PATIENT-LED RESEARCH COLLABORATIVE

2025 Long Covid Fact Sheet

Version 1
March 2025

1. **Long COVID is a global public health crisis.** Over 400 million people worldwide have been impacted by Long COVID[1].

2. **Long COVID is common.** As of fall 2024, at least 1 in 19 US adults are currently living with Long COVID[2] - similar to the rate of diabetes - with many additional cases likely going undiagnosed or misdiagnosed.

3. **The vast majority of Long COVID cases happen after a mild acute infection.** Studies show between 76%[3] to 90%[4] of Long COVID cases happen after a mild infection.

4. **Recovery from Long COVID is rare.** Only 6-9% of people with Long COVID are recovered at 2-3 years.[5] [6] [7]

5. **Long COVID incidence remains high, even among those fully vaccinated and with more recent variant strains.**

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[1] https://www.nature.com/articles/s41591-024-03173-6
[2] https://www.cdc.gov/nchs/covid19/pulse/long-covid.htm
[3] https://s3.amazonaws.com/media2.fairhealth.org/whitepaper/asset/Patients%20Diagnosed%20with%20Post-COVID%20Conditions%20-%20A%20FAIR%20Health%20White%20Paper.pdf
[4] https://jamanetwork.com/journals/jama/fullarticle/2797443 (eTable 16 in Supplement 1)
[5] https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(23)00143-6/fulltext
[6] https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(25)00036-5/fulltext
[7] https://www.mdpi.com/2077-0383/12/3/741

a. The incidence of people currently living with Long COVID has remained between 5.3-6.1% of the US adult population from December 2022 to September 2024.[8]
b. 17% of study participants developed Long COVID after Omicron infection, compared to 23% after pre-Omicron variants.[9]

6. **Each additional COVID infection increases the risk of developing Long COVID, even in those fully vaccinated.** Studies on reinfection show:
    a. People are 1.7x more likely to develop Long COVID after 2 infections, and 2.6x more likely to develop Long COVID after 3 infections.[10]
    b. Long COVID occurred in 24% of reinfections.[11]
    c. Reinfections lead to higher incidence and severity of Long COVID.[12]
    d. Reinfections increase the rates of long-term health problems including heart, lung, and brain issues.[13]
    e. Reinfections are associated with increased chance of getting Long COVID, and worsened existing Long COVID.[14]

7. **People infected with COVID are more susceptible to other infections.**
    a. Those infected with COVID had higher rates of bacterial, mycoplasma, and influenza infections.[15]
    b. Children aged 0-5 who had COVID were 1.4x more likely to get RSV that required medical attention.[16]
    c. Reinfections increased the odds of reporting poor immune health, including having many other infections and taking longer to recover from common infections.[17]

8. **Common new-onset conditions in Long COVID include serious and lifelong disorders.**
    a. This includes vascular events like heart attacks and strokes, as well as permanent conditions like dysautonomia, myalgic encephalomyelitis, and diabetes[18].
    b. In non-hospitalized people, COVID increases the risk of 30 neurological disorders for at least a year, including Alzheimer's, ischemic stroke and TIA, memory problems, peripheral neuropathy, migraine, epilepsy, and hearing and vision abnormalities.[19]

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[8] https://www.cdc.gov/nchs/covid19/pulse/long-covid.htm
[9] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2820087
[10] https://www150.statcan.gc.ca/n1/pub/75-006-x/2023001/article/00015-eng.htm
[11] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2820087
[12] https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065(24)00212-8/fulltext
[13] https://www.nature.com/articles/s41591-022-02051-3
[14] https://www.researchsquare.com/article/rs-4909082/v1
[15] https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065(24)00212-8/fulltext
[16] https://pubmed.ncbi.nlm.nih.gov/37292931/
[17] https://www.researchsquare.com/article/rs-4909082/v1
[18] https://www.nature.com/articles/s41579-022-00846-2
[19] https://www.nature.com/articles/s41591-022-02001-z

c. In non-hospitalized people, COVID increases the risk of 18 cardiovascular conditions for at least a year, including myocarditis, pulmonary embolism, and heart failure.[20]

9. **Long COVID has caused the highest rates of serious, persistent cognitive problems in the US population than any time in the last 15 years[21].**
    a. The cognitive impairment includes problems with memory, reasoning, executive functioning, language, and processing speed, and younger people may have worse and more marked impairment.[22]

