

Hand Protection—Beyond the Glove

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- By M.B. Sutherland

You identify a job hazard, decide on the proper PPE to protect against it, give it to your workers, and no one ever gets injured again. It's a nice story, but if it were that easy, you'd have a lot more time in your day. Safety is complicated, and worker behavior can be unpredictable. New technologies and products on the market now give you more options than ever before to help keep your people safe and comfortable, but are you providing everything your workers need?

Thinking Beyond the Glove and Up the Arms

We talk a lot about hand injuries and the gloves that can help to prevent them. But an area that often gets overlooked is your workers' arms. Too often, we fail to consider that arms are vulnerable to many of the same hazards that cause workers to need a glove. According to the National Safety Council, hand-related accidents accounted for more than 13 percent of injuries involving days away from work in 2017. Arm injuries accounted for nearly 5 percent of injuries. And while 5 percent isn't a major piece of the pie, it still represents a large number of impacted workers, recordables, and lost dollars—many of which might be avoided with the addition of protective sleeves.

When deciding if gloves alone are sufficient or if your workers need sleeves, take a look at what movements are involved in the job. Often workers need to reach over or under machinery, shelving, or other rough materials to complete a task. So while hands may be protected with gloves, arms without proper protection are vulnerable to cuts, abrasions, and burns. Routine tasks such as moving items in and out of bins can become hazardous if workers have to reach into barrels or other receptacles that contain sharp materials. Even the receptacles themselves can cause injury as bins become worn over time and may have sharp, uneven edges.

Consider every part of a task when evaluating a job because even something as seemingly simple as transporting heavy objects can cause arm injuries. Workers tend to take the biggest load they can comfortably carry and cradle items against their chest, risking friction, pinches, or scrapes to the arms. Depending on the material, an abrasion- or cut-resistant sleeve will provide better protection than a shirt sleeve. But sleeves aren't just for protecting against cuts and abrasions. Be sure to take a look at jobs that involve exposure to chemicals and heat or flames. Chemical splash, radiant heat, and hot materials can easily injure arms if your workers have only shirt sleeves, which can also gap open between wrist and elbow, or no arm covering at all.

One place that sleeves may actually increase danger rather than protect from it are jobs that involve power rotating equipment. Any rules that apply to clothing your workers might wear also should apply to sleeves. Be sure to consult OSHA and company regulations before adding or subtracting any type of PPE on a job.

What's In It for Your Workers?

The expression "comfort is king" applies doubly to safety because workers tend to shed uncomfortable PPE as a job goes on. Jason Lee, manager of Health & Safety Services at Magid, said, "The number one complaint I get about sleeves is that they're hot and uncomfortable. Even if workers have their sleeves on, they're frequently pulling them up or down and wearing them improperly."

Advances in FR and cut-resistant materials mean that manufacturers can now provide cooler, one-ply protective sleeves that offer the protection of a two-ply sleeve in a product that's half as thick. In addition, yarns made with coreless technology eliminate the fiberglass, steel, or basalt core that can break and cause contact dermatitis in some workers. Instead, the fibers themselves are infused with strength-enhancing micro particles to provide cut protection without irritation. This new yarn is also significantly lighter and feels cool to the touch, making PPE more comfortable and helping to ensure that workers will put it on and keep it on. Some manufacturers are even developing sleeves specific to particular industries, for example anti-microbial sleeves with high cut protection for food service, making sleeve choice a no-brainer.

Another important consideration in comfort is how the sleeve stays up or down. A quick online search reveals that many sleeves either come in just one large size or use closures that may not be ideal for your environment. The tried-and-true methods include alligator clips, elastic, rub tape, and Velcro. And while they're all easy to use, they also tend to have drawbacks that make workers less likely to wear a sleeve over time.

Advances in comfort include Velcro closures with a gusset and tubular knit sleeves that come in multiple sizes to accommodate larger and more varied bicep sizes than ever before. On the other end of the arm, traditional options such as thumb slots keep sleeves from rolling up, while innovations such as thinner materials at the palm are making sleeves a better and more practical option, particularly when worn under a glove.

What's In It for You?

Other benefits that make sleeves particularly attractive for safety managers are that they're cost effective and reusable. In the past, arm hazards might have been addressed by using cut- or flame-resistant clothing. But a pair of cut-resistant sleeves is a fraction of the cost of an average cut-resistant shirt or jacket. If the hazard extends only to a worker's elbow or shoulder, it's possible you can save money and increase comfort and compliance with a simple pair of sleeves.

And, depending on your needs, you can choose customization or standardization in your sleeve choices. If you're looking for customization, knit sleeves come in varying fits such as tubular, blousy, and tapered so you can tailor the fit for the job your worker is doing. You also can choose from varying sleeve lengths to run from hand to elbow, hand to shoulder, or in between.

If you'd prefer to buy in bulk to save money and avoid the hassle of too many choices, gusseted sleeves allow you to buy one size for your facility because the adjustable closure fits all but the most extreme arm sizes.

Most sleeves can also be professionally laundered and reused, extending their life and increasing cost effectiveness. In general, most sleeves last longer than an average pair of gloves because they don't get the same wear and tear.

One Basic Question

Lee advises safety managers to ask themselves, "Why are you wearing gloves in the first place?" and extending the answer to your workers' arms. Whatever jobs your workers are doing, it's a better time than ever to reevaluate your needs to see if new technologies may offer solid protection while keeping your workers more comfortable and compliant.