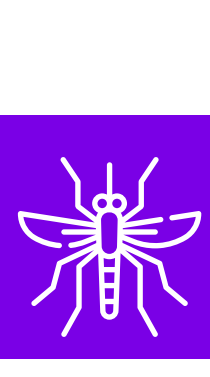


Travel & Endemic Newsletter

March 2022



Mosquito-Borne Diseases

New Mosquito Vision Discovery Could Help You Hide From These Disease-Carrying Bloodsuckers

New research shows that *Aedes aegypti* mosquitoes are attracted to specific colors, including red, orange, black and cyan. The mosquitoes ignore other colors, such as green, purple, blue, and white. The researchers believe these findings help explain how mosquitoes find hosts, since human skin, regardless of overall pigmentation, emits a strong red-orange “signal” to their eyes. The results reveal how the mosquito’s sense of smell — known as olfaction — influences how the mosquito responds to visual cues.

[Link to Publication](#)

Long-term safety of the tafenoquine antimalarial chemoprophylaxis regimen: A 12-month, randomized, double-blind, placebo-controlled trial

Conclusions from this trial that conducted in 600 healthy adults:

- Long-term use of weekly tafenoquine (200 mg) was associated with keratopathy, which is usually reversible within 12 weeks of drug cessation.
- Long-term use of tafenoquine was also associated with elevated levels of ALT, alkaline phosphatase, GGT, and creatinine, as well as mild anemia and methemoglobinemia, all of which normalized after cessation.
- Long-term use of tafenoquine was not associated with neuropsychiatric symptoms or adverse events.
- Travelers taking long-term tafenoquine for malaria chemoprophylaxis should be monitored with ophthalmologic evaluation and blood tests every 3 to 6 months.

[Link to article](#)

Imported plasmodium ovale and mixed infections in Israel 2008-2020:

The authors retrieved epidemiological and diagnostic data on all polymerase chain reaction (PCR)-proven *P. ovale* infections imported to Israel between 2008 and 2020. And concluded that *P. ovale* is commonly imported to Israel from Africa, with a high rate of mixed infections and that the use of RDTs and microscopy is insufficient for the species-specific diagnosis of *P. ovale*, and must be complemented by PCR.

[Link](#)

Genotype-specific features reduce the susceptibility of South American yellow fever virus strains to vaccine-induced antibodies

Yellow fever vaccines based on an African strain induce neutralizing antibodies that are associated with protection. Haslwanter et al. show that these antibodies have reduced activity against South American strains because they



bear genetically distinct surface proteins, suggesting that changes are needed in how immune protection against YFV is monitored.

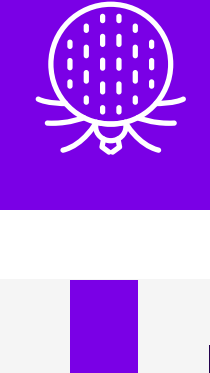
[Link to Publication](#)

Deaths from Congenital Zika Syndrome in Brazil

Data on survival among children with congenital Zika syndrome are limited. A population-based cohort study from Brazil estimate mortality among live-born children with congenital Zika syndrome as compared with those without the syndrome. The results showed that the risk of death was 11 times higher among live-born children with congenital Zika syndrome than among those without the syndrome and persisted throughout the first 3 years of life.

[Link to Publication](#)

[Link to Registration](#)



Tick-Borne Encephalitis

Incidence of Tick-Borne Encephalitis during the COVID-19 Pandemic in Selected European Countries

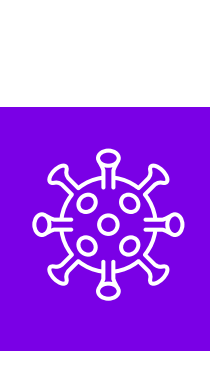
Significant differences in the TBE incidence were found between countries. The highest TBE incidence was found in Lithuania (25.45/100,000 inhabitants). A high TBE incidence was also observed in Central European countries. In 12 of the 23 analyzed countries, there was significant increase in TBE incidence during the COVID-19 pandemic during 2020 compared to 2015-2019. Despite the COVID-19 pandemic and imposed restrictions, the incidence of TBE is increasing in more than half of the analyzed countries. The results of this study show that TBE is an especially important and growing problem in the Baltic, Central European, and Scandinavian countries.

[Link to Article](#)

Tick-borne encephalitis among US travellers, 2010–20

TBE cases among US travellers are rare. From 2010–20, six patients with TBE were identified among both paediatric and adult travellers and all were male. The patients travelled to various countries in Europe or Russia. The author recommend clinicians to consider the diagnosis of TBE in a patient with a neurologic or febrile illness recently returned from a TBE-endemic country, particularly if a tick bite or possible tick exposure is reported.

