

Health and Safety Fact File - General Safety

Temperature, Humidity, Ventilation and Lighting in the Workplace

Temperature, humidity ventilation and lighting are major determinates of comfort in the workplace. Departures from satisfactory conditions can reduce efficiency and may have harmful health effects.

Legislation, in particular the Workplace Health, Safety and Welfare Regulations make general rather than specific requirements. In essence they require '*reasonable conditions*'. Where figures are quoted in this document they are based on recognised standards rather than legislative requirements.

Temperature

The **minimum temperature**¹ in a workroom, as recommended by the Health and Safety Executive, should be 16 degrees Celsius unless much of the work involves severe physical effort in which case the temperature should be at least 13 degrees Celsius. However 16 degrees Celsius is rather cold for sedentary work. The Chartered Institution of Building Services Engineers recommends 20 degrees Celsius. There are certain exceptions to this, e.g. rooms that have to be open to the outside or rooms where food products have to be kept cold.

The Health and Safety Executive do not recommend a **maximum temperature** in a workroom, only that it should be 'reasonable'. However the World Health Organisation recommends a maximum of 24 degrees Celsius for working in comfort.

A degree of flexibility must be adopted when determining if a workplace is too cold or too hot. Arrangements may have to be made in particular circumstances, e.g. if there is a breakdown of the heating system or the weather is exceptionally hot. The provision of heaters or fans may be a solution. People may be allowed to take extra breaks, be provided with hot or cold drinks or be temporarily moved to work elsewhere. Dress code could be relaxed. Starting work earlier and finishing earlier or even working at home should be considered. **However, health and safety precautions must not be relaxed, even if the temperature is extreme, e.g., the correct PPE must always be worn.**

Even where the temperature falls within the guidelines it may not suit everyone. Some people prefer to be warmer or cooler than others. In shared workplaces a degree of co-operation is required.

Humidity

Humidity is the amount of moisture in the air; at saturation point the relative humidity is 100%. Low levels of humidity can exacerbate respiratory and skin conditions. There may be a build up of static electricity in dry air leading to electrostatic shocks.

There is no specific legislation dealing with humidity. Generally the relative humidity should be between 40% and 70%. If there is a problem with humidity it tends to be because it is too low and the air feels 'dry'. This can be improved by several means ranging from having indoor plants to humidifiers.

¹ Workplace Health, Safety and Welfare Regulations, Approved Code of Practice

Ventilation

Fresh air is need respiration, to dilute and remove impurities and odours and to dissipate excess heat. Legislation requires that every enclosed workplace has *effective and suitable ventilation, which provides a sufficient quantity of fresh or purified air.*

In many cases windows or other openings will provide sufficient ventilation. If they do not mechanical ventilation systems may have to be used. Replacement air should be as free of impurities as possible. Air inlets should be sited where they can draw fresh air; they should not therefore be sited near ant source of fumes or other impurities.

Re-circulated air (e.g. in air conditioning systems) should be adequately filtered to remove impurities and the purified air should have some fresh air added. Care should be taken to ensure people are not exposed to drafts.

Lighting

Lighting should be sufficient to enable to work, use facilities and move about safely and without eye strain and other ill health effects. Legislation requires that every workplace has *suitable and sufficient lighting and it shall, as far as it is reasonable practicable, be by natural lighting.*

Good lighting conditions involve:

- Maximum provision of natural daylight.
- Careful planning to minimise the effect of shadows.
- Maximum control by individual workers of ambient lighting, (e.g. by the provision of desk lights).
- Selection of suitable lighting for the task being performed, (e.g. very intricate work may need additional lighting).
- Avoidance of dazzle or glare, including natural light, by the repositioning of the lighting or the workplace.

Additionally there should be suitable and sufficient emergency lighting where people are especially exposed to danger if the artificial lighting fails.