

Safety Helmets vs. Hard Hats



The Rise of Safety Helmets in Construction

The image of a construction worker wearing a hard hat is iconic. Whether it's high atop a skyscraper or down on the ground, everyone on every jobsite must wear a hard hat. Even visitors to a job are required to put one on while onsite. However, is that mainstay of construction—the hard hat—getting a bit of a makeover? More and more, hard hats are being upgraded to safety helmets. Will safety helmets eventually take over as the head protection of choice or will hard hats and safety helmets coexist on the job?

Hard Hat History

In our article "[Hard Hats: 100 Years of Evolution](#)", we profiled the history of hard hats, and how they have been worn by laborers over the last century. Shipbuilders were the first workers to cover their existing hats with tar to protect their heads from objects falling off ships. Over the century, protective hats have been made of leather, steel, aluminum, fiberglass, plastic, and even steamed canvas held together by glue.

Today's hard hats are composed mainly of polyethylene. Modern hard hats now may include features shipbuilders of yesteryear could never dream of such as: ventilation, face shields, ear muffs, visors, perspiration liners, lights, radios, or walkie-talkies. And, their evolution continues with the rise of safety helmets.



Safety Helmet Shift

When picturing a safety helmet, think rescue worker or outdoor sports like, rock climbing, skiing, cycling, and even sport kayaking. These helmets typically attach more closely to the head with built-in chin straps and have little to no brim around the edge. Their overall profile on the head is smaller.

Safety helmets have increased safety elements which is why they have mainly been worn by athletes in dangerous sports and rescue workers in hazardous situations. Inside the helmet there is protective padding, and chin straps that keep the helmet securely on the head.

Helmets Are Construction-Tough

For construction workers, safety helmets not only shield against falling objects, but certain models (Type II) can offer increased protection from impacts to the side and back of the head.

Type II Helmets and Hard Hats are designed to minimize lateral impacts to the head; either from off-center, from the side or to the top of the head. For example, a blow to the head resulting from the sharp end of a side beam or I-beam.

In addition, chinstraps, whether on a helmet or hard hat, can provide increased safety during falls, trips, and slips by keeping head gear in place.

Safety Helmet Options And Accessories

Other attributes that make safety helmets safe include options like attachable visors, ear protection, and being equipped with or constructed from Hi Viz materials.

OSHA regulations require the use of American National Standards Institute (ANSI) compliant head protection (ANSI Z89.1-2014). According to OSHA rule 29 C.F.R. 1926.100, employers must provide head protection equipment that meets or exceeds the industry consensus standard ANSI Z89.1.

Type and Class

All head protection is assigned a “Type” and a “Class.”

The Type refers to the level of protection from an impact, while the Class refers to the different levels of protection from electricity.

ANSI Type I Helmets are designed to reduce force as a result of impact to the top of the head

ANSI Type II Helmets are designed to reduce force as a result of impact to the sides or top of the head

The three classes of head protection include:

Class E (electrical) provides protection to withstand 20,000 volts

Class G (general) provides protection to withstand 2,200 volts.

Class C (conductive) no protection from electricity

A **Type 1, Class C** hard hat would be the standard worn by a construction worker not exposed to electrical hazards; a standard safety helmet would be categorized as **Class C**.



Pros & Cons of Safety Helmets

Pros

Can last up to 10 years

Provide increased safety: protect from side impact

Won't fall off as easily in case of a fall due to chin strap

Cons

Can be expensive: upwards of \$100 - \$150

Cultural shift away from hard hats at some jobs may be difficult

May feel heavier on the head – depending on model

Barriers to Safety Helmet Domination

With all this positive news about safety helmets, what could hold back their full take-over of hard hats? One barrier is cost. Safety helmets are significantly more expensive than hard hats. A lost or misplaced hard hat is less painful to replace, monetarily speaking, than a safety helmet – which can be a stretch for smaller companies or individuals. However, they do last longer – up to 10 years in some cases. The need to purchase fewer safety helmets over the years could outweigh the initial costs.

Another challenge to embracing safety helmets on the job is worker preference. Hard hats are a longstanding symbol of the construction worker. Not only does the safety helmet have a different look than the traditional hard hat, it has a different feel. Some workers may feel uncomfortable wearing the sleeker design of the safety helmet. This may make the cultural shift difficult for some workers.

It's possible that some workers switch to safety helmets while others continue to wear hard hats depending upon the type of work they are doing. Safety helmets could be required when working at heights or in situations where there is a higher risk of falling – while hard hats continue to be worn by workers at ground level, such as concrete finishers, flaggers, electricians, drivers, etc.

Final Thoughts

The implementation of more and more safety helmets means added benefits for workers, construction companies, and insurance carriers. Increased use of safety helmets means companies may have less workers out

due to injury, less worker's compensation payouts, and fewer claims. Construction companies may have to spend a little more money up front, but the return in worker safety is invaluable. The transition from hard hat to helmet may take some time, but the safety and long-term cost benefits will likely make helmets the best choice for some.

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<https://www.enr.com/articles/47097-european-hardhat-brings-science-to-injury-reduction>

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