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Long Covid: rogue antibody discovery raises hope of blood test

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Scientists have raised hopes of a blood test for long Covid after discovering distinctive patterns of rogue antibodies in patients whose symptoms persisted for months.



Researchers at Imperial College London identified so-called “autoantibodies” in long Covid patients that were absent in people who recovered quickly from the virus, or who had not tested positive for the disease.

Unlike normal antibodies which help fight off infections, autoantibodies attack healthy tissues by mistake, causing ongoing damage and illness through the equivalent of biological friendly fire.

With the further easing of coronavirus restrictions in England on 19 July, some scientists believe the UK should be braced for hundreds of thousands of cases of long Covid, a condition where patients experience symptoms such as chronic fatigue, breathlessness, muscle pain and headaches.

“It’s hard to escape a prediction that 100,000 new infections a day equates to 10,000 to 20,000 long Covid cases a day, especially in young people. That’s a lot of damage to a lot of lives. And it’s hard to see that we’d have the healthcare provision to deal with it on that scale,” said Danny Altmann, a professor of immunology at Imperial. “All of us working on this could not be more alarmed.”

Prof Altmann’s research on a blood test for long Covid was filmed as a work-in-progress for BBC’s Panorama and is at a very early stage. “I’m fairly optimistic, so I’d hope that within six months we’d have a simple blood test that you could get from your GP,” he told the programme.

Altmann and his colleagues took blood samples from dozens of Covid patients and healthy individuals who have not had the virus. The populations of antibodies in the blood differed markedly between long Covid patients and those who recovered from the virus swiftly or had not tested positive.

While antibodies are a crucial line of defence against infection and prevent coronavirus from invading human cells, the immune system sometimes misfires and produces autoantibodies that attack healthy cells by mistake. In previous work, a team led by Akiko Iwasaki

at Yale University found that some Covid patients have rogue antibodies that attack their organs, tissues and the immune system instead of the invading coronavirus.

In December, the Department of Health announced that it was setting up dozens of long Covid clinics in England to provide specialist care for people with ongoing symptoms. According to the Panorama team, four of the clinics only see patients that were hospitalised with Covid, while at others, patients faced waits of up to six months to be seen. Freedom of information requests submitted by MPs have highlighted similar problems.

The Department of Health said: “The government rapidly provided specialist care for acutely ill Covid-19 patients at the start of the pandemic and we’ve matched that speed and scale in our support for people with long Covid.”

BBC Panorama – long Covid: Will I ever get better?” will be broadcast at 7.35pm on Monday on BBC One.