UPDATED: Who Is Most Susceptible to the New Coronavirus?

People with cancer, heart disease and diabetes are at increased risk for serious illness from COVID-19.

June 29, 2020 By Bob Barnett

Updated 6/29/2020: The Centers for Disease Control and Prevention (CDC) has updated and expanded the list of people most susceptible to developing severe illness with COVID-19. The new findings state that risk increases with age—not just in people over 65. People at greatest risk include those with chronic kidney disease, chronic obstructive pulmonary disease (COPD), obesity (a BMI of 30 or higher), an immunocompromised state from an organ transplant, a serious heart condition (such as heart failure or coronary artery disease), sickle cell disease and type 2 diabetes. Other conditions that may also increase risk of severe illness include asthma, high blood pressure, dementia, stroke and pregnancy.

Earlier updates:

- 5/5/2020: New studies released at the American Association for Cancer Research reveal that people in treatment for cancer who get COVID-19 face higher risks of severe illness and increased mortality. Those with blood cancers and lung cancer are particularly susceptible.
- 4/8/2020: A CDC report on U.S. hospitalizations for COVID-19 finds that 89% of 1,482 hospitalized patients had one or more underlying conditions. The most common were hypertension (50%), followed by obesity, chronic metabolic disease (such as diabetes), chronic lung disease (including asthma) and cardiovascular disease. Patients 50 and older made up 74% of cases, and 54% were men. The report also confirms that African Americans are much more likely to be hospitalized with COVID-19: 33% of those hospitalized were Black, even though the percentage of Blacks in the geographical areas was only 18%. Although cancer was not covered in this report, other research has found that people with cancer are at greater risk for developing more severe COVID-19. People with HIV, on the other hand, do not appear to be

at higher risk. (For continuing coverage of coronavirus and cancer, click here; for coronavirus and HIV, click here.)

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COVID-19, the disease caused by the new coronavirus, often causes only mild symptoms or in some cases none at all. But a small percentage get severely ill, and some die. New research is identifying who is at most risk for serious illness.

Most vulnerable are the elderly, as well as people with cardiovascular disease, diabetes, chronic respiratory illness, high blood pressure and cancer, according to an article in The Scientist, a magazine for people in the life sciences field. As Lisa Gralinski, a virologist at the University of North Carolina at Chapel Hill, said in the article: "If you're over 50 or 60 and you have some other health issues and if you're unlucky enough to be exposed to this virus, it could be very bad."

According to one study of 45,000 confirmed cases in China, fewer than 1.0% of healthy people who contracted the COVID-19 virus died from the disease. But that percentage was around 6.0% for people with cancer, hypertension or chronic respiratory disease, 7.3% for those with diabetes and 10.5% for those with cardiovascular disease. Patients who were 80 or older were also at increased risk, with 14.8% dying.

Children, especially those younger than 9, were not susceptible to severe disease; none died. "We see relatively few cases among children," said World Health Organization director general Tedros Adhanom Ghebreyesus. Other research suggests that men may be more prone to serious disease than women, but these are preliminary data and may reflect the fact that more men than women in China smoke cigarettes, according to the article.

Most people who get sick with COVID-19 experience a local infection in the cells that line the airways in the lungs. That triggers an immune reaction that eradicates the virus and allows recovery. Symptoms may include fever, cough and shortness of breath, but they are temporary.

The elderly and those with other illnesses, however, may have a dysfunctional immune system that leads to an uncontrolled immune response. This can lead to pneumonia, and severe lung damage from pneumonia can result in acute respiratory distress syndrome (ARDS), which in turn can cause septic shock. ARDS and sepsis are the primary causes of death in people with COVID-19.

The U.S. Centers for Disease Control and Prevention (CDC) does not currently have any specific guidance for protection against COVID-19 for people whose immunity is compromised by cancer or HIV/AIDS. Instead, it emphasizes that people should follow existing evidence-based precautions to reduce the risk of infections such as cold and flu. These include:

- Avoid close contact with people who are sick;
- Restrain from touching your eyes, nose and mouth;

- Stay home when you are sick;
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash; and
- Clean and disinfect frequently touched objects and surfaces using a regular household cleaning spray or wipe.

Perhaps the most important advice is to wash your hands frequently, with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol.

One well-known side effect of chemotherapy is to reduce white blood cell counts and induce a temporary state of reduced immune function. If you are undergoing chemotherapy, work with your medical team to reduce your risk of an infection. According to the CDC article "Preventing Infections in Cancer Patients," that includes calling your doctor if you have a temperature of 100.4 F or higher, washing your hands often and calling your doctor right away if you show any other signs or symptoms of the cold or flu.

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