

MOTION PICTURE THEATERS AND COVID-19 SAFETY

MOVIE THEATERS ARE SAFE ENVIRONMENTS DURING COVID-19

When states initially closed, some businesses were permitted to stay open because they provided services that the governors deemed essential. Movie theaters were not among these essential businesses and never argued for inclusion with essential businesses.

However, once a state decides that indoor activities are safe (with appropriate safety measures such as distancing, capacity limits, mask mandates, etc.), then all similarly-situated businesses should be permitted to open with the appropriate safety measures.

Movie theaters are an indoor business where consumers engage in a sedentary and quiet activity. Specifically, guests sit in a theater, all facing the same direction and wearing face masks, and are discouraged from speaking.

Movie theaters have implemented [CinemaSafe](#), a set of voluntary safety protocols that are in many cases over and above the requirements states have required for movie theaters specifically and certainly above the requirements for other similarly-situated entities such as indoor dining and houses of worship.

These protocols include mandatory mask wearing for guests and employees with only limited exceptions; physical distancing; staggered showtimes; modified concessions and more.

Movie theater auditoriums also typically have high ceilings and individual HVAC units for each auditorium.

THEATERS ARE SAFER THAN SIMILARLY-SITUATED BUSINESSES AND VENUES

Movie theaters are most similar to indoor dining or churches, where visitors sit for an extended period of time. However, churches and restaurants differ from movie theaters in fundamental ways. Movie theaters have not been linked to COVID-19 spread (as described further below).

Churches feature speaking or singing from the religious leaders who are facing the congregation. Worshippers may also hug or pass around a donation bowl or touch a shared religious text. [Churches have been linked to COVID-19 spread.](#)

Restaurants have patrons facing multiple directions around dining tables. Patrons necessarily remove their masks for the duration of their time at the table as they order and eat their food. There is also frequent talking from all the guests. Unlike movie theaters, where all guests in an auditorium stay in the same place for a single showtime, in a restaurant, a party dining for 90 minutes may be exposed to a number of other customers with different reservation times. Finally, restaurants typically have lower ceilings and would be expected to have one HVAC system to serve the entire dining space. [Restaurants have been linked to COVID-19 spread.](#)

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Because of the design of the space and the nature of the activity, movie theaters are safer than other indoor activities including restaurants, religious services and gyms.

STUDIES AFFIRM THAT ACTIVITIES LIKE GOING TO THE MOVIES ARE SAFE

In a [peer-reviewed study](#), scientists compared the risk of airborne transmission of COVID-19 in a variety of different indoor settings and concluded that the activity type/breathing type made a significant difference in terms of likelihood of transmission. See Appendix A for a chart from the study.

The study performed a quanta emission rate calculation for four different emission profiles evaluated as a combination of expiratory activities and activity levels: (i) oral breathing during resting; (ii) oral breathing during heavy activity; (iii) speaking during light activity; and (iv) singing (or loudly speaking) during light activity and determined: “Obviously the lowest values are found under the oral breathing condition during resting.”

Specifically, the study showed that the exposure risk of a **sedentary individual** in a fairly small room (100 m³) with a contagious sedentary individual was low. Even in a room that small, if the room has good ventilation the exposure risk is considered low for exposures of up to 192 minutes, or approximately 3.25 hours.

Movie theaters are typically much larger than 100 m³, and have higher ceilings than the small hospital room used as the sedentary example in the study.

Therefore, with the safety measures in place, we can presume safety for even longer than the 192 minutes noted in the study.

[Another study](#) by the Hermann-Rietschel-Instituts der Technischen Universität in Berlin, Germany, undertaken on behalf of German cinema trade body HDF found that if a patron only breathes in the cinema, the number of inhaled aerosols is still well below that in an office where people are speaking, even with an excessively long film. According to the study, this is also related to the type of ventilation in the cinemas.

In Japan, Professor Mikamo of Infectious Disease Center, Aichi Medical University conducted a test on air circulation in movie theaters using smoke to demonstrate speed of circulation. Based on the study (available in a video in Japanese [here](#)) Professor Mikamo found that the “contaminated” air in a movie theater would be fully replaced by fresh air within 20 minutes. Professor Mikamo concluded that the air ventilation contributes to enhanced safety in a movie theater because an auditorium may get fresh air 6-7 times during one movie showtime.

NO OUTBREAKS HAVE BEEN LINKED TO MOVIE THEATERS ANYWHERE ON THE GLOBE – EVEN WHERE THEY ARE OPEN

There have been no outbreaks traced to movie theaters anywhere in the world, while many have been traced to restaurants and church services.

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For example, in South Korea, [a report by the Film Promotion Committee](#) found that 31.5 million guests visited movie theaters in Korea from February 1 through September 20 of this year but that even with evidence of at least 49 confirmed infected individuals visiting a movie theater during that time, *there have been no cases of additional infection or transmission of COVID 19 in the theaters*. That is, based on extensive tracing, none of the 49 infected cinemagoers appear to have passed on the virus to another audience or staff member.

Other global research also confirms no confirmed case of COVID associated with movie theaters.

In an [analysis of more than 200 cases of massive infection](#), researchers found that none were related to a cinema.

