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We, the undersigned, are responding to The Future Buildings Standard, as proposed by the UK's Ministry of Housing, Communities and Local Government, with specific reference to Part F (ventilation) of the Building Regulations for non-domestic buildings and dwellings.

The UK Government is taking positive steps to mitigate against the risks of airborne infection in offices and public buildings, including proposals with regards increasing ventilation and CO_2 monitoring, which are commendable.

However, we call upon the Ministry of Housing, Communities and Local Government to expand upon these proposals and set a minimum lower limit of 40% relative humidity (%RH) for offices and public buildings, as an additional intervention measure against airborne respiratory infections.

Scientific studies have overwhelmingly shown three mechanisms by which dry indoor air, below 40%RH, promotes airborne infection:

1 – Dry air impairs human respiratory immune defence mechanisms, leaving building occupants more susceptible to airborne infections [1, 2, 7, 9].

2 – Dry air increases the quantity of small droplets, through evaporation of larger droplets, which are capable of remaining airborne for longer, travelling further away from the source and subsequently increasing the risk of airborne cross infection [3, 4, 5, 7, 8, 9].

3 – Many airborne viruses can remain infectious for longer in dry environments [3, 4, 6, 7, 8, 9].

Given the UK climate, the indoor humidity in heated, non-humidified buildings can typically drop below 40%RH at times from October through to March.

It is our belief that by maintaining indoor humidity in offices and public buildings within the range of 40% to 60%RH with the use of humidification technologies, respiratory infections will be substantially reduced as a result. This will in turn provide a significant benefit to society through reduced illness, absenteeism and healthcare costs, alongside improving public health and productivity.

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