

In an article by, Hannah Devlin titled, Study into gene that affects Covid severity should be treated with caution, a gene has been identified to increase the risk of harmful effects from COVID-19. In the article, certain groups of people seem to be at more of a risk of contracting COVID-19 and Devlin goes into depth about it. She starts off by giving an example that Pakistanis were twice as likely and people from Bangladesh had more than triple the chance of dying from COVID-19 than people with a European heritage.¹ These unequal rates of infection and deaths of different ethnicities merit a search for an explanation as described by Devlin.

After the introduction of the differing rates of death in different ethnic groups, Devlin suggests a possible link—genetics. In a paper titled Identification of *LZTFL1* as a candidate effector gene at a COVID-19 risk locus done by Damien J. Downes et. al., a specific gene has been identified that has a correlation with how certain individuals handle COVID-19 infection. The gene identified, *LZTFL1*, alters the epithelial lining of the lungs, which has an impact on the immune system's ability to deal with the infection. Downes et. al. describe that if someone is a carrier of the *LZTFL1* gene they are at about a double risk of respiratory failure and death. The researchers listed that about sixty percent of people with South Asian heritage while only fifteen percent of European heritage were carriers of the gene. The data collected on the *LZTFL1* gene came from a database of about two hundred thousand genomes.²

Devlin also suggests other causes of varying levels of infection and death. With socio-economic factors being taken into account those of Indian, Bangladeshi, and Pakistani heritages still had a fifty percent increase in risk, which suggests that there are still unknowns about the spread of COVID-19. Devlin ends off the article by saying, “without better representation in these databases, scientists cannot be confident that these figures apply across society as a whole,” which shows that there are still unknowns to COVID-19 and that more research needs to be done in figuring out who is truly at high risk. Devlin offers ideas on who should be considered in the studies such as school-age children.

1. Devlin, H. Study into gene that affects Covid severity should be treated with caution. <https://www.theguardian.com/science/2021/nov/04/human-genetic-variant-can-affect-covid-severity-say-oxford-scientists> (2021).

2. Downes, D. J. et al. Identification of *LZTFL1* as a candidate effector gene at a COVID-19 risk locus. *Nature Genetics*. **53**, 1606–1615 (2021).