Temperature at Work – Heat

This briefing is intended for safety representatives who are concerned about temperature in their place of work.

It is usually accepted that people work best at a temperature between 16°C and 24°C, although this can vary depending on the kind of work being done. Strenuous work is better performed at a slightly lower temperature than office work. The Chartered Institute of Building Services Engineers recommends the following temperatures for different working areas:

- Heavy work in factories: 13°C
- Light work in factories: 16°C
- Hospital wards and shops: 18°C
- Offices and dining rooms: 20°C

If the temperature varies too much from this then it can become a health and safety issue. If people get too hot, they risk dizziness, fainting, or even heat cramps. In very hot conditions the bodies blood temperature rises. If the blood temperature rises above 39 °C, there is a risk of heat stroke or collapse. Delirium or confusion can occur above 41°C. Blood temperatures at this level can prove fatal and even if a worker does recover, they may suffer irreparable organ damage.

However even at lower temperatures heat leads to a loss of concentration and increased tiredness, which means that workers are more likely to put themselves or others at risk.

At the same time working in the sun can, for many people, increase their risk of skin cancer, while the glare from the sun can be a problem for drivers and those working on roofs where roof lights can blend into the surrounding roof in bright sunlight.

The legal position
An employer must provide a working environment which is, as far as is reasonably practical, safe and without risks to health. In addition, employers
have to assess risks and introduce any necessary prevention or control measures.

Unfortunately there is no maximum temperature for workers although the Workplace (Health, Safety and Welfare) Regulations state the temperature inside workplace buildings must be ‘reasonable’. In addition, the approved code of practice to these regulations states that ‘all reasonable steps should be taken to achieve a comfortable temperature’. The TUC has called for a maximum temperature of 30°C (27°C for those doing strenuous work), so that employers and workers know when action must be taken, although employers should still attempt to reduce temperatures if they get above 24°C and workers feel uncomfortable.

The Approved Code of Practice to the Workplace Regulations gives examples of what employers must do to ensure a reasonably comfortable temperature. This includes:

- Insulating hot plants or pipes
- Providing air cooling plants
- Shading windows
- Sighting workplaces away from places subject to radiant heat

Where this is not sufficient, it states that employers must install local cooling systems, increase ventilation, or fans. The code of practice also says that other factors, such as protective clothing, physical activity, radiant heat, humidity, air movement, and length of time of a person doing a job must all be taken into account when assessing what a ‘reasonable temperature’ is.

In addition, the Code of Practice requires employers to provide a suitable number of thermometers to enable workers to check temperatures in indoor workplaces.

The regulations also require employers to provide ‘effective and suitable ventilation’, however safety representatives must ensure this is not achieved simply by opening doors, which may be acting as fire doors.

Although the Workplace (Health, Safety and Welfare) Regulations only apply to indoor workplaces, that does not mean that employers do not also have a duty to employers working outside. All employers have a general duty to protect the health and safety of the workforce under the Health and Safety at Work Act, and also to assess and control risks from working in hot temperatures, or exposure to the sun, under the Management of Health and Safety at Work regulations. This includes drivers where working in a very hot cab can make the person more likely to have an accident.
There are also other regulations which employers have to comply with in hot conditions. These include:

- The Personal Protective Equipment at Work Regulations require employers to select protective equipment that is suitable for risks, for the workers using it, and for the working environment. This means that if personal protective equipment is being used in hot weather, whether inside or out, it must be designed to allow workers to keep as cool as possible. This means that when groups such as refuse collectors have to wear special padding to protect themselves from injury from sharps, the trousers are designed to ensure that they are still as comfortable in hot weather as possible.

- Manual Handling Regulations require employers to take into account other factors including hot and humid conditions.

- The Display Screen Equipment Regulations require that 'equipment belonging to any workstations shall not produce excess heat which could cause discomfort to operators or users'.

- The Management of Health and Safety at Work Regulations specifically state that employers have to assess any risks to pregnant women from extremes of heat as pregnant women tolerate heat less well. The same regulations state that young workers must not be employed in situations where they are likely to be exposed to extremes of heat.

