

## **Covid-19 Infodemic; Debunking the Myths and Misconceptions**

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The corona virus pandemic has badly affected the mental harmony of the people globally. Social media and unauthentic information had added to the menace. The pandemic has led to the development of certain myths and misconceptions. If you log onto social media, COVID-19 is the burning topic for discussion. The outburst has become a trending topic on all social media platforms. A huge amount of misinformation and fabricated facts have surfaced across the web. This propaganda has led to development of paranoia and can even compel a lay man to experiment something dangerous in an attempt to protect against or get rid of the virus. The scenario created by the COVID 19 outbreak has led Health Organization (WHO) to label it as an “over-abundance of information” eventually proclaiming it as a “massive infodemic” [1]. The COVID-19 “misinfodemic” has overloaded the layman with myths and misconceptions. Efforts should be made to fact check the misconceptions and offer solutions based on scientific evidence. Following are some of the myths that are strongly believed and should be clarified.

### **Temperature extremes can kill corona virus**

There is no scientific evidence that cold or hot weather conditions can be fatal for coronavirus. Regardless of the external temperature, the normal human body maintains a temperature of 36.5°C-37°C. One can acquire COVID-19, irrespective of hot weather. Countries with extreme temperature have reported cases infected with corona virus. Also taking a hot shower is of no value in prevention from the virus. The best protective measures are social distancing practices and good hand hygiene [2-4].

### **Masks can prevent COVID 19**

Transmission and spread of the coronavirus can be prevented by practices like wearing masks, gloves, frequent hand washing and social distancing [3].

### **Using masks during exercise increases CO<sub>2</sub> levels**

People should not wear masks when training or workout as it may reduce the ability to comfortably breathe. Also masks may become drenched with sweat after prolonged wearing and may become a site of microorganism growth. A disposable mask should not be re-used and should be changed as soon as it gets damp. It is vital to adopt the strategy of social distancing while exercising [2].

### **Drinking alcohol protects you against Covid-19 and can be dangerous**

There is no evidence that proposes benefit of alcohol intake against Covid-19. Rather, alcohol consumption and following intoxication can impair hand hygiene, social distancing norms and other infection control strategies, and set an impending threat of contracting the virus [4]. Also, the risk of health problems is exaggerated by excessive alcohol intake [2].

### **Thermal scanners detect Covid-19**

Thermal scanners can just detect fever but they cannot detect individuals infected with COVID-19. Also, they cannot detect the virus in individuals who are in the incubation period and have not developed fever yet [2-4].

### **Hydroxychloroquine and antibiotics can treat or prevent COVID-19**

Although various drug trials are being done but there is no clinical evidence yet that hydroxychloroquine can cure or prevent COVID-19. Its non-prescribed use can lead to serious side effects and can be fatal. Since COVID-19 is a viral infection, so antibiotics are not the treatment of choice but are useful for treating secondary bacterial infections [3,4]. Though this is an era of biotechnology, still it will take many months to years for the development of prophylactic vaccines and therapeutic antiviral drugs. During this lag period hydroxychloroquine may be proven a cheap, safe and effective option, but it must be administered in hospital settings under supervision of panel of physicians to control any untoward happening timely [5,6].

### **BCG immunization prevents against COVID-19 infection**

There is no scientific proof that the BCG vaccine protects people against infection with COVID-19. Although few trials are underway but WHO has not yet acclaimed BCG vaccination as a preventive strategy against corona virus [4].

### **Adding pepper to your soup or other meals prevent or cure COVID-19**

Hot peppers in food, though very tasty, cannot prevent or cure COVID-19. The best way to protect yourself against coronavirus is social distancing, frequent hands washing, maintaining a balanced diet, adequate sleep, proper hydration and working out regularly [2].

### **COVID-19 is transmitted through houseflies**

No scientific data suggests that houseflies are a source of corona virus. It is a droplet infection and is transmitted when an infected person coughs, sneezes or speaks.

### **Contact with pets causes COVID-19**

According to WHO, there is no evidence to suggest that pets such as dogs and cats have infected humans with Covid-19 [7].

