From the Editor . . .

Gill Nelson,
Editor-in-Chief

In this issue, Fourie and colleagues present a case report of a dermal reaction to nitrile rubber gloves in a laboratory worker. Nitrile gloves are often used as a substitute for latex gloves in a number of industries, but reports about allergic responses to latex gloves far exceed those related to nitrile gloves.[1] I recently attended a course in the Netherlands on human exposure assessment, where I learned how even the supposedly most innocuous things to which we intentionally expose ourselves, on a daily basis, are potentially hazardous to our health – cosmetics, household cleaning agents, etc. Substituting one hazardous substance (or type of gloves, in this case) does not guarantee 'safety'.

The paper on farm workers, by Mhlanga et al., and the one on workers who repair and maintain South Africa's electrical distribution network, by Qwemeshe et al., bring to mind the effect of climate change on workers who are required to spend much of their time outdoors. Climate change, driven by global warming, results in extreme weather events such as shifts in temperature, altered precipitation patterns, and increased frequency and intensity of extreme weather events.[2] Global warming is anticipated to exacerbate the health hazards associated with various weather conditions in outdoor occupations.[3]

Global warming contributes to an overall increase in temperatures, leading to more frequent and prolonged heatwaves. Working in high temperatures is associated with heat exhaustion, heatstroke, dehydration, and fatigue, and excessive exposure to UV light causes sunburn and skin cancer. Outdoor workers who already face the risks of heat-related illnesses will experience heightened dangers as the intensity and duration of extreme heat events rise. As temperatures rise, the geographic range of disease-carrying vectors, such as mosquitoes and ticks, may expand, increasing the risk of vector-borne diseases for outdoor workers.

Climate change is linked to an increase in the frequency and severity of extreme weather events, such as storms, tornadoes, and heavy rainfall, as also experienced in South Africa.[4] Outdoor workers may face higher risks of injury and exposure during these events, which include flooding, landslides, and other weather-related disasters. Strong winds are hazardous for those who work at heights, and also increase the risk of injury from flying debris; while wet, slippery surfaces increase the risk of falls, and prolonged exposure to damp conditions contributes to dermal and respiratory problems.

With climate change comes an increase in the frequency of wildfires and increased levels of air pollution. Outdoor workers may thus be exposed to increasingly poor air quality, leading to respiratory and other health issues.

In a review of research on the impacts of climate change on occupational health and safety, Ferrari et al. (2023) reported that the majority of articles (approx. 86%) focused on rising temperatures, while only a few addressed other effects of climate change such as air pollution, vector-borne diseases, and extreme weather events.[5] Most of the papers also focused on agricultural and construction workers.

Some recommendations to mitigate the health and safety risks associated with outdoor work are to train workers to recognise and appropriately respond to weather-related hazards, to provide personal protective equipment (PPE) such as suitable quality clothing, sunscreen, and hydration kits, and to allow flexible working schedules to enable workers to avoid extreme weather conditions. Where appropriate, shelters should also be provided.

However, outdoor workers in the informal sector, and those working in small and medium-sized enterprises (SMEs), may remain susceptible to the consequences of climate change. These vulnerable groups should not be neglected in strategies designed to reduce the health and safety risks associated with climate change.

REFERENCES

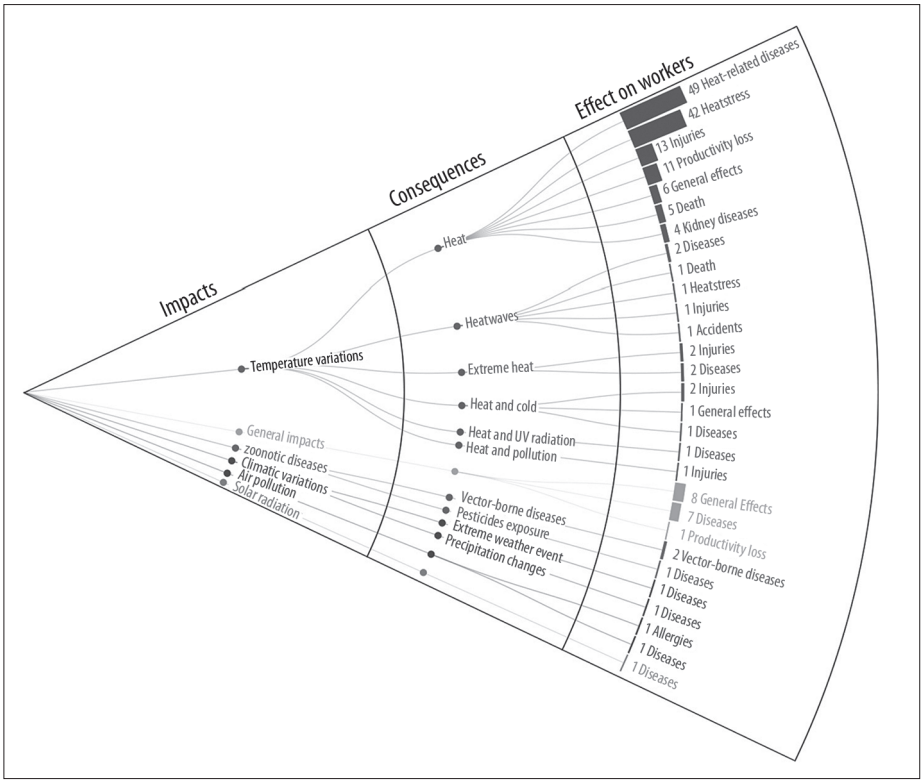
1. Naranje N, Paul, Parate KP, et al. Comparative assessment of hypersensitivity reactions on use of latex and nitrile gloves among general dental practitioners: a cross-sectional study. Cureus. 2023; 15(10):e46443. doi: 10.7759/cureus.46443.

2. Centre for Climate and Energy Solutions. Extreme weather and climate change. C2ES; 2023. Available from: https://www.c2es.org/content/extreme-weather-and-climate-change/ (accessed 10 December 2023).

3. Filomena M, Picchio M. Unsafe temperatures, unsafe jobs: the impact of weather conditions on work-related injuries. GLO Discussion Paper, No. 1280. Essen: Global Labor Organization; 2023. Available from: https://www.econstor.eu/bitstream/10419/270972/1/GLO-DP-1280.pdf (accessed 9 December 2023).

4. Naidoo J. Extreme weather bouts becoming more frequent in South Africa. IOL; 2023 November 14. Available from: https://www.iol.co.za/news/weather/extreme-weather-bouts-becoming-more-frequent-in-south-africa-ef813afe-f26a-4328-8987-2814102daa2f (accessed 10 December 2023).

5. Ferrari GN, Leal GCL, Thom de Souza RC, Galdamez EVC. Impact of climate change on occupational health and safety: a review of methodological approaches. Work. 2023; 74(2):485-499. doi: 10.3233/WOR-211303.



Climate change's impacts, consequences, and effects on workers
Source: Ferrari et al., 2023[5]