

# From Covid-19 to Cockroaches: 6 Ways Our Environment Negatively Affects Health

The environmental impact on human health from global warming, rising sea levels and disappearing ecosystems is widely known and potentially catastrophic. But there is a network of smaller environments much closer to home that also affect health outcomes, often in ways we don't recognize.

Our social, economic, employment and domestic environments can negatively impact our health, and frequently in [ways we are powerless to change](#). As the World Health Organisation (WHO) points out: "The context of people's lives determines their health, and so blaming individuals for having poor health or crediting them for good health is inappropriate. Individuals are unlikely to be able to control many of the determinants of health directly."

To complicate matters further, since our various environments are inter-related in different ways, the health impacts vary depending on our circumstances. A perfect example of this is climate change.

## 1. Climate change affects at-risk populations

Regions with generally lower average socio-economic status and higher proportions of elderly or other at-risk populations, such as eastern/southern Europe, suffer the effects of climate change more severely than other regions, according to a [2018 report from the European Environmental Agency](#) (EEA). These effects include the impacts of heat (heatstroke, fatigue, and heat-related stress) and cold (death due to arterial thrombosis caused by other cold-related health issues).

And, as the temperature warms, the secondary effects on food chains, pollution, access to clean water, flooding and droughts will likely increase the incidence of malnutrition and malaria. A fact sheet published by the [WHO](#) in 2018 estimated: "...between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhea and heat stress."

## 2. Disease outbreaks, pandemics and secondary environmental health effects

The rapid outbreak of COVID-19 in the early months of 2020 was due to a highly contagious virus infecting people near each other. To control the disease, governments put strict controls on social environments and the movement of people outside their homes. While this approach was effective in general, the impact of the disease has been more severe in vulnerable populations such as [people living in poverty situations, older persons, persons with disabilities, youth, and indigenous peoples](#). In addition, lack of access to or quality of basic services such as [safe water or affordable disinfectants](#) has caused a further health effect, also more pronounced in disadvantaged groups.

And, while lockdowns and social distancing slowed and then reduced the spread of the virus, a number of secondary health risks that are not directly related to or caused by the disease itself have emerged. For example, the psychological effects of social isolation, stress due to uncertainty, job loss or financial instability, and overstretched resources in the healthcare system (meaning diagnoses and non-urgent care are postponed) have impacted many people's health to varying degrees.

Paradoxically, measures to control COVID-19 brought significant reductions in other environmental health impacts, such as air pollution.

## 3. Environmental pollution increases the risk of chronic disease

According to the [WHO](#), nine out of ten people breathe polluted air, a contributing cause of about one third of deaths from stroke, lung cancer and heart disease worldwide. The WHO report estimates that air pollution kills 7 million people every year.

Further, an [EEA briefing report from 2018](#) identified noise from transport as the second most significant environmental cause of ill health in Western Europe after air pollution. In addition to annoyance, stress, sleep disturbances and impaired cognitive functioning, environmental noise contributes to approximately 17,000 premature deaths in Europe annually, primarily due to high blood pressure, heart attacks and coronary heart disease.

Unfortunately, human health is affected by pollution from many other sources. Contaminants found in soil and water – for example, metals, pesticides, solvents and other compounds & pollutants – can affect the body's organ systems. A [Canadian study conducted in 2001](#) outlined risks such as neurological development and neuro-behavioural problems, endocrine disruption, and immune system effects, particularly in unborn fetuses, early childhood and pubescent children.

#### 4. Social environments and their impact on health

As [The Centers for Disease Control and Prevention](#) (CDC) has reported, socio-economic position in society, driven primarily by access to and control of money, power and resources, determines a wide range of factors impacting health. Access to education and health services, food security, social support, employment, living conditions, and personal security all have possible health outcomes. A [comprehensive survey in the US in 2013](#), that pooled expertise from National Research Council (NRC) and the Institute of Medicine (IOM), gives some compelling examples:

- social participation and integration in the immediate social environment appear to be important to both mental and physical health
- conditions in neighborhoods such as threats to safety or social disorder may create triggers for stress
- there is a consistent relationship between social capital and self-reported health status, as well as to some measures of mortality
- walking and physical activity levels are affected by access to recreational facilities, land use mix, transportation systems, and urban planning and design which likely affects obesity levels.

A [Canadian public health study published in 2017](#) analysed the effects of food retail on diet-related health outcomes. The research started from the point that the “food environment is gaining recognition as a major determinant of food choices and diet-related outcomes such as obesity.” After analyzing the prevalence and density of retail food outlets and the impact these have on nutrition, diabetes and obesity, researchers concluded that “A retail food environment that promotes and supports access to and availability of healthy food choices is one aspect of a healthy neighborhood design and built environment.”

## 5. Health impacts in the work environment

Our work environments also contribute to a range of possible health outcomes and that depends on what sort of work we do and where.

Blue-collar workers may be exposed to physical risk (injury) or other environmental health dangers (chemicals, solvents, metals, noise). White-collar workers may work in unfavorable conditions such as poor light, ventilation or heating. Poorly configured workstations can worsen the health impacts of computer use, which range from [fatigue and discomfort to debilitating repetitive strain injury](#). Even office layout can have an effect: a 2005 study in *Ergonomics* journal concluded that working in an open plan office [intensifies cognitive workload and worsens interpersonal relations](#).

Other factors in the work environment can significantly affect health. Researchers in a [landmark 1979 study](#), which still informs research today, proposed two inputs that variably impact the degree of job strain workers experience: the sense of control employees have over their work and the demands of their workplace. A low sense of control and high demand can lead to stress which negatively impacts physical and mental well-being in a variety of ways such as cardiovascular disease, depression and anxiety.

## 6. The domestic environment and health

While our idea of home may be a safe place where we feel most comfortable, the domestic setting can be host to another set of environmental challenges.

Older homes may contain materials such as lead paint or lead-contaminated dust, which can build up in human occupants over time. [Lead poisoning](#) has a range of adverse health effects.

Appliances or furnishings may contain potentially harmful materials such as flame retardants or perfluorinated chemicals or PFC. (Teflon uses one type of PFC.) Pesticides, detergents, and other chemical-based products may pose a risk to humans, such as [glyphosate in weed killer](#). However, there are many simple ways to [reduce the risk of harm around the house](#).

In addition, there is a range of live pests that might be sharing your home, including [cockroaches](#), [bed bugs](#), and [dust mites](#) and other allergens, although clean homes generally help to reduce these problems.

Beyond positively adjusting the impact of our environment on our health with a cleaner, greener home, we could derive a different set of benefits by curling up on the sofa with a pet. As a [2011 US study](#) showed, there may be a range of cardiovascular and other benefits to pet ownership. And, if nothing else, pets help take our minds off environmental health impacts outside the front door.