Advice for safety representatives – Indoor work
Heat is one of the biggest causes of complaint to safety representatives during the summer. However, the air temperature which you can measure from a thermometer is only one part of what safety representatives have to take into account. Humidity, heat sources, clothing, any breeze or wind, all can have an effect on how heat affects someone. In addition, the effects of heat vary depending on the weight and age of a person.

It is possible to get a more accurate assessment of the situation in the workplace using a wet bulb globe thermometer or an electronic equivalent, which measures humidity. The comfort range for humidity is between 40% and 70%.

However, the best rule of thumb in deciding if it is too hot, is whether or not your members feel comfortable. If they don’t, then something should be done to protect them.

The following check-list gives some ideas of what a safety representative might want to suggest to an employer if there are problems about heat or humidity. However, before you approach their employer, your may wish to find out from
your members where the worst problems are, what times of the day are worst, and what the causes are.

Measures that might want to be considered could include:

- Introducing a properly designed air conditioning system into the building: In some buildings this is not possible, either because of the age or type of the building, or because of planning restrictions. A properly maintained air conditioning system is a very effective way of reducing temperatures. However, air conditioning systems do use a very high level of power and other, more environmentally friendly, solutions should also be considered.

- Relaxing dress codes: Often there is no reason why employers have to insist on workers wearing ties, tights, or jackets for work. The issue is whether or not the clothing is acceptable in the context of the job a person does. For instance, insisting that security guards and porters wear a uniform, with a jacket, in the heat of the summer sun is clearly unnecessary and inappropriate.

- Redesigning the work area: Often simply moving people away from windows, or reducing heat gain by installing reflective film or blinds to windows can be a very effective way of keeping a workplace cooler.

- Install fans or natural ventilation: Providing fans or windows that open can also help workers feel cooler, however both these become less effective at higher temperatures. Portable air-cooling cabinets are also available, which are more effective.

- Allowing staff to be more flexible in their working arrangements: Often staff have to travel to work in overcrowded trains or buses. Allowing them the flexibility to finish either earlier or later can help, as can allowing them more frequent rest breaks.

If none of these measures are sufficient to reduce the level of heat, and staff are still uncomfortable, then the employer should ensure that a competent heating and ventilation engineer is employed to survey the workplace and recommend a permanent solution to the problem.

Workers in some indoor situations such as some factories, mines, boiler rooms, kitchens and laundries are at even more risk of heat stress or dehydration. The employer should always seek professional advice on both reducing heat and protecting workers in these situations, and workers should be given information about avoiding heat stress and dehydration, and on how to recognise early symptoms.
Advice for safety representatives - outdoor work

Skin cancer is the most commonly diagnosed cancer in the UK. There are around 100,000 new cases of skin cancer every year in this country, although under 10% of these are malignant. The vast majority of these are caused by exposure to sunlight and are easily preventable. However, outside workers are not just at risk from skin cancer. Exposure to the sun can blister and burn the skin and cause premature ageing.

Working in hot weather also leads to the possibility of dehydration and heat stress. This can lead to fatigue, muscle cramps, rashes, fainting, and in severe cases a loss of consciousness.

Heat stress can also be a problem for workers who drive as part of their job. This is particularly dangerous as any driver suffering from fatigue, giddiness, or fainting, is clearly a major risk to both themselves and other people. Employers should provide cars, vans or lorries with air conditioning, or, if a driver is likely to be stuck in traffic for any length of time, make sure they are not driving in very hot weather.

Safety representatives should ensure that their employer has done an adequate risk assessment and taken control measures to ensure that no worker suffers from sunstroke, excess of sun exposure, dehydration or heat stress.

For outside workers, this is likely to involve issuing workers with sunscreen and hats. The employer should also ensure that any protective clothing is light and suitable. Staff should always be able to have access to fresh water and regular breaks. Ideally, employers should organise work so that employees are not outside during the hottest part of the day.

Further Advice

The TUC ‘Work smart’ website contains a lot of practical information and advice for workers on temperature and hot weather. Go to www.worksmart.org.uk.

In addition, the Health and Safety Executive have some excellent advice on working in hot environments. Go to www.hse.gov.uk/temperature