Who Is Most Susceptible to COVID-19?

Age, underlying medical conditions, race/ethnicity and economic status all play a role in determining the risk for severe illness.

September 14, 2020 By Bob Barnett

COVID-19, the disease caused by the novel coronavirus, infects many people without causing any symptoms at all, leads to mild disease in some and causes life-threatening, indeed often fatal, disease in others. Severe disease complications may affect many different organs and can linger for months and may be permanent in some cases.

Who is most susceptible to serious COVID-19 disease? The short list from the Centers for Disease Control and Prevention (CDC) includes older age and not just being over 65—people in their 50s are at greater risk for severe disease than those in their 30s or 40s, for example. Children are less likely to develop severe disease than adults, but the disease can lead to hospitalization and can be fatal in children as well as adults. (The fact that many children don't develop symptoms may also render them more likely to be silent spreaders of the disease.)

Underlying medical conditions at any age increase the risk of severe disease. According to the CDC, these include cancer; chronic kidney disease; chronic obstructive pulmonary disease; an immunocompromised state from a solid organ transplant; obesity (body mass index of 30 or higher); serious heart conditions, such as heart failure, coronary artery disease or cardiomyopathies; sickle cell disease; and type 2 diabetes.

Black Americans are more likely to contract coronavirus and to die of COVID-19. Institutional racism contributes to a greater proportion of African Americans who have underlying conditions such as diabetes and heart disease, which in turn makes them more susceptible to severe COVID-19 illness. Latinos also have a disproportionately high risk of contracting the coronavirus. Household crowding, poverty, working in essential occupations that can't be done from home and less access to health insurance and quality care are more prevalent in Black and Latino communities and contribute to higher infection risk and more severe illness.

While the CDC lists cancer as a risk factor, recent studies have shed light on significant nuances. People who are living with cancer are indeed at greater risk for severe COVID-19 and death, although the increase risk pales in comparison to other underlying conditions, such as heart disease or diabetes. The type of cancer makes a difference too—people with lung cancer or blood cancers, such as leukemia or lymphoma, are more likely to have worse outcomes if they contract COVID-19. However, people with breast cancer, gynecological cancers or prostate cancer do not

appear to be at greater risk than the general population.

The type of cancer treatment also plays a role. Earlier studies pointed to cytotoxic chemotherapy as a risk factor for severe COVID-19, but the latest studies have been reassuring—receiving chemotherapy within three months prior to a COVID-19 diagnosis was not linked with more severe COVID-19 illness. The picture is less clear for people being treated with checkpoint inhibitor immunotherapy, as study results have been mixed. (For more about cancer and COVID-19, click here.)

People with HIV have also been concerned about how their immune status may affect the risk of severe COVID-19. Here, too, research has been reassuring. Studies to date, as well as anecdotal reports, suggest that people living with HIV whose virus is well controlled are not a high-risk group based on their HIV status alone. Specifically, people on antiretroviral treatment who have an undetectable HIV viral load and a near-normal CD4 count do not appear to be at higher risk than their HIV-negative counterparts. According to the World Health Organization, "At present, there is no evidence that the risk of infection or complications of COVID-19 is different among people living with HIV who are clinically and immunologically stable on antiretroviral treatment when compared with the general population." (For more about HIV/AIDS and COVID-19, click here.)

People with liver disease may be at risk for more severe COVID-19 in part because of high rates of comorbidities. For example, people with non-alcoholic fatty liver disease (NAFLD) or its more severe form, nonalcoholic steatohepatitis (NASH), often have obesity and diabetes, and they appear more susceptible to have severe COVID-19. Studies have shown that people with liver cirrhosis have more COVID-19 complications and higher mortality, with the risk rising in those with more advanced liver disease. People who have received a liver transplant and are taking immune-suppressing drugs may be more likely to contract the coronavirus and should take extra precautions, but they do not appear to have more severe COVID-19. (For more about liver disease and COVID-19, click here.)

To reduce the risk of severe COVID-19 illness among susceptible populations, everyone in society should comply with public health measures, including social distancing and wearing masks in public, to bring the coronavirus under control.

People who fit into any of these susceptible categories need to be extra vigilant in taking precautions to prevent infection and should seek medical attention and testing if they have been exposed or experience symptoms. To learn more, see "How Can You Prevent COVID-19?"
