



Nottinghamshire Healthcare
NHS Foundation Trust

HOT TOPICS NEWSLETTER

Infection Prevention and Control in the News

July 2020

Flu in early life determines our susceptibility to future infections: New findings suggest early exposure to the flu affects how likely we are to acquire future infections and may also impact vaccine effectiveness:

Date: July 7, 2020 **Source:** eLife

Early infections of influenza A can help predict how the virus will affect people across different ages in the future and could impact the effectiveness of flu vaccines, says a new study published today in *eLife*. The findings may help improve estimates of both the age-specific risk of acquiring seasonal influenza infections and vaccine effectiveness in similarly vaccinated populations. Seasonal influenza is an acute respiratory infection caused by influenza viruses that occur across the world. It causes approximately 100,000-600,000 hospitalisations and 5,000-27,000 deaths per year in the US alone. The rapid evolution of seasonal influenza that allows it to escape preexisting immunity adds to the relatively high incidence of infections, including in previously infected older children and adults. But how susceptibility arises and changes over time in human populations has been difficult to quantify. "Since the risk of influenza infection in a given age group changes over time, factors other than age may affect our susceptibility to infection," says first author Philip Arevalo, a postdoctoral researcher in senior author Sarah Cobey's lab, Department of Ecology and Evolution, University of Chicago, US. "We wanted to see whether these differences can be explained in part by the protection gained from childhood flu infection, which has lasting impacts on the immune response to future infections and the protection against new influenza A subtypes. For full study go to:

<https://www.sciencedaily.com/releases/2020/07/200707113304.htm>

Children rarely transmit COVID-19, doctors write in new commentary- Schools can reopen in fall, they say, if safety guidelines are observed and community transmission is low:

Date: July 10, 2020 **Source:** University of Vermont

In the new *Pediatrics* study, Klara M. Posfay-Barbe, M.D., a faculty member at University of Geneva's medical school, and her colleagues studied the households of 39 Swiss children infected with Covid-19. Contact tracing revealed that in only three (8%) was a child the suspected index case, with symptom onset preceding illness in adult household contacts.

In a recent study in China, contact tracing demonstrated that, of the 68 children with Covid-19 admitted to Qingdao Women's and Children's Hospital from January 20 to February 27, 2020, 96% were household contacts of previously infected adults. In another study of Chinese children, nine of 10 children admitted to several provincial hospitals outside Wuhan contracted Covid-19 from an adult, with only one possible child-to-child transmission, based on the timing of disease onset. Reopening schools in a safe manner this fall is important for the healthy development of children, the authors say: For full article with world wide studies go to: <https://www.sciencedaily.com/releases/2020/07/200710100934.htm>

encountering novel (i.e., pandemic or potentially pandemic) strains. For full study go to:
<https://www.sciencedaily.com/releases/2020/07/200723143748.htm>

Major new campaign encourages millions to lose weight and cut COVID-19 risk
:Published 27 July 2020 From: [Public Health England](#)

A new national campaign is under way to encourage millions of adults to kick start their health and reduce their risk of serious illness, including COVID-19. The campaign – unveiled as part of the government's new Obesity Strategy – encourages adults to introduce changes that will help them work towards a healthier weight, with a suite of free tools and apps supporting people to eat better, drink less alcohol and get active. This includes a new app for the free 12-week NHS Weight Loss Plan, helping people make healthier food choices and learn skills to prevent weight gain. The current evidence does not suggest that having excess weight increases people's chances of contracting COVID-19. However, data shows that obese people are significantly more likely to become seriously ill and be admitted to intensive care with COVID-19 compared to those with a healthy BMI. For full information and Video visit:
<https://www.gov.uk/government/news/major-new-campaign-encourages-millions-to-lose-weight-and-cut-covid-19-risk>

The enemy within: Safeguarding against the spread of intracellular bacteria:

Date: July 30, 2020 **Source:** Walter and Eliza Hall Institute

Melbourne researchers have revealed the multiple, intertwined cell death systems that prevent the spread of the 'intracellular' bacterium Salmonella, an important cause of typhoid fever which kills more than 100,000 people annually. The team revealed that the spread of Salmonella is curtailed by the death of infected cells, but surprisingly cells can die in several distinct ways. Although Salmonella continuously seeks to outsmart infected cells by blocking their suicide, cells have evolved impressive 'back-up' strategies to ensure that the infected cell can still die and thus protect the body from Salmonella infection and consequent typhoid fever.

Many disease-causing bacteria invade cells, surviving and reproducing within the cells and hiding from the body's immune system. Salmonella, a cause of serious food-borne infections, is one such 'intracellular' bacterium. Cells have developed a range of defences against intracellular bacteria, Professor Bedoui said: For full article go to:

<https://www.sciencedaily.com/releases/2020/07/200730113101.htm>

Rare tick-borne infections diagnosed in England -PHE calls for people to be tick aware as the first case of a babesiosis is diagnosed in England.

Published 31 July 2020 From: [Public Health England](#)

Public Health England (PHE) can confirm the diagnosis of a case of babesiosis and a probable case of tick-borne encephalitis (TBE) in England. This is the first record of a UK-acquired case of babesiosis and the second case of TBE being acquired in the UK. Babesiosis is caused by a parasite which infects red blood cells whilst TBE is a viral infection that affects the central nervous system. Both are rare infections spread by the bite from an infected tick. Both patients have been transferred to hospital, where they are receiving appropriate treatment and supportive care. PHE regularly undertakes work to understand the potential risks of tick-borne infections in England. This year, PHE has surveyed sites in Devon close to where the person with babesiosis lives, collecting and testing hundreds of ticks – all tested negative for the parasite which causes babesiosis.

PHE has tested deer blood samples from Hampshire in areas near to where the person with probable TBE lives and they have shown evidence of likely TBE virus infection, which matches similar results found in 2019. The risk of babesiosis or TBE for the general public is very low. However, a number of infections can develop following a tick bite, including Lyme disease, and there are things we can all do to reduce our risk of being bitten by ticks while enjoying the outdoors this summer. For more info go to:

<https://www.gov.uk/government/news/rare-tick-borne-infections-diagnosed-in-england>

