

AirCoV2 - screenshots

Voorbeeld: woonkamer met vier personen, verblijfsduur 1 uur.

Er is één besmettelijk persoon aanwezig die virus via aerosolen verspreid via ademen/spreken/1 hoest/ 1nies. Kans op besmetting van tenminste één persoon wordt geschat.

Zonder ventilatie:

AirCoV2

SCENARIO

Living room

Length, m: 7

Width, m: 4.5

Height, m: 2.2

Volume, m³: 69.

Ventilation

liter/sciperson

m³/h

One infected person

Virus/ml in mucus 10⁸: 8

P[10⁸ virus/ml]: 8.5%

Exposed person(s)

Number: 4

Exposure time, min.: 60


Virus infectivity

Intact fraction: 0.01

Infectious fraction: 0.5

Virus concentration in the air

Virus/room Virus/L



Risk calculator for aerosol transmission of SARS-CoV2

Results | Model | Data | References | About | History

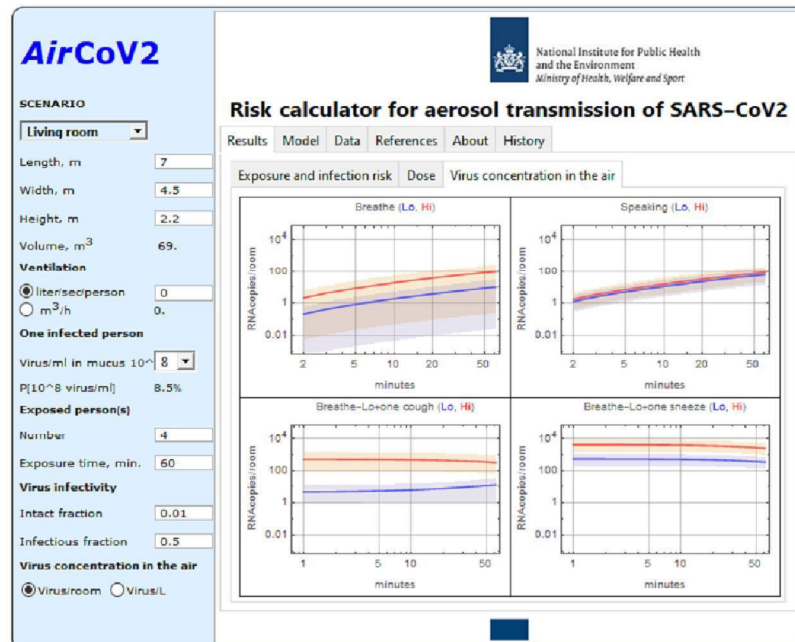
Exposure and infection risk | Dose | Virus concentration in the air

	Exposure probability				Infection risk			
	Mean	5%	50%	95%	Mean	5%	50%	95%
Breathe-Lo	0.13%	0%	0%	1%	0.064%	0%	0%	0.5%
Breathe-Hi	0.98%	0%	0%	3.9%	0.53%	0%	0%	2%
Speak-Lo	0.77%	0%	0%	3%	0.38%	0%	0%	1.5%
Speak-Hi	1.1%	0%	1%	3.9%	0.54%	0%	0.5%	2%
Cough-Lo	0.21%	0%	0%	1%	0.11%	0%	0%	0.5%
Cough-Hi	8.5%	1%	6.8%	23%	4.4%	0.5%	3.4%	12%
Sneeze-Lo	9.3%	2%	8.6%	20%	4.8%	1%	4.4%	10%
Sneeze-Hi	49%	24%	48%	78%	30%	13%	28%	53%

Probability of exposing and infecting at least one person via aerosol transmission of virus from one infected person.

Exposure probability and infecting risk are equal if the fractions of intact virus particles and of virus particles giving infection are both equal to one.

The probability of this scenario occurring depends on the prevalence of the virus infection and the frequency of persons meeting in this kind of room for this period of time.



Door ademen en spreken nemen de aantal virussen in de ruimte voortdurend toe. Door een nies of hoest zijn de aantallen uitgestoten virussen aan het begin van de verblijfsduur meteen veel hoger. Dit blijft in een uur vrijwel constant.

Met ventilatie (hier $4 \times 12 \text{ l/s/p} = 172.8 \text{ m}^3/\text{uur}$):

AirCoV2

SCENARIO

Living room

Length, m: 7

Width, m: 4.5

Height, m: 2.2

Volume, m³: 69

Ventilation

liter/sec/person: 12

m³/h: 172.8

One infected person

Virus/ml in mucus 10⁸: 8

P(10⁸ virus/ml): 8.5%

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Intact fraction: 0.01

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Virus concentration in the air

Virus/room Virus/L


 National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

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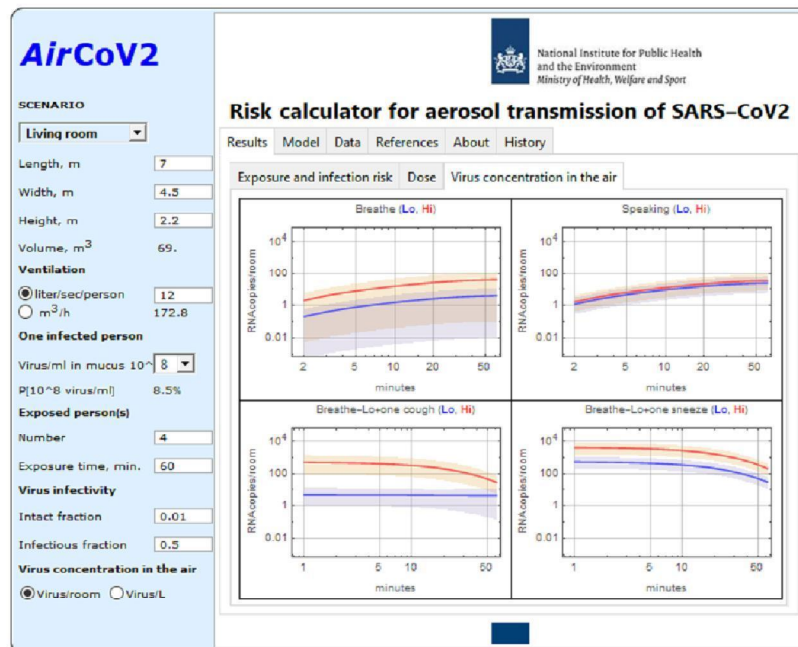
Exposure and infection risk
Dose
Virus concentration in the air

	Exposure probability				Infection risk			
	Mean	5%	50%	95%	Mean	5%	50%	95%
Breathe-Lo	0.07%	0%	0%	0%	0.035%	0%	0%	0%
Breathe-Hi	0.57%	0%	0%	2%	0.3%	0%	0%	1%
Speak-Lo	0.41%	0%	0%	2%	0.2%	0%	0%	1%
Speak-Hi	0.57%	0%	0%	2%	0.29%	0%	0%	1%
Cough-Lo	0.1%	0%	0%	1%	0.051%	0%	0%	0.5%
Cough-Hi	3.6%	0%	3%	10%	1.9%	0%	1.5%	5.4%
Sneeze-Lo	3.9%	0%	3%	9.5%	2%	0%	1.5%	4.9%
Sneeze-Hi	25%	9.5%	23%	46%	14%	4.9%	12%	27%

Probability of exposing and infecting at least one person via aerosol transmission of virus from one infected person.

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Kans op blootstelling/infectie ruwweg factor twee lager.

De grafieken tonen een afname van de virusconcentratie in de lucht vanaf ongeveer 10 minuten in de hoest- en niesscenario's.