

Extension-Step Ladders

This is an excerpt I copied from a search:

Ladder Accidents

More than **500,000 people a year are treated for ladder-related injuries annually in the US**, according to the American Academy of Orthopedic Surgeons. Of these 500,000 injuries approximately **300 people in the US die from ladder related injuries annually**. A large percentage of ladder injuries and deaths could have been prevented if proper procedure had been followed.

These statistics are needless, same as the saw injury statistics, read on.

Duty Rating	Type	Maximum Weight
Household Duty (general household use)	3	200 lbs.
Professional Duty (commercial painter, handyman, etc.)	2	225lbs.
Commercial Duty (industrial applications)	1	250 lbs.
Industrial Duty (industrial applications)	1A	300 lbs.
Special Duty (high-impact industrial/professional use)	1AA	375 lbs

The poundage rating is the easiest classification to go by.

If you can afford it always buy the 375#. Take it from me; there is a lot of difference between a 200# ladder and a 375# ladder.

A 200# 16' extension ladder will be about \$70 and 375#, 16' extension ladders will cost about \$140, well worth the difference if you are going to use it every day. Also, your life could depend on this piece of equipment.

There are 4 things you do, or should do, every time you climb an extension ladder:

1. **Set the ladder plumb and where rung treads are level, both ways, rails 75°.**
2. **Test for stability, 2nd/3rd rung.**
3. **Tie it off when reaching the top.**
4. **Top of ladder at least 4' above the landing area (where you climb off the ladder onto the roof or stage).**
5. **Check rung locks and clean rungs that have ice and mud.**

If you do these 5 things every time you set up an extension ladder you have lowered your chances of an injury or death by a tremendous amount. If everyone in the USA would follow these procedures the half million would reduce to almost nothing.

**Same as the circular saw article I wrote, if everyone in the world would let a circular saw stop when the cut is completed (never mentioned in the safety procedures that come with a new saw) before they move the saw off of the material, saw injuries and deaths would come to a complete halt, there will always be some character that can find a way to get cut, but it won't be you or I if we let the saw stop.*

I heard from a friend of mine that watches statistics and he said saw injuries are still very high and that the saw injuries are still happening by the thousands. The free saw article is available everyone.

OSHA regs say you must never work off of an extension ladder. True, but I know very well most of you are going to work off of an extension ladder and it's just something that is going to happen. It is best that you don't work off of an extension ladder.

I agree with OSHA but I say if you are in a situation where you have to do something using an extension ladder at least get a belt and tie yourself off, and if the ladder isn't tied off securely it will do little good. Tie the ladder to the eave or stage that you are going up to.



The first procedure is to set the ladder against the building or structure you are going up to (75°). If you have to get a level and check the rungs both ways, do it, until you learn what the proper position is for an extension ladder. The rung should be level, side to side and forwards, as shown.

You will learn this when you climb a ladder and it is set wrong, the feet/shoes are too close to the building or too far away and you won't need a level to tell you that you positioned the ladder wrong.

The second thing is to get the ladder on stable ground. If you have to, take a frame hammer and dig a hole where the shoes are setting on the ground and get them level and stable. If need be, place a 4' 2x12 on the ground and nail the ladder to it, there are two ¼" holes on the shoes for this purpose. Another thing is you may want to use

the serrated teeth on the shoes to bite into some footing material to get a good grip with the shoes. That is what these teeth are for, digging in or penetrating a material to get a stable ladder that will not slip or slide. I have seen more than one ladder slip and slide down the wall to the ground.



This is extremely important. Not setting on any ice or any slippery flooring. I have even had to set a ladder on some plywood and block the shoes, when on slippery vinyl, so as to have a stable place to hold the shoes.

Now when you climb up and get to the 2nd or 3rd rung, stop and shift your weight from side to side, moving the top of the ladder a little. This will tell you if the ground is stable and if the ladder is going to shift and slip when you get up higher, very important procedure, **and this procedure is never mentioned in the ladder safety precautions of any manufacturer. If it is, I would like to see it, so far, I haven't.**

If your ladder is going to shift and move you want it to do this while you are on the bottom, not when you get to the top. If you fall off at 2' it

probably won't hurt you, but at 20', it could kill you.

Never carry tools when you ascend or descend a ladder, absolutely always keep your hands free to climb a ladder, whereas you have one hand/two feet on the ladder at all times.

The fall is not going to hurt you, it will be painless. Except for the ones listening to you scream.

It's landing on the ground or hitting obstacles on the way down that will kill or maim you.

When you get to the top of the structure where your ladder is resting on you need to figure out some way to tie it off.

People do not want you driving nails in their soffit or fascia, nor breaking the edges of their shingles on their roof. You need to take a couple of clamps, a wire or rope and clamp pads with you or even a rope to go over the roof and some way or another, tie the ladder off and stabilize it. Any way you do it is better than nothing.



This ladder is not tied off and I didn't climb it. The rungs are on 12" centers, so this ladder is about 4' (OSHA says 3') above the eave.