10. **Long COVID patients experience severe functional limitations, poor quality of life, and extreme fatigue at least as detrimental as many serious illnesses, including Parkinson's disease and certain cancers.**
    a. Long COVID patients' functional ability scores ranked lower than stroke and were on par with those found in Parkinson's disease on a scale measuring ability to work, manage the household, engage in leisure, and maintain social relationships.[23]
    b. Long COVID patients' quality of life scores ranked lower than those in advanced/metastatic cancers.[24]
    c. Long COVID patients' fatigue scores were worse than those in end stage renal failure.[25]

11. **Long COVID substantially impacts patients' livelihoods and ability to work, with most being unable to work or needing reduced hours.**
    a. At 2 years, only 40% of Long COVID patients could work full-time.[26]
    b. 52% had reduced work hours and lost an average of 25% of their monthly income.[27]
    c. People with Long COVID are nearly twice as likely to report housing insecurity.[28]
    d. People with Long COVID report high rates of food insecurity[29] [30] and difficulty paying utility bills.[31]

12. **COVID increases risks during pregnancy and childbirth, and is associated with reproductive health issues like altered menstruation and erectile dysfunction.**

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[20] https://www.nature.com/articles/s41591-022-01689-3
[21] https://www.nytimes.com/2023/11/13/upshot/long-covid-disability.html
[22] https://www.nature.com/articles/s41598-023-32939-0
[23] https://bmjopen.bmj.com/content/13/6/e069217
[24] https://bmjopen.bmj.com/content/13/6/e069217
[25] https://bmjopen.bmj.com/content/13/6/e069217
[26] https://www.mdpi.com/2077-0383/12/3/741
[27] https://pmc.ncbi.nlm.nih.gov/articles/PMC11377524/
[28] https://www.sciencedirect.com/science/article/pii/S2352827323002513
[29] https://www.jandonline.org/article/S2212-2672(24)00731-7/abstract
[30] https://www.urban.org/research/publication/employment-and-material-hardship-among-adults-long-covid-december-2022
[31] https://www.urban.org/research/publication/employment-and-material-hardship-among-adults-long-covid-december-2022

a. COVID infections are associated with early miscarriages[32], stillbirths[33], preterm births and cesarean deliveries[34], and preeclampsia and maternal mortality.[35]
b. Long COVID is associated with many reproductive health disorders including menstrual issues, endometriosis, erectile dysfunction, and others.[36] [37]

13. Long COVID disproportionately impacts people from already marginalized groups.

a. Rates of Long COVID are higher in Hispanic/Latine and Black people, trans people, disabled people, and women.[38] [39] [40]

14. Children are greatly impacted by Long COVID.

a. An estimated 6 million children are estimated to have Long COVID as of early 2024.[41] [42]
b. Children have similar rates of Long COVID to adults, as well as similar findings regarding organ system complications, new-onset conditions, and biological mechanisms.[43] [44]
c. Many pathological findings in adults, such as impaired function on a CPET, have also been found in children.[45] [46]

15. Long COVID has a highly destructive impact on the economy.

a. The global economic cost of Long COVID is estimated at $1 trillion per year.[47]
b. In 2024, 1.5 billion work hours were lost in the US due to Long COVID corresponding to a potential cost of more than US $152.6 billion.[48]
c. Long COVID is responsible for massive GDP losses worldwide – including $24.4 billion in Saudi Arabia, $12.3 billion in Taiwan, and $11 billion in Brazil.[49]
d. Five years of Long COVID burden is projected to cost $3.7 trillion to the US economy in reduced quality of life, lost earnings, and increased medical spending.[50]

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[32] https://academic.oup.com/humrep/article/37/6/1126/6564665
[33] https://www.cdc.gov/mmwr/volumes/70/wr/mm7047e1.htm
[34] https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-024-06767-7
[35] https://jamanetwork.com/journals/jamapediatrics/fullarticle/2779182
[36] https://www.frontiersin.org/journals/rehabilitation-sciences/articles/10.3389/fresc.2023.1122673/full
[37] https://www.nature.com/articles/s41579-022-00846-2
[38] https://link.springer.com/article/10.1007/s11606-022-07997-1
[39] https://www.census.gov/library/stories/2023/05/long-covid-19-symptoms-reported.html
[40] https://www.cdc.gov/nchs/covid19/pulse/long-covid.htm
[41] https://jamanetwork.com/journals/jama/article-abstract/2815350
[42] https://publications.aap.org/pediatrics/article/153/3/e2023062570/196606/Postacute-Sequelae-of-SARS-CoV-2-in-Children
[43] https://publications.aap.org/pediatrics/article/153/3/e2023062570/196606/Postacute-Sequelae-of-SARS-CoV-2-in-Children
[44] https://www.nature.com/articles/s41579-022-00846-2
[45] https://journals.lww.com/pidj/fulltext/2024/08000/cardiopulmonary_exercise_testing_in_children_with.17.aspx
[46] https://www.nature.com/articles/s41579-022-00846-2
[47] https://www.nature.com/articles/s41591-024-03173-6
[48] https://impact.economist.com/perspectives/health/incomplete-picture-understanding-burden-long-covid
[49] https://impact.economist.com/perspectives/health/incomplete-picture-understanding-burden-long-covid
[50] https://scholar.harvard.edu/files/cutler/files/long_covid_update_7-22.pdf

