

USDA / Food Safety Inspection Service / Office of Management submits the following comments for the Advance notice of proposed rulemaking (ANPRM) on Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings published by the U.S. Department of Labor's Occupational Safety and Health Administration in the Federal Register on Oct. 27, 2021, at 86 Fed. Reg. 59309. Docket No. OSHA-2021-0009, Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings.

1) Acclimatization Plans: Most employers will have difficulty with implementing acclimatization plans while keeping with feasible labor production for their individual industry. The ANPRM acknowledges that OSHA and NIOSH have historically recommended the **"Rule of 20 Percent"** for acclimatizing workers. Under this regimen, workers would only work 20 percent of the normal duration of work on their first day in hazardous heat conditions performing job tasks similar in intensity to their expected work, increasing the work duration by 20 percent on each subsequent day until performing a normal work schedule.

The ANRP identifies **"if the normal workday lasts 8 hours, then new workers should work no more than 1 hour and approximately 40 minutes (20 percent of 8 hours) on their first day in the heat and spend the remainder of the workday doing work tasks without heat stress."** **"They should be given at least one rest break during the period when they are working. Furthermore, Workers with underlying medical conditions may need more time to fully adapt to the heat."** An increase of no more than 20% would be applied on each additional day. Theoretically, during early Spring/Summer changes in heat, every employee could argue that they would need an acclimation period. Your ANPRM acknowledges that **"Acclimatization is also important for those who may have been previously acclimatized but were out of the workforce or hot environment of the workplace for more than 2 weeks (e.g., due to vacation or sick leave)"** and **"All outdoor workers may need time to acclimatize to heat during early season hazardous heat, or during particularly severe or long-lasting heat events, which are associated with higher mortality in the general population"** This would be more prevalent with companies who have bargaining unions to where all employees must be provided the exact same work practices and benefits.

If OSHA adapts a standard that mandates this type of acclimatization plan, most employers will not be able to comply. For employers with limited job tasks such as construction or agriculture type work, there will not be 6 hours of busy work available for each employee to accomplish. Additionally, there are many employees who may have unknown underlying medical conditions that they have not disclosed to their employer. How could any private employer survive every time a heat wave hits, they must only run 20% of production for 5 days until they reach 100%? USDA/FSIS would be considered a large employer. However, many regulated establishments are small and only have a few USDA/ FSIS employees working there each day.

2) Monitoring: The ANPRM identifies a need for monitoring activities. The ANRP identifies that **"Monitoring activities may include monitoring environmental conditions regularly, self-monitoring of urine color, and monitoring of heart rate and core body temperature. Individual-level biomonitoring with wearable technologies may be an option in some occupational settings."** Monitoring activities may also include buddy systems.

Individual-level biomonitoring would not be feasible for most employers. Buddy systems would only be effective in instances to where employees are working closely together during normal operations. Employees who work in settings such as operating machines or equipment will not be able to view and monitor their fellow employees while simultaneously performing their duties safely. USDA/FSIS inspectors are often alone at a workstation without another USDA / FSIS employee nearby to monitor them.

OSHA tends to move away from expecting some level of individual employee personal responsibilities and focus more on burdening the employer with all tasks. Individuals must take a certain level of responsibility to hydrate, wear appropriate clothing, and refrain from negative activities that exasperate heat illness and dehydration such as caffeine and alcohol consumption and proper nutrition. Employers cannot monitor the employees off duty activity or verify how much appropriate fluids that are consumed during the workday. All employers will also have difficulty in mandating certain types of “street” clothing worn by employees.

3) Previous OSHA Programs and Geographic Region Issues: On September 1, 2021, OSHA’s Directorate of Enforcement Programs issued an Inspection Guidance for Heat- Related Hazards, which established a new enforcement initiative to prevent heat-related illnesses and fatalities while working in hazardous hot indoor and outdoor. The guidance provided that on days when the heat index exceeds 80 degrees Fahrenheit will be considered heat priority days. Individual State Plans have used different heat index trigger levels or by use of a calculated threshold WBGT for each work activity. Washington’s rule also relies on ambient temperature readings combined with considerations for the weight and breathability of workers’ clothing. NIOSH criteria recommend that environmental heat should be assessed with hourly measurements of Wet Bulb Globe Temperature (WBGT).

