



SAFETY UNLIMITED, INC.

Weekly Safety Meeting

Suspension Trauma

Fall arrest systems are often seen as the ultimate lifesaver for workers at heights. A worker's fall protection harness may keep him or her from hitting the ground, but that worker is not in the clear yet.

Suspension trauma is often overlooked as a serious risk for workers at height.

This is why OSHA requires employers to provide prompt rescue for those who experience a fall.

Suspension trauma occurs due to an extended period of orthostatic intolerance. What does this mean?

OSHA defines it 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.”

Immobility can cause venous pooling. This means that blood pools in the legs and reduces the amount of blood circulating in the rest of the body. Someone who is standing will lose consciousness and fall to a horizontal position. This way, the heart, legs, and brain are on the same plane and the body can normalize blood flow.

When a worker is suspended in a fall harness, the body has no way of going horizontal. The blood keeps pooling and cannot flow properly. This is suspension trauma. And unless the worker is rescued promptly, venous pooling and orthostatic intolerance occurs. This may result in serious damage to the brain, kidneys, and other organs.

Symptoms to Watch For:

Suspension trauma is relatively rare, but fallen workers awaiting rescue should be closely monitored for suspension trauma symptoms.

Common symptoms include:

- Faintness;
- Breathlessness;
- Sweating;
- Paleness;

- Nausea;
- Dizziness;
- Hot flashes;
- Unusually low heart rate or blood pressure;
- Increased heart rate; and
- Loss of vision.

Factors that can affect the degree of risk of suspension trauma:

- Ability/inability to move legs;
- Pain;
- Injuries;
- Fatigue;
- Dehydration;
- Hypothermia;
- Shock;
- Cardiovascular disease;
- Respiratory disease;
- Blood loss;
- Stress/Panic;
- Smoking/drinking; and
- Other illness.

Rescue Plans

Regulations say that companies must have a plan in place for the prompt rescue of a suspended worker. But what does 'prompt' mean?

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

But 30 minutes is a long time to be left hanging.

In reality, symptoms of suspension trauma can start after just a few minutes.

Studies have even found that loss of consciousness can occur in as little as seven minutes.

- Pay close attention to the rescue procedures that are appropriate to suspension trauma and to prevent reflow syndrome.
- Have a plan in place to rescue suspended workers quickly and get them immediate medical attention.
- When rescuing a suspended worker, do not lay the worker flat into a horizontal position.
- Keep the worker sitting up with legs straight out in front.

- Keep the worker calm and quiet and monitor constantly so he or she does not faint and fall into a horizontal position.
- Get a rescued worker immediate medical attention and ensure that medical personnel are aware of the possibility of suspension trauma.

Remember:

Prolonged suspension from fall arrest systems can cause orthostatic intolerance, which, in turn, can result in serious physical injury or, potentially, death.

To reduce the risk associated with prolonged suspension in fall arrest systems, employers should implement plans to prevent prolonged suspension in fall protection devices.

Fall Prevention...Deserves Your Attention!!!

Safety Meeting Sign-In Sheet

<i>Supervisor:</i>	<i>Subject:</i>
<i>Location:</i>	<i>Date:</i>
<i>Conducted By:</i>	<i>Trainer Signature:</i>

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests