



Fall Protection

**Can you
provide
prompt
rescue?**



Can You Provide Prompt Rescue?

3M™ Fall Protection Offers Innovative Products, Training, and Sample Rescue Plans to Meet OSHA Requirements for Prompt Rescue

While it may seem like the exact opposite is true, rescue after a fall is actually a good problem to have. It means a worker was wearing his harness properly, was attached to an anchor and was utilizing his gear correctly. The worker's arrested fall also demonstrates that the employer's fall protection plan was a success.

Despite the importance of having a rescue plan and employees trained in rescue, rescue is often overlooked by many companies. Some avoid the topic because it seems difficult, confusing or even intimidating. However, if you are the employer, it's helpful to remember that a compliant rescue plan protects both you and your workers — plus, OSHA and ANSI clearly state that prompt rescue is your responsibility.

- *“The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.” (OSHA 1926.502 [D] [20] and OSHA 1910.66)*
- *“The employer shall provide prompt rescue to all fallen authorized persons.” (ANSI Z359.2—6.1)*

But what is “prompt” rescue? According to ANSI, the recommended goal for rescue subject contact is less than six minutes (ANSI Z359.4-6.1). Though these standards and regulations have been in place for some time, OSHA and ANSI are bringing this critical subject to the forefront and employers should take note.



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Why Prompt Rescue is Critical

Consider this: A worker falls, and his fall protection saves him. Everyone breathes a sigh of relief. However, this feeling of relief is premature. Without prompt rescue, the worker is at risk of sustaining medical complications or a worsening of injuries from the fall. Keep in mind that injuries can occur before, during and after a fall. Here are some examples:

- **Before:** A worker is struck by a falling object or suffers a medical emergency such as a heart attack. This contributed to the fall.
- **During:** A worker collides with part of a structure as he falls.
- **After:** A worker is injured while suspended in his harness after a fall.

What You Need to Know About Suspension Trauma

After a fall, a worker is exposed to the risk of suspension trauma. Suspension trauma — also known as harness-induced pathology, harness hang syndrome (HHS) or orthostatic intolerance — occurs when a fallen worker is suspended for too long in his harness and the harness' leg straps constrict his veins, causing blood to pool in his legs. In turn, this reduces the flow of oxygenated blood to his heart, brain and kidneys.

Although every person reacts differently and not everyone will experience suspension trauma, research indicates that suspension of a worker in a fall arrest device can result in unconsciousness — followed by death. Although there is a lot of misunderstanding relating to the amount of time a worker can actually suspend in a harness, recent studies confirm that there is no correlation between toxic levels of substances and severity or length of time that the patient was suspended.

When considering the amount of time someone can be suspended in a harness safely, these primary factors should be taken into consideration:

- **Health of individual and pre-existing medical conditions** — for example, if the worker has a pre-existing cardiac condition, he could be at greater risk of suspension traumaⁱ
- **Type and fit of harness** — for example, a construction style harness may put a small amount of pressure on the ribs, which may help alleviate pressure on the femoral veins and femoral arteriesⁱⁱ
- **Immobility and gravity** — if the worker is not able to make any movement with his legs, he is at greater risk



for suspension traumaⁱⁱⁱ

- **Age** — the very old are most at risk due to less responsive arteries and veins and a less robust heart^{iv}
- **Dehydration and exhaustion** — both of these conditions increase the chance and speed of suspension trauma occurring^v

Note that suspension trauma is considered a medical issue by OSHA. Therefore, an employer rescue plan should ensure medical aid is readily available to treat it. In order to avoid after-fall injuries, here's what OSHA says employers must do:

“To reduce the risk associated with prolonged suspension in fall arrest systems, employers should implement plans to prevent prolonged suspension in fall protection devices. The plan should include procedures for: preventing prolonged suspension, identifying orthostatic intolerance signs and symptoms, and performing rescue and treatment as quickly as possible.” (OSHA Safety and Health Information Bulletin SHIB 03-24-2004, updated 2011)

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9-1-1 to the Rescue?

Firefighters, 9-1-1 rescue personnel and other rescue professionals are trained in technical rescue and can provide a high level of safety support. For instance, they can perform complex “pick offs” where they rappel from a helicopter to rescue a casualty. However, these personnel and the technical skills and equipment they use are in most cases not the best suited option to meet OSHA requirement for prompt rescue after a fall arrest.

In situations where a rescue can be planned and anticipated, such as at an employer site, the best approach is almost always the simplest. The 3M Fall Protection four basic considerations of an employee’s rescue are:

1. **Keep it simple**
2. **Keep it safe**
3. **Do not use knots**
4. **Do not use knives**

Instead of relying on rescue professionals, employees themselves who are properly trained in simple rescue

techniques specific to their job-site are often best positioned to quickly respond to and perform a successful rescue.