e. Long COVID disproportionately impacts certain labor sectors, particularly those with high exposure to COVID infections, like low-wage workers, farm workers, and those in education and the service industry.[51] [52] [53]
f. A quarter of US Marines who had COVID developed Long COVID, with long-term decrease in functional performance.[54]
g. Lost productivity of caretakers in the UK was estimated at £4.8 billion.[55]

16. Medical provider education about Long COVID is inadequate.

a. Only 7% of physicians are very confident diagnosing Long COVID and only 4% are very confident treating it.[56]
b. A majority of Long COVID patients have experienced a negative experience with a healthcare provider.[57]

17. Lack of public awareness is causing crucial delays in care and support.

a. Over ⅓ of people have still not heard of Long COVID despite its wide impact.[58]
b. Communities of color are particularly affected.[59] [60]

18. There is a significant amount of Long COVID research.

a. Over 86,000 research papers have demonstrated wide-ranging biological abnormalities in Long COVID.[61]
b. Up-to-date review papers include the scope of mechanisms and possible therapeutics[62] [63], viral persistence[64] and mechanisms to target persisting reservoirs[65], designing and optimizing clinical trials[66], and roadmaps for Long COVID research and policy.[67]
c. An incredible breadth of biological mechanisms have been found in Long COVID, including reduced cerebral blood flow[68] [69] and disrupted neurovascular function[70],

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[51] https://labor.ucla.edu/wp-content/uploads/2022/01/Fast-Food-Frontline-Report-1-13-22.pdf
[52] https://environmentalhealth.ucdavis.edu/research/covid-19/domestic-workers-survey
[53] https://academic.oup.com/eurpub/article/34/3/489/7616634
[54] https://www.thelancet.com/pdfs/journals/lanam/PIIS2667-193X(24)00236-9.pdf
[55] https://pmc.ncbi.nlm.nih.gov/articles/PMC11377524/
[56] https://debeaumont.org/wp-content/uploads/2023/03/Long-COVID-Brief.pdf
[57] https://www.nature.com/articles/s44220-023-00064-6
[58] https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1360341/full
[59] https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1360341/full
[60] https://pubmed.ncbi.nlm.nih.gov/39090366/
[61] https://scholar.google.com/scholar?as_vis=1&q=%22long+covid%22&hl=en&as_sdt=0,33&as_ylo=2020
[62] https://www.sciencedirect.com/science/article/pii/S0092867424008869
[63] https://www.nature.com/articles/s41579-022-00846-2
[64] https://www.nature.com/articles/s41590-023-01601-2
[65] https://www.sciencedirect.com/science/article/abs/pii/S1473309924007692
[66] https://www.sciencedirect.com/science/article/pii/S0024320524005605
[67] https://www.nature.com/articles/s41591-024-03173-6
[68] https://www.ahajournals.org/doi/10.1161/JAHA.124.036752
[69] https://www.mdpi.com/2227-9032/10/10/2105
[70] https://journals.sagepub.com/doi/full/10.1177/10738584231194927

fibrin microclots and their downstream impacts[71] [72], tissue damage and skeletal muscle necrosis after exercise[73], changes to the brainstem[74] and hippocampus[75], viral persistence[76] and persisting antigen[77], induced Long COVID in mice by transferring IgG from Long COVID patients[78] [79], and innumerable more.

19. **The vast majority of the public and physicians believe Long COVID needs more research funding.** 82% of physicians and 76% of the public believe it is important to increase research funding for Long COVID.[80]

[71] https://www.nature.com/articles/s41586-024-07873-4
[72] https://pmc.ncbi.nlm.nih.gov/articles/PMC11491705/
[73] https://www.nature.com/articles/s41467-023-44432-3
[74] https://academic.oup.com/brain/article/147/12/4121/7811070
[75] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0316625
[76] https://www.science.org/doi/10.1126/scitranslmed.adk3295
[77] https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(24)00432-4/abstract
[78] https://www.medrxiv.org/content/10.1101/2024.06.18.24309100v1
[79] https://www.biorxiv.org/content/10.1101/2024.05.30.596590v1
[80] https://debeaumont.org/wp-content/uploads/2023/03/Long-COVID-Brief.pdf