# AVOID A REACTION

## Understand and prevent glove-associated allergies

Photos courtesy of Ansell

By DON CRONK

Latex and non-latex disposable gloves are increasingly popular in industrial, chemical and food processing environments. Workers here face a challenge many healthcare users of these gloves have coped with for decades: allergies tied to natural rubber latex gloves or chemicals used in glove manufacturing.

Estimates suggest as much as six percent of the population is sensitive to natural rubber latex – that's about 19 million people in the U.S. and 432 million worldwide.

Reactions can be serious – ranging from skin irritation and rashes to serious health issues that can end careers. Fortunately, it's likely alternatives can help avoid an allergic reaction. The challenge: identify the allergy and find the right glove that provides the comfort, performance and protection required for the job.

### Understanding allergies

There are two types of glove-associated allergies. Type I allergies are a reaction to proteins found in natural rubber latex and can range from allergic contact dermatitis to serious anaphylactic reactions, the most severe of which – while rare – can be life-threatening. Individuals also can become sensitized to natural rubber products. They may not initially suffer an allergic reaction but develop one in time with repeated use. A minor reaction may develop into a more serious one. Individuals wearing natural rubber latex gloves experiencing even minor reactions should stop using them.

Type IV allergies are a reaction to residual chemical irritants left from the glove manufacturing process. Type IV allergies are not life-threatening, but can trigger severe reactions and are more difficult to accurately diagnose. Different chemical combinations are used in production of gloves, so identifying the trigger for the allergy isn't as simple as pointing to a latex glove.

Chemicals used fall into the following broad classifications, one of which is the primary cause of chemical allergies: Accelerators; Accelerator activators; Antidegradants; Extenders; Fillers; Retarders; and Stabilizers.

More than 80 percent of reported glove-associated allergic contact dermatitis is attributable to chemical accelerators. Symptoms surface from six to 48 hours after initial contact with the glove, and may persist for days.

Don't minimize the seriousness and impact of allergic reactions. Glove-associated allergies often translate into potential costs:

- Lost productivity due to employee sick time
- Cost of replacing trained staff
- Workers' comp triggered by occupational allergies
- Costs of doctor's visits and treatments
- Costs for tests for allergies
- Loss of quality workers

### Finding the right fit

In any case of persistent dermatitis or allergic reaction triggered by glove use, the worker should see a physician for an accurate diagnosis. Determining which type of glove to use or any necessary treatment starts with understanding whether it's a Type I or Type IV allergy. Let's look at PPE options and recommended actions.

**Type I allergy:** Switch to a glove made from synthetic materials. There are three primary synthetic material options:

- **Polyisoprene:** Most similar in performance to natural rubber latex with a high level of comfort, excellent elasticity and moderate strength.
- **Neoprene:** Characteristic performance falls between polyisoprene and nitrile with a good balance of comfort, strength and elasticity.
- **Nitrile:** Typically higher strength and puncture resistance than natural rubber latex but does sacrifice some elasticity.

*There are gloves designed to reduce the risk of both Type I and Type IV allergies. Ansell's TouchNTuff® 73-500 is made of neoprene – a latex alternative that delivers comfort, strength and elasticity – and manufactured without accelerators.*

Many natural rubber latex gloves include a donning powder that can act as a carrier for allergenic latex proteins. That powder can become airborne and attach to or be inhaled by coworkers with latex allergies. Even a worker who switches to synthetic gloves could suffer allergic reactions to powder from a coworker's gloves. If an individual with a Type I allergy is working close to coworkers using natural rubber latex gloves, the coworker should either switch to synthetic or to a powder-free latex glove.

**Type IV allergies:** As mentioned earlier, because there are many potential causative agents, finding an alternative for someone experiencing a Type IV reaction can be a complex challenge. The first step should be to look at chemical accelerators used in manufacturing the glove, because accelerators are the most common causative agent for Type IV reactions.

The best way to avoid accelerator-caused Type IV reactions is to use gloves manufactured without chemical accelerators. These gloves rely on a different process for vulcanization and produce a cleaner product that reduces or eliminates most allergic reactions.

*Nitrile gloves like Ansell's Microflex® Sensation® offer a strong, durable alternative to natural rubber latex. Made of a special formulation, these gloves are clinically proven to reduce the risk of developing contact dermatitis*

Of course, not all Type IV reactions are triggered by accelerators. The manufacturing process can either increase or reduce the likelihood of chemical allergic reactions. Responsible manufacturers eliminate residual chemicals through a leaching process that ensures the gloves are clean and less likely to trigger a reaction. But not all leaching processes are as effective as they should be. As a result, some gloves carry more residual chemicals, and the likelihood of skin reactions increases.

### Complicated choice

Choosing the right gloves can be complicated, but it becomes less so with the proper information – and that includes a thorough understanding of glove-associated allergies and how to avoid them. Once you understand the nature of the allergy, any responsible glove manufacturer can help identify alternative gloves that do not compromise the comfort, performance of protection. ISHN

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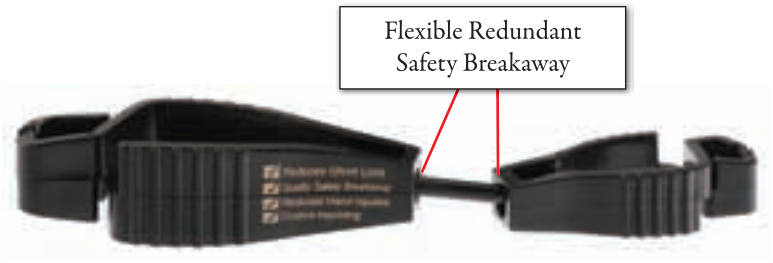


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