

## **TEST YOUR KNOWLEDGE: HOW MUCH DO YOU KNOW ABOUT THE RISKS OF DROPPED OBJECTS FROM HEIGHTS?**

A light object — like a bolt or screw — falling from a height may not seem like a big deal, but because of its acceleration, it can be deadly. Imagine what could happen if something heavier like a wrench or pair of pliers fell. That's why it's important to understand the impact of falling objects and how to effectively prevent dropped objects from heights.

Answer the five questions below to determine how much you really know about the dangers of objects falling from heights, then check your answers on the back of this page.

**1. What is the maximum weight for tethering tools to the worker via wrist band or tool belt?**

- A. You should never tether tools to the worker directly**
- B. 5 pounds**
- C. 10 pounds**
- D. 15 pounds**

**2. How far can a wrench deflect if it falls from 100 feet and hits a bar 20 feet above the ground?**

- A. 20 feet**
- B. 49 feet**
- C. 176 feet**
- D. 220 feet**

**3. If a wrench weighing 8.3 pounds falls from 300 feet in the air, how fast is it moving at impact?**

- A. 83 miles per hour**
- B. 95 miles per hour**
- C. 112 miles per hour**
- D. 300 miles per hour**

**4. On a construction site, what classifies as a dropped object?**

- A. A falling tool**
- B. A falling person**
- C. A falling cellphone**
- D. All the above**

**5. In 2017, what percentage of construction worker fatalities were due to falls?**

- A. 39.2 percent**
- B. 26.4 percent**
- C. 8.2 percent**
- D. 7.3 percent**

## **TEST YOUR KNOWLEDGE: HOW MUCH DO YOU KNOW ABOUT THE RISKS OF DROPPED OBJECTS FROM HEIGHTS? ANSWERS**

### **1. What is the maximum weight for tethering tools to the worker via wrist band or tool belt?**

**Answer: 5 pounds.**

Any object five pounds or lighter can be tethered to a wristband or tool belt, as long as it has a secure attachment point. There are various types of tool belts, holsters and wristbands available for tethering — and buckets may be utilized for tools that are not currently in use. Tethering tools heavier than five pounds to the worker can cause unnecessary strain or even injury.

### **2. How far can a wrench deflect if it falls from 100 feet and hits a bar 20 feet above the ground?**

**Answer: 220 feet.**

With such a wide drop zone, unsuspecting civilians and workers are at risk. This is why securing tools is so important. In addition to safely storing and tethering tools, the Occupational Safety and Health Administration (OSHA) requires hazard areas to be barricaded and posted with warning signs. The group also recommends toe boards, screens on scaffolding and guardrails, and debris nets or catch platforms to catch fallen objects.

### **3. If a wrench weighing 8.3 pounds falls from 300 feet in the air, how fast is it moving at impact?**

**Answer: 95 miles per hour.**

When objects fall, gravity causes them to accelerate to the ground, resulting in dangerous impact speeds. The impact force of the wrench falling at 95 miles per hour is 9,960 pounds. Should an object at this weight strike a worker or civilian passerby, the result would be catastrophic. The easiest way to prevent injury or death is to properly secure all tools when working at heights.

### **4. On a construction site, what classifies as a dropped object?**

**Answer: All the above.**

A dropped object is defined as anything that falls from a great height — including but not limited to — tools, equipment, personal items and people. These dropped objects are classified in two categories: objects that fall because of their own weight, and objects that fall because of an outside force. In addition to tethering and storing tools, workers are required to wear harnesses when they are working above ground level. Harnesses are safer than belts because in the case of a fall, the force is more evenly spread throughout the entire body, rather than directed entirely near the waist or stomach.

### **5. In 2017, what percentage of construction worker fatalities were due to falls?**

**Answer: 39.2 percent.**

In 2017, 39.2 percent of reported construction worker fatalities were because of falls. This is the second highest cause of fatalities in construction work. Additionally, the most frequently cited OSHA standard in fiscal year 2018 was fall protection. Using adequate fall protection for workers and objects on the jobsite can reduce this number of fatalities.

How did you score? Whatever your knowledge about fall protection, Amerisure's risk management consultants can ensure your business is utilizing the proper safety features and protections to prevent loss. Contact your local risk management consultant at **800-257-1900** or [riskmanagement@amerisure.com](mailto:riskmanagement@amerisure.com).