

Why Experienced Workers Still Overlook Hazards During Non-Routine Tasks

Muscle memory and routine expectations create cognitive blind spots during non-routine tasks, requiring dedicated risk profiles to protect senior personnel.

• **BY CHARLIE BURGESS**

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Experience is a double-edged sword on worksites. An employee who's known the ins and outs of the industry for 20 years will, quite understandably, be seen as an authority figure by their crew, trusted to handle any unusual tasks with little difficulty. If the cumulative learnings of those 20 years, every success, near-miss and incident they had witnessed, were omnipresent and fresh in their mind, there would likely be no problem with this.

Unfortunately, the human brain does not function like this. Memory is inherently imperfect, vulnerable to all kinds of biases and cognitive shortcuts that can skew an experienced worker's perception of risk. Looking at broader figures for construction, for example, you see a bell curve emerge: injuries are common among first-year employees, then decrease over time, only to spike again among those above a certain age and experience range.

The core issue here is not one of competence, but of expectations. Non-routine tasks cannot be viewed through the same lens as everyday work.

Why Experience Doesn't Always Transfer

One of the greatest strengths of experience is the efficiency it enables. Workers perform a certain routine so many times, and gradually find ways to streamline without compromising on quality. When they know what to expect and what the risk parameters are, they can hone their approach through repetition and safe experimentation. This process can be upended when standard workflows no longer apply, and may even become detrimental to safety as muscle memory and expectations color their performance.

During non-routine tasks, the workplace itself changes on a fundamental level. Machinery they're used to might lack standard guards; they could be using a temporary platform to reach an area of the equipment they're not used to, all while performing a sequence that they've not familiarized themselves with.

OSHA suggests conducting a unique risk assessment and hazard identification framework for non-routine tasks, precisely for these reasons.

Creating a New Hazard Profile For Non-Routine Tasks

Safety guidelines and parameters for non-routine tasks need to be set out before any action is taken. Adjustments to security systems, such as door access controls and other temporary movement restrictions, are a good place to start, as lockout-tagout measures prevent unauthorized entry to high-risk areas and immediately signal to teams that the event differs from standard operations.

Safety leads should then explore what has changed at the site and in the process to raise awareness of the current conditions.

Non-routine tasks can vary dramatically across industries, but three common characteristics unite them. They are infrequent and unpredictable, and they tend to pose an increased risk of injury, meaning risk assessments should account for and mitigate these factors as much as possible.

A structured analysis of the following areas can help create a more holistic awareness of changing conditions:

1. Physical hazards

- a. How has the machinery that experienced workers are used to changed, and what is different about the space they will operate in? In industrial settings, manufacturing can help safety teams review maintenance histories, equipment performance and incident records before defining the hazards associated with unfamiliar work.
- b. Non-routine tasks can involve performing maintenance in a confined space or at an elevated height. Hazards that are normally isolated, such as pipelines and electrical equipment, could be part of the task or adjacent to the temporary work space, and the new risk assessments should reflect these.

2. Environmental hazards

- a. Does the task involve uncomfortable noise levels, poor lighting, unusual temperatures or atmospheric debris such as dust or chemical fumes? What equipment operators can use, and how long they can remain in the space, are both influenced by these factors.

3. Operational hazards

- a. Are several teams working alongside each other? Can isolated teams communicate progress and incidents promptly? Is movement around the area restricted?

While unique to the non-routine task, these assessments must also account for the general, day-to-day risks of a worksite, which may persist even if certain areas are locked off and machines are inactive. This approach helps both supervisors and the workers responsible for conducting the task recognize what distinguishes this work from standard procedures and enables additional mitigations, such as specialized PPE and workflow adjustments, that reflect the realities of the job at hand.

Hazard Recognition as a Skill Worth Fostering

Experience is invaluable in any environment, but the very nature of non-routine tasks means that even those who spend decades in a particular field struggle to apply their routine knowledge to the unpredictable. Hazard perception is neither innate nor tied to years on the job; it is a skill that can and should be instilled through [search technique training](#) and scenario modeling.

Reducing non-routine injuries requires a more adaptable approach to risk assessment. Safety practitioners and the workers themselves must understand what has changed and why in order to minimize the [psychological barriers and physical unpreparedness](#) that often result in harm due to false expectations.

ABOUT THE AUTHOR

Having trained as a journalist, Charlie Burgess now lends his writing talents and research skills to a variety of publications in the security and tech space. Specializing in physical security, his work has appeared in publications from around the world, including Business Insider Africa, ASIS International, and SecurityJournalUK.