### **COVID 19 infection is transmitted by mosquito bite**

There is no study to suggest that COVID19 spreads by mosquito as for a virus to pass to a person through a mosquito bite, the virus must be able to replicate within the mosquito [3,7].

### **Chicken consumption spreads COVID 19**

No clinical evidence supports the spread of COVID 19 via consumption of mutton, seafood or chicken [4,7].

### **Intake of disinfectant protects against COVID-19**

Disinfecting surfaces with alcohol based spray and bleach does not mean that they can be ingested as well. If ingested these substances can be toxic and may irritate or damage the skin [2,4].

### **COVID 19 can be prevented by vaccines against pneumonia**

There is no scientific proof that vaccines that used to cure pneumonia can protect against COVID 19 infection as well [4].

### **COVID-19 is always fatal**

Being infected by coronavirus does not mean end of life. Majority of the individuals who are infected with corona virus, recover. If a person is infected with COVID 19, he should get the symptomatic treatment. If symptoms develop medical care should be sought early. Most patients recover by supportive care [2].

### **Holding breath for 10 seconds or more without discomfort and cough means the individual is not infected**

Laboratory test is the authentic way to confirm the presence of virus. It cannot be confirmed based on this breathing exercise, which can even be hazardous [2].

### **Online orders and purchases can infect individuals with COVID-19**

Transmission of Corona virus through packages is not supported by clinical evidence. The probability of becoming infected with corona virus from a commercial package is little since during shipment it has probably moved over several days while being exposed to diverse temperatures. Corona virus remains active, stable and infectious for about 72 hours on cardboard and plastic. Hence your courier delivery or grocery you ordered online may provide corona virus a window of opportunity to get inside your house [4,7].

### **Ablution protects against COVID 19**

A shocking 82% of Pakistani population continues to believe that if they perform ablution five times a day, they will stay protected from corona virus. Religious beliefs are seen as a major determinant in our approaches towards the virus. Mass awareness campaigns are needed to dispel these myths, which may put the lives of people in danger.

### **Religious gatherings and religious chants can protect virus**

67% of Pakistanis believe that jamaat (congregation) cannot infect anyone, as Allah has control over all viruses. Nearly half of the people (48%) polled believe that since shaking hands is Sunnah, it cannot infect anyone with Covid. Muslims way of greeting i.e. embracing can spread the virus. Religious gatherings and services are being suspended across the country because closely-knit faith groups and pilgrims have emerged as major spreaders of the coronavirus disease [7].

### **Garlic, ginger, vitamin C, rinsing of nose help prevent infection with coronavirus?**

Garlic possess some antimicrobial properties but there is no supportive data that states that it can protect people from coronavirus. (Organization) However, taking vitamin C, ginger, saline water gargles, consistent rinsing of nose with saline builds immunity to fight against infections [3,4].

### **Coronavirus affects the elderly**

All age groups can be infected by COVID 19. Older people, and people with Co-morbid medical conditions are vulnerable to becoming severely sick with COVID 19. WHO advises all individuals irrespective of age to take precautionary measures to protect themselves from the virus [3].

### Do Pakistanis really have an immune system strong enough to beat the virus?

Contrary to popular belief, Pakistanis have a weak immune system. It is feared that a lot of people may have caught the virus already and be asymptomatic for now. With a weak immune system, many other individuals will be especially at risk. To mitigate health risks, engaging in some form of physical activity to boost immunity while maintaining social distancing is a good option. It is also best to have a healthy diet, with lots of fruits and vegetables. Staying at home will have a huge impact on mental health as is, so it is best to keep oneself active and busy [8].

All these myths have a strong influence on public opinion and disease transmission. Adequate steps must be taken by the authorities to demystify the myths in due time. Considering the dynamics of COVID-19 infection, people should look for scientific evidence before considering them to be beneficial and applying them on themselves and families. The masses should focus more on preventing the spread and to carry out awareness campaigns that may help in deciphering the myths and persuade the people to follow SOPs. Health care providers and Administrative bodies should work in unison to mitigate the effects of COVID 19.

### Conflict of Interest

There is no conflict of interest.

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