



**SAFETY INCENTIVE PROGRAM**  
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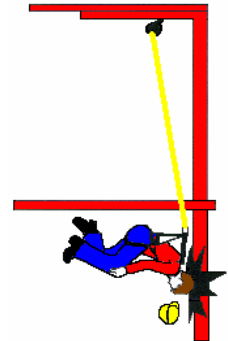
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February, 2005

**SIP TIP: THE SUSPENSE (SUSPENSION) MAY JUST KILL YOU!**

Prolonged suspension from fall arrest systems can cause orthostatic intolerance, which, in turn, can result in serious physical injury, or potentially, death. While not common, such fatalities often are referred to as "**harness-induced pathology**" or "**suspension trauma**."

Orthostatic intolerance may be defined as "the development of symptoms such as light-headedness, palpitations, tremulousness, poor concentration, fatigue, nausea, dizziness, headache, sweating, weakness and occasionally fainting during upright standing". While in a sedentary position, blood can accumulate in the veins, which is commonly called "venous pooling," and cause orthostatic intolerance



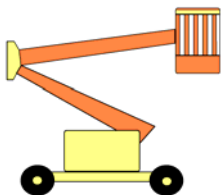
Venous pooling typically occurs in the legs due to the force of gravity and a lack of movement. In the veins, blood normally is moved back to the heart using the normal muscular action associated with limb movement. If the legs are immobile, then a large volume of blood may accumulate in the veins.

An accumulation of blood in the legs reduces the amount of blood in circulation. The body reacts to this reduction by speeding up the heart rate and in an attempt to maintain sufficient blood flow to the brain. If the blood supply is significantly reduced, this reaction will not be effective. The body will abruptly slow the heart rate and blood pressure will diminish in the arteries.

Research indicates that suspension in a fall arrest device can result in unconsciousness, followed by death, in less than 30 minutes.

OSHA recommends the following general practices/considerations:

- Rescue suspended workers as quickly as possible.
- Be aware that suspended workers are at risk of orthostatic intolerance and suspension trauma.
  - Be aware of signs and symptoms of orthostatic intolerance.
  - Be aware that orthostatic intolerance is potentially life threatening.
  - Be aware of factors that can increase the risk of suspension trauma.
  - Be aware that some authorities advise against moving the rescued workers to a horizontal position too quickly.



**REMINDER: TO REDUCE THE RISK ASSOCIATED WITH ORTHOSTATIC INTOLERANCE, EMPLOYERS SHOULD ESTABLISH A FALL PROTECTION RESCUE PLAN TO PREVENT PROLONGED SUSPENSION IN FALL PROTECTION DEVICES.**