

**Goals: This safety session should teach employees to:**

- Understand the hazards of using all types of powder-actuated tools (PATs).
- Realize they need training for each particular tool before they use it
- Recognize the importance of following the rules for safe tool operation

**Applicable Regulations: 29 CFR 1910.242 and 243(d)****1. Powder-actuated tools pack a lot of power—that's why they are so useful.**

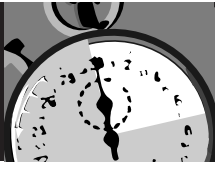
- PATs contain gunpowder charges just like loaded guns and should be treated with the same respect and safety precautions.
- They are used to shoot specially made fasteners or pins into another object.
- They eliminate the need to drill holes with a concrete drill bit and use anchors and screws for fastening applications.
- You can use PATs to attach materials like plywood, framing lumber, drywall track, conduit clips, and electrical junction boxes to surfaces like concrete, masonry, and steel.

**2. Even though PATs have built-in safety devices, you must follow safety precautions as well.**

- Always wear safety glasses or a face shield and a hard hat plus hearing protection.
- Never leave loaded PATs unattended or point them at yourself or anyone else.
- Load PATs just before use.
- Never carry loaded PATs from job to job.
- Insert the powder fastener into the muzzle of the tool first, then the powder load.
- Bring the tool into position against the surface; then pull the trigger.
- If a tool misfires, hold it in the firing position for at least 30 seconds.
- Then try to operate the tool a second time—wait another 30 seconds.
- Keep the tool pointed in a direction that cannot cause injury to you or others and unload the explosive cartridge very carefully according to the manufacturer's instructions.
- Dispose of the faulty cartridge properly.
- Never use these tools in an explosive or flammable atmosphere.

**3. Check the surface that you are nailing into.**

- Make sure that the receiving surface is thick and sturdy enough that the stud or pin cannot go completely through it.
- There have been accidents when a nail went completely through a wall and killed a worker on the other side.
- Don't fire into a very hard surface such as cast iron, rock, or glazed tile—the stud or pin might just bounce off.
- Do not permit other workers close enough that they could be injured by a fastener bouncing off a hard surface or a flying chip of concrete.



- Post warning signs for anyone coming into the area.
- Use screens if necessary to protect other workers nearby.
- Use the minimum charge necessary to penetrate the surface.
- Always check to make sure you are using a fastener designed for the gun.
- Make sure there are no live electrical circuits in the receiving surface.
- Never fire into a cracked surface or too close to an edge.

#### 4. Always inspect PATs carefully before each use.

- Check the chamber to see that the barrel is clean and has no obstructions.
- Be sure all moving parts operate freely.
- Tag defective tools “out of service” and remove until properly repaired.
- Powder-actuated staplers and nailers release fasteners at very high velocity and can puncture tissue from a considerable distance.

#### 5. Remember these safety tips when working with powder-actuated tools.

- Never operate PATs unless you have been properly trained to do so.
- Read the operating instructions before using a new tool—similar tools may have different features.
- **Never** point a nailer or stapler at another person.
- Always use the lowest possible charge to do the job.

#### Discussion Points:



Review the types of PATs used in your operations. Are the surfaces you are firing into thick enough that a nail could never go completely through? Are there special hazards involved that require warning signs or other precautions in your workplace?

#### Conclusion: Powerful tools require extra care.

Powder-actuated tools are very useful because they are so powerful. That same power is why they are so dangerous. By being aware of the hazards and by following the proper safety precautions we can take advantage of that power to make many jobs much easier.

#### Test Your Knowledge



Have your employees take the Powder-actuated Tools Quiz. By testing their knowledge, you can judge whether they are really aware of the risk factors and the necessary safety precautions or whether they need to review this subject again soon.