

**GOVERNMENT OF INDIA  
MINISTRY OF HEALTH AND FAMILY WELFARE  
DEPARTMENT OF HEALTH RESEARCH**

**RAJYA SABHA  
UNSTARRED QUESTION NO. 926  
TO BE ANSWERED ON 30<sup>TH</sup> JULY, 2024**

**STUDY OF POST-COVID COMPLICATIONS IN THE COUNTRY**

**926. DR. SASMIT PATRA:**

Will the Minister of **HEALTH AND FAMILY WELFARE** be pleased to state:

- (a) the details of Post-COVID complications, if any, seen among people in the country;
- (b) the comparison, if any, with similar Post-COVID complications among people across other countries/continents/geographical regions;
- (c) the reasons for the Post-COVID complications;
- (d) the symptoms of such complications; and
- (e) the details of effect if COVID vaccines are influencing such symptoms and complications?

**ANSWER**

**THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE  
(SHRI PRATAPRAO JADHAV)**

(a): Indian Council of Medical Research (ICMR), an autonomous body under the Department of Health Research (DHR), has informed that the Post-COVID complications affect multiple organs and can be pulmonary, cardiovascular, hematological, neuropsychiatric, dermatological, renal, gastrointestinal, musculoskeletal, genitourinary or endocrine complications.

According to the National Clinical Registry for COVID-19 (NCRC) data obtained from 31 hospitals across India, dyspnea, fatigue and mental health issues were the most common symptoms observed at all follow-up time-points. Dyspnoea, fatigue and mental health issues were reported among 18.6%, 10.5% and 9.3% of the 8042 participants at first follow-up of 30–60 days post-discharge, respectively, which reduced to 11.9%, 6.6% and 9%, respectively, at 1-year follow-up in 2192 participants.

(b): A systematic review and meta-analysis done for 194 studies conducted in across various geographical locations- Europe (106 studies), Asia (49 studies), North and South America (31 studies), and other continents (8 studies) demonstrated that fatigue is the most frequently reported symptom across hospitalised (28.4%), non-hospitalised (34.8%), and mixed (25.2%) population. Amongst hospitalised patients, the five most prevalent symptoms reported were fatigue (28.4%, 70 studies), pain/discomfort (27.9%, 10 studies),



impaired sleep (23.5%, 34 studies), breathlessness (22.6%, 70 studies), and impaired usual activity (22.3%, 10 studies).

(c): Post-COVID complications are multifactorial. Factors such as immune system dysregulation, autoimmunity, dysbiosis, microthrombi, systemic fibrosis, autonomic dysfunction or persistent CNS infection can lead to Post-COVID complications.

(d): A recent systematic review has demonstrated that nearly 45% of COVID-19 survivors experienced at least one unresolved symptom. Fatigue is the most frequently reported symptom across hospitalised, non-hospitalised and mixed cohorts. Other commonly reported symptoms are malaise, dyspnea, persistent loss of smell or taste, brain foggiess, headache, cough, low-grade fever, palpitations, dizziness, depression, muscle and joint pains. World Health organisation (WHO) reports fatigue, shortness of breath or difficulty breathing, memory, concentration or sleep problems, persistent cough, chest pain, trouble speaking, muscle aches, loss of smell or taste, depression or anxiety and fever as the most common symptoms experienced during Post COVID-19 condition.

(e): ICMR has informed that it is observed that COVID vaccine taken prior to COVID-19 infection is associated with lower incidence of Post-COVID complication. Also, it is not associated with worsening of Post-COVID symptoms in patients with prior COVID-19 infection and ongoing long COVID. Only 16% of patients who died had been vaccinated, demonstrating the protective effect of anti-SARS-CoV-2 vaccination.

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