Indoor Risk During the COVID-19 Pandemic

October 6, 2020

The following guidance was developed by the San Francisco Department of Public Health for use by San Francisco residents and will be posted at sfcdcp.org/indoorrisk. This tip sheet may change as information is updated.

Purpose. Attending events, eating meals, socializing, and engaging in other activities indoors significantly increases the risk of COVID-19 transmission. This guidance document serves as information for businesses and the general public about the risk of indoor activities and ways to reduce that risk.

Audience. San Francisco residents and visitors. The material is also designed for use by San Francisco employers and anyone producing materials to inform the public about COVID-19 risk.

INDOOR ACTIVITIES INCREASE COVID-19 RISK

Scientists agree that the risk of transmitting COVID-19 is generally much greater indoors than outdoors. Consider the increased risk to yourself and your community before participating in indoor activities.

How Does Covid-19 Spread?
COVID-19 is transmitted from person-to-person and occurs in some of the following scenarios:

- Large droplets from coughing and sneezing are propelled directly into the face, nose, eyes, or mouth of someone nearby, usually within 6 feet. These droplets are sometimes called “ballistic droplets” because they travel in straight lines and are subject to the forces of gravity. OR

- Small droplets and particles are released when a person breathes, talks, sings, coughs, or sneezes. These small droplets and particles can remain suspended in the air for a period of time and/or move beyond 6 feet on indoor air currents. Other people might inhale these small droplets and particles even if they are further than six feet away. These droplets are sometimes referred to as “aerosols” or “bioaerosols”. OR

- A person touches a surface that is contaminated and then touches a mucus membrane such as their nose, eyes or mouth. Contaminated surfaces are sometimes called “fomites”.

The COVID-19 virus can travel in the air more than 6 feet and builds up indoors. Generally, whenever possible, choose outdoor activities over indoor activities, and if you need to go indoors, limit your time indoors if you are with people who are not in your household. Avoid enclosed spaces that are crowded and have poor ventilation.
FREQUENTLY ASKED QUESTIONS

1) Is it really riskier to be indoors?
   a. Generally, yes. The same activity is usually much riskier indoors than outdoors because of the risk of aerosol transmission indoors.

2) How much more risky?
   a. Precise numbers are difficult to calculate but the science is clear: the COVID-19 virus can build up indoors and many individuals can get sick indoors even if they were more than 6 feet away from the infected person.
   b. Each of these factors adds to your risk: participating in multiple indoor activities, being indoors with many other people from other households, taking your face covering off for any amount of time, being closer than 6 feet to other people, being around others who are singing or shouting. Activities that combine these risk factors multiply your risk even more.

3) How can we reduce risk at indoor activities?
   a. Consider potential outdoor and in-home alternatives
   b. Find options for outdoors, curbside, delivery or take out
   c. Decide not to socialize indoors
   d. Plan and consider safety precautions for indoor activities well in advance
   e. Limit your group to members of your own household
   f. Limit the time spent indoors. Minimize time in places where masks are not worn consistently
   g. Find times when the location will not be busy or crowded
   h. Choose locations which have larger interior spaces and high ceilings
   i. Look for good ventilation, including good air flow due to open doors or open windows
   j. Do not enter if there are people not wearing masks and maintaining at least 6 feet social distance
   k. Singing, shouting, sneezing, or coughing carries much higher risk: go back outdoors if you see or hear these activities indoors
   l. Guard your minimum 6 feet of social distance
   m. Keep your mask on at all times.

References

San Francisco Department of Public Health Coronavirus (COVID-19)

Centers for Disease Control and Prevention (CDC): CORONAVIRUS 2019

Scientific research papers:

Guidance


- Jones NR, Qureshi ZU, Temple RJ, Larwood JPJ, Greenhalgh T, Bourouiba L. Two metres or one: what is the evidence for physical distancing in covid-19? BMJ. 2020 Aug;p. m3223. Available from: https://doi.org/10.1136/bmj.m3223.


- Ong, S, Tan, Y, Chia, P, Lee, T, Ng, O, Wong, M, Marimuthu, K. Air, surface environmental, and personal protective equipment contamination by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) from a symptomatic patient. JAMA 2020 APR 28; 323(16):1610-1612; Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7057172