or IgG proteins.
6. Some people who have or have had the disease don't produce measurable antibodies, such as immunocompromised patients who can remain infectious indefinitely and be unable to produce antibodies.
7. The test can yield a negative test result even in infected patients (e.g., if antibody has not yet developed in response to the virus)
8. Or, it can infrequently be falsely positive.
9. Therefore, these Antibody Tests should not be used to diagnosis **Acute Covid-19 Infections**

So what does it mean when a JUST vaccinated person tests positive ON AN ANTIGEN (ACUTE, CURRENT) TEST? It likely indicates that they were infected with SARS-CoV-2 just prior to or after being vaccinated before the vaccine had started to work. Although the current Covid-19 vaccines may not completely prevent an individual from being infected, they likely reduce the incidence of asymptomatic infection and have demonstrated a high level of efficacy in preventing symptomatic and severe disease.

MORE ON ANTIBODY TESTS:

ANTIBODY TESTS BLOOD TEST

“...a serology – or antibody-based – assay, determines whether a person has been exposed to SARS-CoV-2. When an individual is infected with a virus,

their immune system responds by developing proteins, called antibodies, which help to clear the virus from the body and subsequently provide some level of immunity to reinfection.

A “positive” serology test their immune system has generated an antibody response to the virus or to a vaccine for the virus. In other words, **serology tests detect antibodies against the virus, and not the virus itself.** THEY ARE NOT used to diagnose an active infection. This is because it takes one to two weeks following infection for the immune system to make antibodies. By this time, most patients are beginning to recover from the illness (hopefully).