



## Health Status

### 1- Antibody Status and Incidence of SARS-CoV-2 Infection in Health Care Workers

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#### Abstract

**Background** The relationship between the presence of antibodies to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the risk of subsequent reinfection remains unclear.

**Methods** We investigated the incidence of SARS-CoV-2 infection confirmed by polymerase chain reaction (PCR) in seropositive and seronegative health care workers attending testing of asymptomatic and symptomatic staff at Oxford University Hospitals in the United Kingdom. Baseline antibody status was determined by anti-spike (primary analysis) and anti-nucleocapsid IgG assays, and staff members were followed for up to 31 weeks. We estimated the relative incidence of PCR-positive test results and new symptomatic infection according to antibody status, adjusting for age, participant-reported gender, and changes in incidence over time.

**Results** A total of 12,541 health care workers participated and had anti-spike IgG measured; 11,364 were followed up after negative antibody results and 1265 after positive results, including 88 in whom seroconversion occurred during follow-up. A total of 223 anti-spike-seronegative health care workers had a positive PCR test (1.09 per 10,000 days at risk), 100 during screening while they were asymptomatic and



## Health Status

123 while symptomatic, whereas 2 anti-spike-seropositive health care workers had a positive PCR test (0.13 per 10,000 days at risk), and both workers were asymptomatic when tested (adjusted incidence rate ratio, 0.11; 95% confidence interval, 0.03 to 0.44;  $P=0.002$ ). There were no symptomatic infections in workers with anti-spike antibodies. Rate ratios were similar when the anti-nucleocapsid IgG assay was used alone or in combination with the anti-spike IgG assay to determine baseline status.

Conclusions The presence of anti-spike or anti-nucleocapsid IgG antibodies was associated with a substantially reduced risk of SARS-CoV-2 reinfection in the ensuing 6 months. (Funded by the U.K. Government Department of Health and Social Care and others.)

In a longitudinal study of seropositive and seronegative health care workers undergoing asymptomatic and symptomatic SARS-CoV-2 testing, the presence of anti-spike or anti-nucleocapsid IgG antibodies was associated with a substantially reduced risk of SARS-CoV-2 reinfection in the ensuing 6 months.



## Health Status

### 2- Consumption of ultra-processed foods and health status: a systematic review and meta-analysis

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#### **Abstract**

Increasing evidence suggests that high consumption of ultra-processed foods (UPF) is associated with an increase in non-communicable diseases, overweight and obesity. The present study systematically reviewed all observational studies that investigated the association between UPF consumption and health status. A comprehensive search of MEDLINE, Embase, Scopus, Web of Science and Google Scholar was conducted, and reference lists of included articles were checked. Only cross-sectional and prospective cohort studies were included. At the end of the selection process, twenty-three studies (ten cross-sectional and thirteen prospective cohort studies) were included in the systematic review. As regards the cross-sectional studies, the highest UPF consumption was associated with a significant increase in the risk of overweight/obesity (+39 %), high waist circumference (+39 %), low HDL-cholesterol levels (+102 %) and the metabolic syndrome (+79 %), while no significant associations with hypertension, hyperglycaemia or hypertriacylglycerolaemia were observed. For prospective cohort studies evaluating a total population of 183 491 participants followed for a period ranging from 3.5 to 19 years, highest UPF consumption was found to be associated with increased risk of all-cause mortality in five studies (risk ratio (RR) 1.25, 95 % CI 1.14, 1.37;  $P < 0.00001$ ), increased risk of CVD in three studies (RR 1.29, 95 % CI 1.12, 1.48;  $P = 0.0003$ ), cerebrovascular disease in two studies (RR 1.34, 95 % CI 1.07, 1.68;  $P = 0.01$ ) and depression in two studies



### Health Status

(RR 1.20, 95 % CI 1.03, 1.40; P = 0.02). In conclusion, increased UPF consumption was associated, although in a limited number of studies, with a worse cardiometabolic risk profile and a higher risk of CVD, cerebrovascular disease, depression and all-cause mortality.