Now you are at the top and you see that your ladder is going up above the landing area (the area where you are going to step onto when you climb off of the ladder) only about 6". This is dangerous and hard to get down onto the ladder to descend. Go back down and extend the ladder to where you have 4' (as shown above) extending above the landing area. If your ladder is not long enough, go get one that will.

Two examples here:

My Dad and a friend of his, Jake Youngblood, were building a house in Levelland, Texas in 1956. They had built a ladder that was only extending about 6" above the landing area, which they figured was OK because it was only 7' to a pile of sand below the eave. Jake started to come down, and slipped, and with nothing to grab to, he fell 7' into the sand, broke his neck and died.

Second example:

Some carpenters were mounting a flag pole base to the side of a building, 24' up on the side of the 40' tall building. With no landing area and the ladder was just leaning against the building. The carpenter goes up; hammer drill, base, anchors and driver all with him. He gets to the top, looks down and freezes. No movement, he would not talk and they were over two hours getting him down, they had to get a cherry picker. He said later that he was not afraid of heights but that the situation he was in when his face was against that wall and he had nothing to

climb onto was something he had never thought of.

When you start to climb up to an area or roof, think about what it is going to be like up there and what you are going to do when you get there. Think about it on the ground, not when you get up 24' and wonder why in the world you ever came up here in the first place and you know very well, if you ever get down that you will never climb another ladder in your life.

Now we are ready to go down. You start down and you are stepping on two rungs going down, fairly easy to do. Then you get to where the extension ladder goes from a double rail/double rungs to a single rail/rung and you don't see it and all of a sudden the heel of your foot steps onto nothing. This is where a lot of people using a ladder fall to their death or are badly injured. Look at this picture.



This is where most descending falls happen, 2 rungs to 1 rung. Think, concentrate, focus on getting to the ground safely. Don't get in a hurry.

You need to paint the bottom rung of the top ladder rail frame bright red/yellow. Remember 2 rungs to 1 rung; I know you have felt it. You and others will see it going up and it will

remind you when you are going down that something is different in this area. You will even have people ask why you painted that rung, and then you can tell them. Take my word for this and try it.

Many carpenters/contractors think this is stupid and you are a coward to be painting a ladder or using any of these safety precautions; anybody should know how to climb or descend a ladder. I have had contractors get mad at me and others for taking the time to tie a ladder off. A lot of you homeowners have the same attitude about safety procedures.

Leave your attitude at home with your wife when using a ladder/saw and use these safety procedures instead.

The thing is, I have been a carpenter all my life. I have seen death, destruction and severe injuries caused by faulty ladder procedures. I know what I am talking about. You will think of me and the safety procedures I am giving you the next time something happens to you or others using a ladder.

These cowboys make up the majority of the 500,000 injuries/deaths a year. I know, I have been working with them for over 40 years. You can't tell them anything. They are 20-80 years old, have been climbing ladders/using saws all of their life, and know it all. Same thing went when I distributed the saw article. Very few carpenters or homeowners listened to me. I have two classic examples working for me at this very time.

As I say in the Carpenter Book, if you are doing a lot of work on a roof, it doesn't take much time to set up two tied off extension ladders and then put another one against the two on the roof so that you have a barrier to

stop someone from falling. This procedure has saved a lot of lives and limbs.

Another thing that is, in the over 100 safety procedures that are in the book, the first time you cut a piece of material on a roof and create sawdust, then a piece of scrap falls on this dust and you step on this scrap, you are probably going to slide down the roof and off to the ground. You have just created a new statistic for OSHA and the American Academy of Orthopedic Surgeons, you will be one of the 500,000.

Not much to tell you about step ladders although they are some 12' stepovers available. You had better have the same environment for this monster as you do for the extension ladders, and you had better be sure that the **folding braces are in the locked position before ascending any step ladder.**

If I or someone else has to tell you not to stand or work off of the top platform (it is not a step) you should never get on another ladder. I don't even like working on the last step on the top, let alone the top platform.

I have seen quite a few construction workers injured, falling off of a 4' step ladder, something to think about.

I have seen many fingers get broken by the braces while folding a step ladder.

If you follow these procedures and use your head and a small amount of common sense, chances are you will not be among the half million that get injured or killed using a ladder. I pray that you listen to me and that you aren't among these.

Most of the time, about any construction procedure, using just a

little common sense could save your life. If you think something is wrong, it probably is. If you feel something bad about a situation or procedure, stop, think about it and correct it before you proceed.

Just like testing the ladder on the third rung, is much safer than getting to the top and the shoe was set on top of a gopher hole, and then the ladder slides off the eave and you go down. If you live through that, I will bet you test the ladder for stability next time.

Like I said, I hope you think of these procedures next time something happens using a ladder, and for some, that is the only time it will sink in.

With over 50 years of using a ladder this is my opinion as to how to use a ladder safely, if you have a better procedure, use it.

Like I said in the saw article "it is your choice whether or not you want to use these safe and correct procedures". Not mine nor anyone else's, it is yours. Your job to keep from becoming a statistic instead of a carpenter.

If you need to contact me go to my website and email me. Thanks

Bob Johnston, carpenter

<http://carpenterbooks.com>

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