Thread by @CathNoakes on Thread Reader App – Thread Reader App

Prof Cath Noakes #Ventilate 😁 💙

17 Jul, 22 tweets, 3 min read

A thread today about windows and ventilation, and some things you can do to make the most of your windows for comfort and infection risk 1/

First, you will probably use them differently at different times of the year and in different weather conditions. That's because natural ventilation works in two ways 2/

Wind driven ventilation uses wind blowing onto a building to create a pressure difference across a building. This difference in pressure moves air into and through the building. 3/

The higher the wind speed the more the ventilation and the bigger the openings the more the ventilation. 4/

Stack ventilation relies on temperature differences. The bigger the temperature difference between indoors and outdoors and the bigger the opening, the more airflow you get. 5/

But also hot air rises, so air tends to flow from the bottom of the room to the top, or downstairs to upstairs. The bigger the height difference, the more the air flows 6/

In winter when it is cold and windy it is easy to ventilate as you get both wind and stack flow. You can get away with pretty small openings or opening occasionally, but there may be cold drafts 7/

But on a hot still summer day it is hard to get enough airflow and you need much wider openings to ventilate, especially to keep you cool. 8/

There are some tricks though to use windows though for both hot and cold weather. 9/

When its cold, opening high up windows (top opening pane, top of sash, top of tilt) can limit cold drafts. The cold air coming in mixes with warmer air in the room rather than directly hitting people 10/

Having the trickle vent open or the window on the vent catch can also often be enough in very cold or very windy weather. 11/

When it is hot, you need to open more windows and think about which ones to use to get the best flow. 12/

Having windows open on opposite sides of the building will get the most air through especially if there is a breeze – as long as internal doors are open. 13/

If you can only open windows on one side of the building, try to have two openings - this essentially gives you one to let air in and one to let it out. 14/

If you have a sash window, open it top and bottom rather than just one opening. If you have windows with a low and high opening do both. Tilt and turn windows are best turned out so you have a vertical opening. 15/

Keep blinds and curtains closed on sunny sides of the building, and if it is really hot close the windows on the sunny side. But switch around in the afternoon, then open up in the evening to cool your home. 16/

And if you can, open downstairs and upstairs windows, and the internal doors to get a cool evening airflow through the whole building. And turn off lights to keep the bugs out! 17/

Fans can also help, especially in the evening positioned to move the air through the building and encourage the cooler outdoor air to come in 18/

If you are a business or a school and you are planning summer maintenance, get those high-level windows unstuck – you know the ones that have been painted up for years. You'll need them for winter 19/

Also think about adjusting furniture so that people can easily reach the windows to use them, and if security is a problem look at grilles or window stoppers to prevent really wide opening 20/

And I know this doesn't work for everyone. Some places are too polluted, noisy or unsafe. Regular airing may work, but some will need mechanical ventilation or air cleaners to enable safe indoor air 21/

And also remember that ventilation isn't a magic bullet. Its part of the toolbox, but also distance, mask, hands, get a vaccine and isolate if you are sick END

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