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Background Information

The information in this publication is based on NIOSH supported research; Nail Gun Safety: A Guide for Construction Contractors (NIOSH Publication No. 2011-202/OSHA Publication No. 3459-8-11); and focus group discussions with residential building subcontractors, safety specialists and workers.

New nail gun users must receive safety training, not just a copy of this publication. Safety training requirements are described in detail in Nail Gun Safety: A Guide for Construction Contractors and can be viewed and printed or downloaded from www.cdc.gov/niosh/docs/2011-202/.

More information about OSHA power tool regulations mentioned on pages 4–5 can be found in Hand and Power Tools, OSHA Publication No. 3080 2002 (Revised) www.osha.gov/Publications/oshapub3080.pdf.

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Safer • Healthier • People™
**STRAIGHT TALK ABOUT NAIL-GUN SAFETY**

Dude, hold on a minute.

Safety training? Why, you just point & shoot, right?

What's the big deal?

(Oh boy)

Have you had safety training for that thing?

These guns can shoot a 3-inch nail more than 100 miles per hour. That's 150 feet per second!

That means they can easily go through your hand—

—break bones—

—or get stuck in your thick skull!

That's the "big deal!"
Nail guns are powerful tools that get the job done faster than a hammer.

Hurry up, oldtimer!

Wise guy

And, they can be as deadly as a firearm!

So, can you give me the training?

That's why everybody needs some basic training before they start using one!

Let's cover the basics today—and get you in the next safety class!

And speaking of basics:

Always wear approved safety glasses & a hard hat when nailing.

Most important:

Framing nail guns have a sliding safety tip that must be pushed down first.

So you can't just pull the trigger and let a nail fly.

Not yet!

OK, now go ahead.

/Pop!
Then these guns are really safe, right?

No! And not all guns are equally safe.

You can squeeze the trigger of many guns before you push in the safety tip—making it possible to shoot a nail by accident?

These are called "bump-fire" or "automatic" nail-guns.

The safer gun forces you to push the safety tip against the wood.

And then pull the trigger to shoot one nail.

You repeat this for each nail you shoot.

These safer guns are known as "single-shot" or "sequential."

Sounds like it's more difficult using the safer gun!

It takes a little more skill but there's very little chance of shooting a nail by accident.

It's just too easy to keep the trigger squeezed when you're not nailing—right after nailing.

And with an automatic trigger, that's when accidents happen.

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NAIL GUN TRIGGER SAFETY

• Removing the safety tip spring or disabling any safety device increases the risk of injury. OSHA prohibits doing these things.

• Use the “single shot” trigger (also called full sequential trigger) when possible.

• Ask your employer for nail gun safety training if you are a new user. OSHA requires this training. Ask how the different triggers and safety devices work.

• Know what type of trigger you are using before you start working.

NAIL GUN USE

• Hold and carry the nail gun with your finger OFF the trigger.

• Keep co-workers out of your line of fire.

• Clear a nail jam after you disconnect the hose.

• Shoot the bottom nail first when fastening a stud to a plate.

• Know where the studs or joists are when shooting plywood or OSB.

• Keep your free hand, not holding the gun, as far from the nailing location as possible (12 inches or more is best).

• Use extra care when toe nailing, nailing in tight spaces, from a ladder, or with the gun above your head.

• Allow space for nail gun recoil (“kickback”) and don’t try to stop or fight this recoil.

• Use your dominant hand to operate a nail gun.
LUMBER & BUILDING MATERIALS

- Check lumber for knots, nails, straps, or other things that can cause a nail ricochet or deflection.
- Only use a hammer, palm nailer or positive placement teco nailer for fastening metal straps or other connectors.
- Use extra care with warped or twisted lumber.
- Good planning of material storage and layout can save more job time than the choice of trigger.

COMPRESSORS/ HOSES

- Check your nail gun, air hose, hose fittings, and compressor to make sure they work properly. Use only tools and equipment that work properly.
- Make sure your air pressure is in the recommended range, usually 80 to 120 psi.
- Nail guns should be lubricated on a regular basis.
- Don’t lift, lower, or carry your nail gun by the air hose.
- Disconnect the air hose when clearing a nail jam or doing any maintenance on the nail gun.

Always wear eye protection, hard hat, safety shoes, and hearing protection as required by OSHA.

Never horseplay or fool around with nail guns.

Seek medical treatment immediately if injured with a nail gun.

Work only as fast as you can safely control the nail gun. Resist pressure to work faster.
Now here's a question: Where do you think you would most likely be injured when using a nail gun?

