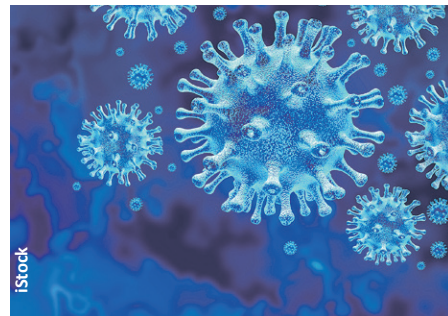


DISORDER LINK TO COVID-19

COVID-19 may be linked to a rare disorder in young children.



Data from Italy, the USA and UK has shown a very small number of children develop symptoms similar to a rare condition called Kawasaki disease.

In the Bergamo province of Italy, ten children are thought to have had a condition very similar to the disease since February, compared to 19 in the past five years. Eight of them tested positive for COVID-19. In the UK, up to 100 children have been affected.

Kawasaki disease is a rare condition that usually affects children under the age of five. It causes blood vessels to become swollen. If the child is treated in hospital, the condition is rarely fatal. It is not known what triggers the condition but it is thought to be an immune system over-reaction to an infection, so experts think it could be directly linked to COVID-19.

But remember that the vast majority of children who catch COVID-19 suffer mild or no symptoms.

A study in France, meanwhile, has shown that a drug praised by US President Donald Trump as being a treatment for COVID-19 isn't very effective. Patients who received hydroxychloroquine were not able to recover from the virus more quickly than those receiving standard care. Mr Trump says he is taking the drug.



A medical worker treats a patient with COVID-19 at a hospital in Cambridge

SCIENTISTS and politicians have described a new COVID-19 test that has been approved for use in England as a “game-changer”.

Public Health England, the organisation that advises the Government on health matters, says it has given the go-ahead for a reliable antibody test that can tell if people have already had the new coronavirus.

If you have developed COVID-19, even without having any symptoms whatsoever, your body will produce antibodies that stay in the blood for a long time.

The new test developed by Swiss company Roche shows if these antibodies are present. This will allow doctors to find out how many people have had the virus.

For now, scientists don't know for sure whether people who have been infected become immune to the virus, and therefore cannot catch it a second time. But previous coronaviruses have left people immune for a period of time.

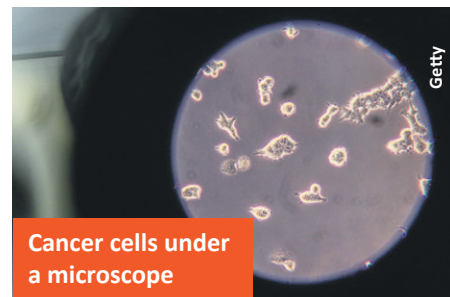
The deputy chief medical officer for England, Jonathan Van-Tam, said he thought the antibody test “will be incredibly important”. It's hoped that the test will soon be available in NHS hospitals and clinics.

Some experts are worried, however, that the Government may use the antibody test to give people “immunity passports”. That would be a document that says an individual has had COVID-19 and is now healthy and can return to work. There are fears some people may forge a “passport” or even deliberately try to get infected in order to recover and be able to get back to normal life.

What are antibodies?

They're microscopic proteins that are formed by our immune system in response to an attack by a virus or bacteria. They search for these invaders and attach themselves in order to fight the infection. They usually manage to stop it from coming back for a period of time.

NEW CANCER BREAKTHROUGH



Cancer cells under a microscope

A SPECIAL diet and high doses of vitamin C supplements can help destroy cancer cells.

That's the remarkable finding of a new study by scientists at the University of Southern California, USA, and the IFOM Cancer Institute in Milan, Italy.

In studies on mice with tumours, researchers found that almost all the cancer cells were killed. The diet they used was low-calorie and plant-based (vegan). This caused cells to respond as if the mouse was fasting (not eating anything). When combined with high doses of vitamin C (right), the effects on the mice's tumours were remarkable.

One of the scientists behind the research, Valter Longo, said the study was the first to show a treatment that does not involve drugs can successfully treat an aggressive cancer.

The main advantage of this method over standard cancer treatments like chemotherapy is that there are no side-effects such as sickness or hair loss.

The treatment creates an environment that is harmful to a particular type of cancer cell, but safe for normal cells.

Further trials will need to be carried out to find out if this treatment can be safely applied to humans.



TATA
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SERVICES

INNOVATIONS

ELECTRONIC devices could soon be powered by sweat instead of batteries.

A group of scientists at the University of Glasgow have developed a new type of portable energy device that replaces the electrolytes (minerals that carry an electric charge) found in conventional batteries with sweat. The innovation can be fully charged with just 20 microlitres (0.02 millilitres) of sweat.

The researchers used a special type of cloth to absorb the sweat. When the two interacted, they caused an electrochemical reaction that generated energy able to power wearable tech, such as a watch.

It's hoped that “sweat power” could one day replace some environmentally-unfriendly batteries.



SCIENCE
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This report is from the Science and Industry Museum in Manchester

SPENDING more time at home might mean you've been playing lots of games, but have you ever played on a pinball machine?

It provides a great opportunity to explore the science of forces and motion!

Three main forces change the motion of the ball. First, the flipper starts the ball moving by applying a contact force directly to it. Friction between the bottom of the ball and the pinball table means it rolls rather than slides. Finally, because the machine slopes downward, gravity makes the ball travel slower on the way up and faster on the way down.

From Monday 25 to Friday 29 May, the Science and Industry Museum is showing you how to make your own pinball machine and lots of other creations from home. Visit tinyurl.com/MakeFest2020 or search for #MakeFestAtHome.



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