A large portion of the nation will exceed current heat index guidelines of approximately 80 degrees Fahrenheit on most days throughout the summer months. If similar elements of these state and professional industry guidelines are mandated at the Federal level, it will have a great economic impact on the survivability of most small to mid-size employers. The ANPRM acknowledges that **“Determining when heat becomes hazardous is complex”** and **“There is no universally accepted threshold for ambient temperature, heat index, or WBGT at which heat is considered hazardous.”** Also identified in the ANPRM is **“Individual-level factors such as age, pharmaceutical use, underlying health conditions (such as cardiovascular diseases), and the ability to cool at night (during heat waves or access to night time air conditioning, for example) also play a role”** Yet, the agency intends to mandate these standards and place the burden on the employer to figure out and determine what is hazardous.

Although OSHA will advertise that the Agency will assist employers in new standards through outreach which generally consists of news advertisements and publications available on the OSHA website, OSHA typically has one Compliance Assistance Specialist (CAS) to each Federal Area Office. The CASs are busy assisting employers who are able to participate through OSHA’s Cooperative Programs such as Alliance, Strategic Partnership Program (OSPP), and Voluntary Protection Programs (VPP). State Plans may have additional Compliance Assistance staff. The remainder of the personnel in the Area Offices are focused on enforcement. Federal agencies such as USDA/FSIS cannot participate in these type programs.

Additional Information Needed to Create Standard Proposed Rule

Support “obtaining additional information” as documented in OSHA–2021–0009. On review, many of the references are surveillance and observational studies. There is limited randomized control or case-control epidemiologic research, and many of quoted articles are not within the last 5 years. (NIOSH articles from 1972, 1986, 1986, 2017). In addition, many comparison groups noted are to the general population and not people working in the same field such as “all other civilian occupations” and “all other industries.”

Rule of 20 percent

There is minimal literature referenced in OSHA–2021–0009 that contains randomized control trials. Specifically, the “Rule of 20 Percent” is noted to be “historically recommended.” OSHA–2021–0009 does not reference scientific studies or comparison of different percentages, workloads, and environments with regard to the “Rule of 20 Percent.” Further scientific evidence documented to include acclimatization at specifically 20 percent when compared to acclimatization schedules and percentages would be needed. There is no justification or comparison in the document for the benefits to employees when acclimatizing at a 20% rate compared to other rates or time frames.

Concerns Heat Index/Stand-alone Temperature Guidance does not take into consideration other variables and not sufficient evidence for standardized rule. In addition, feasibility and implementation framework in document could be expanded.

Common risk factors for exertional heat illness are strenuous exercise in high ambient temperature and humidity, lack of acclimatization, poor physical fitness, obesity, dehydration, acute illness, external load, including clothing, equipment, and protective gear (O’Connor FG, et al. Exertional heat illness in adolescents and adults: Epidemiology, thermoregulation, risk factors, and diagnosis, In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA., 2021).

Per the document: *On September 1, 2021, OSHA’s Directorate of Enforcement Programs issued an Inspection Guidance for Heat-Related Hazards, which establishes a new enforcement initiative to prevent heat-related illnesses and fatalities while working in hazardous hot indoor and outdoor environments (OSHA, September 1, 2021). The guidance provides that days when the heat index exceeds 80 degrees Fahrenheit will be considered heat priority days.* Throughout OSHA–2021–0009, there are factors of variability presented: wet-bulb globe temperature, thermodynamic principles of heat transfer, human thermoregulation, medical considerations, business size, geographic regions, etc. Given the data presented in OSHA–2021–0009, future documents would need to incorporate more variables than the Sept. 1, 2021 enforcement initiative and also address implementation feasibility across all areas of essential work. Given the document notes regional variability on heat stress, national standards based on temperature or heat index alone may not address other contributory factors. Further quantitative association of factors to heat-related injury and illnesses outcome variables would further support areas of focus of proposed rule.