[Link to Publication](#)

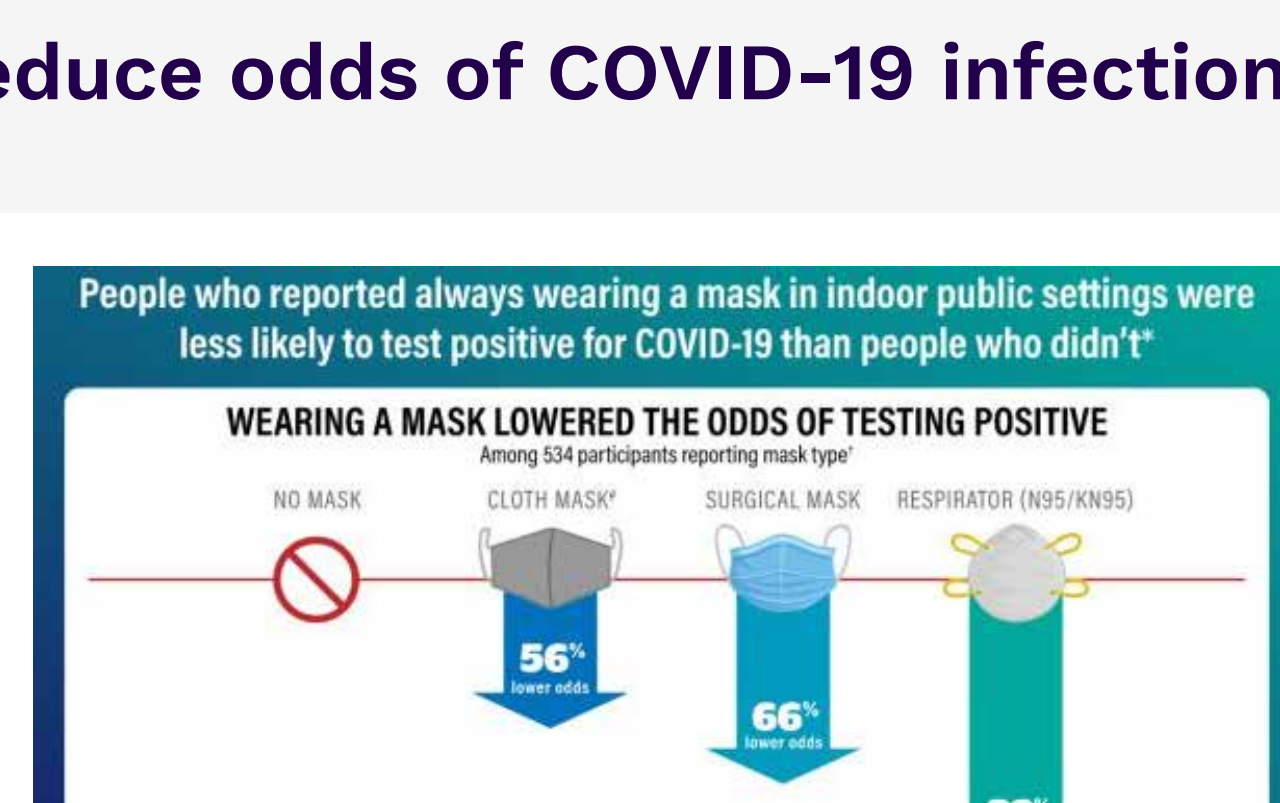


The Covid Corner

CDC study: N95, KN95 masks best reduce odds of COVID-19 infection

According to the study, surgical masks reduced the odds of testing positive for COVID-19 by about 66 percent compared to no masks at all. People who reported wearing N95 respirators while indoors were about 83 percent less likely to test positive compared with those who said they never wore a mask inside, the CDC found.

[Link](#)



*The study was conducted from Feb. 18 through Dec. 1, 2021, before the omicron variant became widespread.

SARS-CoV-2 human challenge study offers novel insights into viral kinetics:

This first SARS-CoV-2 human-challenge study was conducted safely and reported on viral kinetics. The 36 healthy volunteers (aged 18-29 years) without evidence of previous infection or vaccination were inoculated intranasally with a wild-type virus and received around-the-clock medical monitoring in a negative-pressure quarantine unit. A robust viral replication was observed in 53% (18/34) of seronegative participants. Within two to four days of incubation, viral loads (VLs) escalated rapidly, peaking at high levels and continuing for over a week. Despite high VLs, the symptoms that were reported in 89% of infected individuals were consistently mild-to-moderate and predominantly confined to the upper respiratory tract.

Detailed viral kinetics showed that some individuals shed culturable virus at 12 days pi, up to 10 days after symptom onset. On average, the viable virus was still detectable 10 days pi. Therefore, these data support the isolation periods of 10 days post-symptom onset advocated in many guidelines to minimize onward transmission.

The level of viral load and development of serum spike-specific and neutralizing antibodies did not correlate with symptoms. Lateral flow results reflected viable virus and modeling suggested that rapid testing twice a week could diagnose infection before significant amounts of viable virus become present.

[Link](#)

*This preprint is under consideration at a Nature Portfolio Journal

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