

# Smoke



Smoke inhalation is the primary cause of death in victims of indoor fires. Smoke kills by a combination of thermal damage, poisoning and pulmonary irritation caused by carbon monoxide, hydrogen cyanide and other combustible products. Smoke, being lighter than air, will rise to a ceiling area and can travel through a building quickly through lift shafts, voids, open doorways, and vents. If unattended a fire will double in size every thirty seconds. As the fire grows more smoke is produced and will descend towards the floor. It is important to escape while clean air can be found down low, hence the saying “Get Down Low & Go Go Go”.

Smoke is also combustible, the term “Flash Over” is used when the temperature of the smoke reaches around 600 degrees. Combustible gases within the smoke ignite, accelerating room temperature dramatically causing some items within the room to instantaneously combust. Containing smoke or fire to a room by closing doors can be a very effective way of slowing a fire down by limiting the amount of oxygen to the room, it is important however to ensure evacuation has been completed. Never open a door that is hot to touch or has smoke seeping from under or around it.

People often underestimate the effects of smoke, a 50% carbon monoxide level in

your bloodstream can occur in just a couple of breaths. Smoke inhalation will affect the way you think and the way you move and is not to be underestimated. Remember, if you can smell it you are breathing it. While asleep you will lose your sense of smell therefore it is vital that you have a number of good quality smoke detectors throughout your home and ensure that you:

- Test each one every month
- Replace the batteries every six months
- Vacuum the outside of the detector every 3 months
- Replace the detector every 10 years



Placement of detectors is just as important as the detector itself. Split level or multi-level homes should have coverage on each level. Most modern commercial buildings will have detectors throughout the complex that are checked regularly. Some detectors within commercial buildings can also be activated for other reasons other than smoke. Dust, steam, hair spray and burnt toast often trigger alarm activations. Occupants should exercise caution as activation of the central alarm system will bring emergency services to the building. Fines may also be passed onto tenants for repeat offences; this will be addressed during training sessions.

Importantly if you have been subjected to a smoke environment seek medical assistance even as a precautionary measure.