

# HAZARD ALERT

CPWR [O]  
THE CENTER FOR CONSTRUCTION  
RESEARCH AND TRAINING

# NAIL GUNS

*Serious – even fatal – injuries are happening even when used as designed.*



PHOTO COURTESY STEPHAN MANN, M.D., MPH

## What's the problem?

Nail guns are popular for a reason. They get the job done in a blink of an eye.

But that rapid-fire action can work against you. In a split second, a nail can enter your finger, your hand, or worse.

Nail gun injuries are much more common than people think. Most injuries involve puncture wounds to hands or fingers, but serious, even fatal, injuries are also associated with the use of these tools.

## How most nail gun injuries happen

- Accidental or unintended firing, often associated with recoil of the tool after firing
- Ricocheting nails
- Nail going through work surface
- Airborne nails
- By-passed safety features
- Unsafe work practices
- Holding finger on contact trigger



## About nail guns

Although there are many types of nail guns (framing, finishing, flooring, etc.), there are two common triggers:

**Contact Trip Triggers** fire anytime the trigger and the nose of the gun (contact element) are both depressed. Trigger can be held down to allow “bump” or bounce nailing.

**Sequential Triggers** require the nose of gun to be depressed before the trigger is pulled. That avoids accidental firing of nails.

**Dual Triggers** are new models that allow workers to switch back and forth from contact trip to sequential. Confusing the two can lead to injuries.

## WARNING

*All triggers look alike. Test guns before using. If you can “bump nail” by holding the trigger down and bouncing the nose against a nailing surface, that is a contact trip trigger gun.*



**USE EXTREME CAUTION.**



## How to prevent injury

- Ask for a nail gun with a sequential trigger mechanism.
- Do not press the trigger unless the nose of the gun (contact element) is firmly pressed against the work material.
- NEVER walk around with your finger on the trigger.
- NEVER clean or clear jams or adjust a nail gun when it is connected to the air supply.
- Avoid nailing into knots and metal; nails are more likely to ricochet. Dense materials, like laminated beams, are also difficult to nail.
- NEVER remove or bypass safety devices, triggers, or contact springs.
- NEVER use a defective tool. If a tool is malfunctioning, it needs to be tagged and taken out of service.

## Why it's important:

- 1.** Workers using the contact trip or “bump nailers” have **double the rate of serious injury** of those workers using sequential trigger guns.
- 2.** **Accidental firings** are most common following recoil of tools with contact trip triggers.
- 3.** Serious, even fatal, injuries are happening to workers, even when using nail guns as designed. **Get training on nail guns**, even if you are using a sequential trigger gun.

## What's the risk?

Researchers found that 44% of apprentice carpenters in one program were injured by nail guns before they finished their training. A study measuring productivity found that most of the variability in speed had to do with the nail gun's user rather than the type of trigger used. Another study found 12% of nail gun injuries happen to workers not even using a nail gun.

To get more information about nail gun safety (including videos and training tools), go to [www.nailgunfacts.org](http://www.nailgunfacts.org)

For more safety and health information, visit [www.elcosh.org](http://www.elcosh.org)

To learn more about CPWR, visit [www.cpwr.com](http://www.cpwr.com)

**If you think you are in danger:**

Contact your supervisor.  
Contact your union.

Call OSHA  
**1-800-321-OSHA**