A global analysis by Celluloid Junkie also confirmed that [zero outbreaks of COVID-19 have been tied to movie theaters](#) anywhere in the world. Even where there were known cases of an infected customer or employee on the premises there was no evidence of any spread to others.

Additionally, the team behind [covid19settings.blogspot](#) has compiled over 1,500 cases of massive infections around the globe and none are related to a cinema operation.

To allow a restaurant, gym or church to open while forbidding movie theaters from opening cannot be supported by science.

OUTSIDE EXPERTS CONFIRM MOVIE THEATER SAFETY

On Movie Safety Generally:

[Dr. Jose L. Jimenz, Ph.D:](#)

"Every route of viral transmission would go down if we talked less, or talked less loudly, in public spaces. . . I can't name a movie-theater outbreak in the contact-tracing literature . . . I can tell you that theaters don't seem nearly as dangerous as a loud restaurant or bar, where people have to speak loudly to be heard."

<https://www.theatlantic.com/ideas/archive/2020/08/wear-your-mask-and-stop-talking/615796/>

[Dr. Natascha Tuznik, D.O.:](#)

"But now that masks are required . . . a theater should pose less risk of person-to-person transmission than many other places people are going now."

<https://health.ucdavis.edu/health-news/newsroom/movie-theaters-may-pose-less-covid-19-risk-than-we-think-says-uc-davis-health-expert/2020/06>

[Dr. Robert Lahita, M.D.:](#)

"Nothing is 100 percent safe . . . but I would say you're 95 percent safe if you go to the movies [with all of the stated measures in place]."

<https://www.vulture.com/2020/08/is-it-safe-to-go-to-a-movie-theater-during-coronavirus.html>

On the CinemaSafe Protocols:

[Dr. David F. Goldsmith, Ph.D:](#)

"There are no findings that show a link between going to see a movie and contracting COVID-19."

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“The[] [CinemaSafe] protocols, and the way they were developed, demonstrate a serious, comprehensive effort by movie theater owners to examine every aspect of their operations, identify potential risks, and reduce them.”

[Dr. Joyce L. Sanchez, MD, FACP:](#)

The CinemaSafe protocols address, “Two of the three general concepts that factor into activity risk: distance, dose and duration.” Sanchez said that duration can’t be controlled but noted that movie runtimes are similar to that of a domestic flight or time spent at a restaurant. “While every activity outside the home carries risks, these additional measures can help to mitigate them.”

[Dr. Matthew Sims, MD PhD, FACP, FIDSA:](#)

“I find the risk reduction strategies recommended by the National Association of Theatre Owners for initial reopening to meet what I would expect

to see when reopening such a venue in the wake of the COVID-19 pandemic. Based on my review, I believe that, when followed, they would lower the risk as much as possible within what I would consider reasonable requirements.”

“I believe allowing the movie theaters to reopen while enforcing these guidelines is at least as safe, or safer, as any other comparable businesses currently permitted [] to open, such as a shopping mall and likely safer than indoor restaurants, where people might have masks off for a significant amount of time and which are employing far less aggressive risk reduction strategies.”

[Dr. Anthony S. Fauci, MD:](#)

“It seems that you are proceeding in a very responsible manner. I do not see anything that you described [in the CinemaSafe protocols] that is incompatible with the principles that I have been espousing.”

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APPENDIX A:

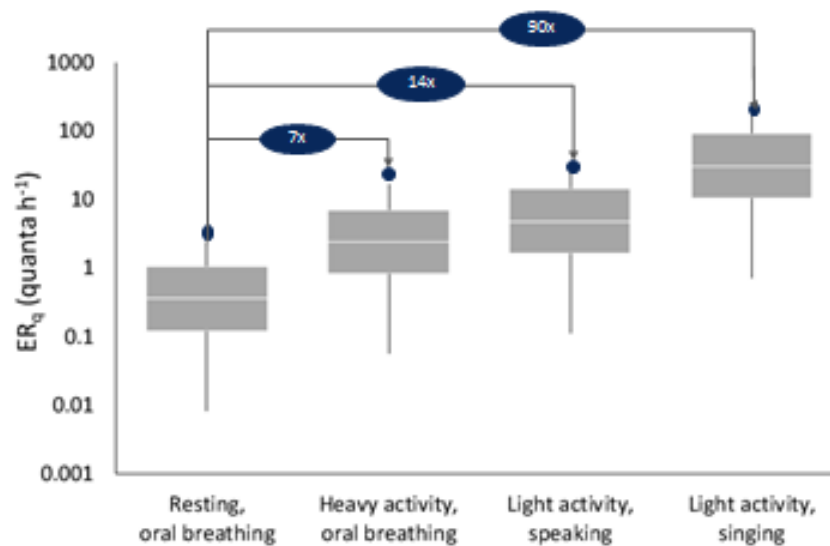


Figure 1 - Statistics of quanta emission rates (ER_q) for the four expiratory activities considered in the exposure scenarios. Data reported represent 1st, 25th, 50th, 75th, and 99th percentiles.

Source: Quantitative assessment of the risk of airborne transmission of SARS-CoV-2 infection: Prospective and retrospective applications; G. Buonanno, L. Moravcsik, L. Stabile