### Keywords

#### Author Keywords

[Ultra-processed food](#)[Health](#)[CVD](#)[Mortality](#)[Meta-analysis](#)

#### Keywords Plus

[NATIONAL-HEALTH](#)[NUTRITION](#)[OBESITY](#)[RISK](#)



## Health Status

### 3- Burdens of post-acute sequelae of COVID-19 by severity of acute infection, demographics and health status

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**Abstract**

The Post-Acute Sequelae of SARS-CoV-2 infection (PASC) have been characterized; however, the burden of PASC remains unknown. Here we used the healthcare databases of the US Department of Veterans Affairs to build a cohort of 181,384 people with COVID-19 and 4,397,509 non-infected controls and estimated that burden of PASC-defined as the presence of at least one sequela in excess of non-infected controls-was 73.43 (72.10, 74.72) per 1000 persons at 6 months. Burdens of individual sequelae varied by demographic groups (age, race, and sex) but were consistently higher in people with poorer baseline health and in those with more severe acute infection. In sum, the burden of PASC is substantial; PASC is non-monolithic with sequelae that are differentially expressed in various population groups. Collectively, our results may be useful in informing health systems capacity planning and care strategies of people with PASC.

**Keywords**

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## Health Status

### 4- The impact of quarantine on mental health status among general population in China during the COVID-19 pandemic

By:

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**Abstract**

Quarantine and isolation measures urgently adopted to control the COVID-19 pandemic might potentially have negative psychological and social effects. We conducted this cross-sectional, nationwide study to ascertain the psychological effect of quarantine and identify factors associated with mental health outcomes among population quarantined to further inform interventions of mitigating mental health risk especially for vulnerable groups under pandemic conditions. Sociodemographic data, attitudes toward the COVID-19, and mental health measurements of 56,679 participants from 34 provinces in China were collected by an online survey from February 28 to March 11, 2020. Of the 56,679 participants included in the study (mean [SD] age, 36.0 [8.2] years), 27,149 (47.9%) were male and 16,454 (29.0%) ever experienced home confinement or centralized quarantine during COVID-19 outbreak. Compared those without quarantine and adjusted for potential confounders, quarantine measures were associated with increased risk of total psychological outcomes (prevalence, 34.1% vs 27.3%; odds ratio [OR], 1.34; 95% CI, 1.28-1.39;  $P < 0.001$ ). Multivariable logistic regression analyses showed that vulnerable groups of the



## Health Status

quarantined population included those with pre-existing mental disorders or chronic physical diseases, frontline workers, those in the most severely affected areas during outbreak, infected or suspected patients, and those who are less financially well-off. Complying with quarantine, being able to take part in usual work, and having adequate understanding of information related to the outbreak were associated with less mental health issues. These results suggest that quarantine measures during COVID-19 pandemic are associated with increased risk of experiencing mental health burden, especially for vulnerable groups. Further study is needed to establish interventions to reduce mental health consequences of quarantine and empower wellbeing especially in vulnerable groups under pandemic conditions.

### Keywords

### Keywords Plus

[ACUTE RESPIRATORY SYNDROME](#) [PSYCHOLOGICAL IMPACTS](#) [SEX EXPOSURE](#) [TORONTO DISORDER](#)



## Health Status

### 5- An investigation of mental health status of children and adolescents in china during the outbreak of COVID-19

By:

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#### Abstract

**Objective:** : The sudden outbreak of Coronavirus Disease 2019 (COVID-19) has had a dramatic effect on the mental health of the public. In the present study, we demonstrated the psychological effects on children and adolescents associated with the epidemic.

**Methods:** : By using convenience sampling method, questionnaires, such as Spence Child Anxiety Scale, Child Depression Inventory and Coping style Scale, were distributed to participating 359 children and 3254 adolescents online.

**Results:** : The anxiety levels of children and adolescents were (23.87 +/- 15.79) and (29.27 +/- 19.79), respectively. 22.28% respondents were suffering from depressive symptoms. Seven significant factors associated with increased levels of anxiety, including female, resident in urban regions, emotion-focused coping style. Nine factors associated with increased levels of depression, such as smartphone addiction (OR 1.411, 95% CI 1.099-1.180), Internet addiction (OR 1.844, 95% CI 1.209-2.811), and resident in Hubei province (OR 3.107, 95% CI 1.252-7.708). Two additional factors associated with decreased levels of depressive symptoms: hours spend on Internet per day before the epidemic (OR 0.652, 95% CI 0.609-0.697) and tendency to apply problem-focused coping style (OR 0.937, 95% CI 0.923-0.951).

**Conclusion:** : Our findings indicate that the COVID-19 outbreak has had a significant psychosocial impact on children and adolescents. Findings of current levels of anxiety and depression not only highlight the need to address emotional distress for children and adolescents during the epidemic but also provide





## Health Status

researchers with scientific fundamentals to formulate targeted interventions based on the significant influencing factors.

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