Employers Still Responsible, Even if Agency Is Used

If an employer chooses to hire a professional rescue agency, the employer should recognize that they still remain responsible for providing prompt rescue. In regards to working with outside agencies — which would include third party private companies and public safety entities — ANSI has the following guidance:

“If a professional rescue agency is going to be used, the employer’s competent person or program administrator shall contact the rescue agency to review the location of the elevated workplace before starting workplace activities, and shall review with that agency the types of fall protection being used and the environment where the agency may be called to perform a rescue.

The rescue agency shall advise the employer in writing of its availability and capability, any limitations on the types of rescue it can perform, and detailed instructions regarding how they are to be called and if they need to be advised when certain activities are planned or certain conditions exist so that they may ensure the fastest possible response.” (ANSI Z359.2—6.3.1.1)

developing a rescue plan, employers should also take cost into consideration. Professional rescue agency fees can be very expensive, whereas providing basic rescue training to employees is only a fraction of the cost. In addition, such training provides employees with both the skills and mindset they need to perform multiple rescues, should they be needed.

The 3M Fall Protection two-day Competent Person training course can help employers save significant costs. In addition, it not only ensures that employees become Competent Persons, but also provides required training to become authorized rescuers and equip them with necessary skills to perform most rescues from a fall arrest situation. Additionally, 3M Fall Protection offers rescue-specific training courses to further expand knowledge of proper rescue techniques. These rescue courses are offered for tower rescue, confined space and general industry.

Although safety must always be the first priority when

Time to Review, Revise or Create Your Rescue Plan

Many companies do an excellent job at implementing managed fall protection programs that address the risk of falls. However, without a comprehensive and compliant rescue plan in place, your workers could suffer severe injuries or even death. Not only is this a tragedy, it puts you and your organization at risk. If you haven't reviewed or revised your rescue plan recently — or if you don't have one — now is the time to take action.

Free, downloadable rescue plan template that meets both OSHA and ANSI requirements.

The good news is that rescue doesn't have to be complicated. Consider these facts:

- Rescue is an expected event you can plan for.
- 3M Fall Protection has developed ANSI-compliant rescue and descent systems that make rescues quicker and easier than ever, such as the Rollgliss™ R550.
- There's no need to spend time and resources developing your own plan. 3M Fall Protection has done the work for you. They offer a free, downloadable rescue plan template on their website that you can use. This plan meets both OSHA and ANSI requirements.

The Rollgliss™ R550 Supports Your Plan, Offers Prompt Rescue Capabilities

The 3M Fall Protection Rollgliss R550 is an easy-to-use rescue tool that not only meets and exceeds all applicable standards, but makes rescues easier than ever. Used all over the world, the R550 is a secure rescue and descent device that can be used in virtually any industry and on any structure — from cell phone towers, aerial lifts and cranes to wind towers, buildings and more.

Additionally, it features the lightest, most compact, easy-to-use design on the market today to help ensure prompt rescues are readily available to anyone. It offers the choice of rescue, evacuation, or the versatility of assisted-rescues with lifting capabilities.

This fully automatic controlled descent device can be used in applications from heights up to 1,640 ft. (500m) for one user 310 lbs. (141kg) or 575 ft. (175m) for two users totaling 620 lbs. (282kg). It features 3/8 in. (9.5mm) super static kernmantle rope, and is configured with connecting hardware at each end of the lifeline so that it can be operated in both directions. During assisted-rescue scenarios, a fallen worker can be attached to the R550 device, raised to a point that allows their fall arrest



device to be removed, and then lowered to the ground safely. With a drill attached, the R550 can also provide lifting capabilities which is essential in confined space rescues.

3M Training Courses Prepare Employees for Rescue

In order to perform complex rescues such as pick-offs, rescue professionals should complete more than 120 hours of training. In comparison, with several of the 3M Fall Protection courses listed below, an employee can master the skills necessary to perform simple and safe rescues in as little as two days.

Global fall protection leader 3M is one of the few providers to offer comprehensive rescue training for employees. Several training courses are currently offered where employees can gain these practical but crucial rescue skills. Students have the option to attend either an open enrollment course at several locations within the United States or may have a 3M instructor conduct training at their location.



- **Competent Person:** A recommended course is the two-day Competent Person course, which includes approximately four hours of Authorized Rescue training.
- **Competent Industrial Rescuer:** Another option geared specifically to those designated as the Competent Rescuer is the two-day Competent Industrial Rescuer course. This course is designed to incorporate more medical aid aspects required by OSHA, including simple patient packaging techniques to allow employees in medical stress to be evacuated to a lower level. Participants will also be trained in more complicated safety-at-height rescues when such skills are deemed necessary by the employer.
- **Authorized Rescuer:** An Authorized Rescuer course can be provided to employees that are already well versed in fall protection to fulfill their rescue plan.

Contact 3M Fall Protection Today

- For more information about rescue training or to schedule a course for your employees, contact our North American Training Coordinator at 800 328 6146 ext. 8 or visit 3M.com/FallProtection.
- Download your free copy of our rescue plan template from our website.
- Learn more about how the Rollgliss™ R550 can support your organization and rescue plan.



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