Probably the hand. It wouldn't be fun but I guess it might not be that bad.

Did he really say that?

You're right about the hand except you're wrong about how bad it can be!

Hand injuries can do serious damage to nerves and tendons, and cause infections and tetanus poisoning.

I can take it!

Don't be a tough guy get medical attention for every nail injury. Even if it seems like you can handle it.

What else do you suggest for avoiding nail gun injuries?

Keep your non-trigger hand away from the nailing point. Twelve inches is a safe distance.

You said not to hold my finger on the trigger, but it's heavy. There's no other place for the trigger finger.

You're right but...
IT'S STILL BETTER THAN HAVING YOUR FINGER ON THE TRIGGER.

OTHERWISE, YOU COULD INJURE YOURSELF OR A COLLEAGUE.

SEE THAT FRAMER OVER THERE? A COUPLE OF YEARS AGO HE SHOT HIMSELF IN THE LEG WHEN HE YANKED ON THE AIR HOSE WITH HIS FINGER ON THE TRIGGER.

THE HOSE WOULDN'T BUDGE BUT THE SAFETY TIP HIT HIS LEG.

OUCH!

DON'T EVER TRY TO PULL THE HOSE LOOSE USING THE GUN!

I KNOW ANOTHER FRAMER WHO WAS WAITING FOR HIS BUDDY TO BRING OVER THE DECK SHEATHING WHILE HE HAD HIS FINGER ON THE TRIGGER.

THEY DIDN'T SEE EACH OTHER AND HIS BUDDY BACKED INTO THE GUN AND GOT SHOT IN THE SHOULDER.

OKAY, I GET IT! KEEP MY FINGER OFF THE TRIGGER UNLESS I INTEND TO FIRE A NAIL!

"YEAH, BUT..."

"-BUT IT'S POSSIBLE TO SHOOT A SECOND NAIL EVEN WHEN YOU WANTED TO SHOOT ONLY ONE."

THE AUTOMATIC GUN CAN "DOUBLE FIRE" IF YOU STILL HAVE YOUR FINGER ON THE TRIGGER AFTER RECOIL.

THEN, IF THE SAFETY TIP CONTACTS YOUR BODY OR SOMETHING ELSE, THE GUN FIRES AGAIN.

Yeah, but..."
A double fire can happen when you're nailing in a tight space and your gun or elbow hits the lumber and bounces back. Sometimes it happens when new guys push the gun back too hard after the recoil.

So I have to release the trigger really fast after I shoot each nail? You may not always have time for that.

But if you use the single-shot trigger, it won't matter. With a single-shot nailer, you can't shoot a second nail until after you release the trigger.

I get it, safety's super important, is that all? Not quite.

Sometimes nails start flying.

No way!

This happens when you're using any trigger and the safety tip strikes the lumber but the nail misses it!

Yikes!
IT'S ALL A MATTER OF TAKING THE TIME TO POSITION THE GUN PROPERLY.

SOMETHING SIMILAR CAN HAPPEN WHEN YOU NAIL SHEATHING, NO MATTER WHICH TOOL YOU USE.

IF YOU MISS THE STUD OR JOIST, THE NAIL CAN GO THROUGH THE SHEATHING & HIT SOMEONE!

THE MATERIALS YOU USE HAVE THEIR OWN DANGERS.

KNOTS IN THE WOOD ARE SUPER HARD. A NAIL THAT HITS A KNOT CAN CHANGE DIRECTION & COME OUT & INJURE SOMEONE.

YOU CAN'T ALWAYS SEE ALL THE KNOTS.

THAT'S ONE GOOD REASON TO KEEP YOUR FREE HAND AWAY FROM THE NAILING POINT.

NEVER USE A FRAMING NAILER ON A METAL CONNECTOR. IT'S TOO EASY TO MISS THE PRE-DRILLED HOLE & SEND A NAIL FLYING.

WITH LVL (LAMINATED VENEER LUMBER), IF YOU SHOOT AT AN ANGLE THE NAIL CAN RECOIL & HURT SOMEONE. THIS CAN BE A DANGER WHEN YOU'RE TOE-NAILING.

I'VE GLAD I DIDN'T HAVE TO LEARN THESE THINGS THE HARD WAY!

WE'VE COVERED THE MOST COMMON PROBLEMS.

ONE LAST THING: NEVER GIVE IN TO PRESSURE TO NAIL FASTER THAN YOU CAN SAFELY DO IT.

NOW LET'S GET TO WORK!

DON'T FORGET TO READ THE NAIL-GUN SAFETY CHECKLIST ON PAGES 445.
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