
Discussion Leaders Guide Session Hidden Hazards Analysis Electrical Hazards

1. Preparation

- Participants should have completed the basic hazards lesson before being trained in the hidden hazards.
- You will need a DVD player and a television.
- Review the **Tell**, **Ask** and **Review** portions of the Discussion Leaders Guide. You will be presenting the material in *italic* to the group during these sections.
- Preview the video before you show it.
- Ensure that everyone attending the training can easily see and hear the video.
- Print the handouts prior to the training. Handouts for this session are the **Hidden Hazards Analysis Chart** and the **Preventing** for this topic.

Training Day

2. Introduce the Lesson

Controlling or eliminating hazards is the best way to prevent injuries. Some hazards are easy to spot like a broken ladder rung. However, what about those hazards that are not so obvious? Hidden hazards are hazards that are not obvious. Often they can be the result of an unsafe action or a response to an unexpected emergency.

Today we are going to identify hidden hazards associated with working around electricity. Electricity is part of our everyday life both at home and at work. It is easy to forget that electricity can start fires or cause serious injury and even death.

*In order to understand how to identify hidden hazards and what can be done to prevent them; we are going to use the **Hidden Hazards Analysis Chart** to guide you through the process.*

Look at the handout titled **Hidden Hazards Analysis Chart**.

In the first column “What could go wrong”, we are going to take some time to list what could go wrong at our workplace when working around electricity. For example, you might list that a power strip could be overloaded and cause a fire or that a tool begins smoking and giving off the smell of burning electrical wires.

Think about what types of accidents or emergencies involving electricity that have occurred here or at other places you have been or know about? What hidden hazards could result from the design or layout of the facility?

Take a few minutes to write down a few situations that could occur while working around electricity.

Note: You may want to break up into teams. Allow the participants a few minutes to work on the “What Could go Wrong” situations.

Let’s watch the DVD now and see if there are any hidden hazards we may have missed.

3. Start the DVD

- Select your language choice
- Select scenario

4. The DVD has paused

5. Encourage discussion

ASK: *What are some of the “What could go wrong” situations you have identified?*

Are there any other hidden hazards or emergencies that might occur when working around electricity?

What might happen if water contacts live electrical wires?

Besides an electrical shock, electricity can cause a fire. How could electricity cause a fire here?

How would you put out the fire?

If someone were to suffer an electrical shock, what would you do?

Note: Allow time for groups to respond between questions. Consider writing responses down on a flip chart or in another format.

TELL: *Not all hazards pose the same risk of occurring. Some are more likely to occur than others are. For example; it is more likely an overloaded power strip will overheat and cause a fire than an outside power line will unexpectedly fall. Prioritizing hazards lets us know where we need to focus our safety efforts.*

In the column “Chance it will Happen Here”, fill in a number between one and five. A five means there is a high chance that the event you listed in the first column could happen here, and one is a low chance it could happen here.

Note: Allow the participants time to complete this step.

Since the goal of eliminating or reducing hazards is to reduce injuries, we need to look at the human impact or effect of each situation. Using the same one to five scale, fill in the “Human Impact” column. Five for high impact and one for low.

Note: Allow the participants time to complete this step.

The two columns added together is the total. The higher the number the higher the risk from the hidden hazard.

ASK: *What are some of the possible situation with the highest totals?*

Note: Allow time for groups to respond. Consider writing responses down on a flip chart or other format.

Before we proceed with the prevention portion of the analysis, let’s watch the rest of the DVD.

6. Restart the DVD

7. Finish

Tell: Look at your **Hidden Hazards Analysis Chart**. There is one more column to complete, "Prevention". What steps could we take to prevent the type of accident you described in "What Could go Wrong"? You can use the handout titled **Preventing** for suggestions.

Note: Allow time for group to complete task. Consider writing responses down on a flip chart or other format.

Electricity always flows along the path of least resistance. The human body provides little resistance to electricity. Actions such as; contacting wires that are not properly insulated, touching electrically charged tools with wet hands or using them in water provides electricity with the opportunity to take advantage of the bodies conductive properties. Injuries from electrical shock can be avoided by knowing electricity's hidden hazards.

Let you supervisor know if there are tools or equipment that pose an electrical hazard. If you see an electrical hazard or someone working in a way that may expose them to an electrical hazard, let them or the supervisor know. You will be preventing them from being injured or possibly worse.

Note: Review your company's safety policies for inspecting electrical equipment and cords. Review your Lockout/Tagout Program.

Are there any questions?

Note: Be sure to collect the information from the **Hidden Hazards Analysis Chart**. You can do this by writing down the information during the lesson or by collecting the analysis forms at the end of the program. The information will be valuable for identifying where you need to put more safety emphasis.

Thanks for attending.

Hidden Hazards Analysis Chart

What Could go Wrong	Chance it will Happen Here 1-5	Human Impact 1-5	Total	Prevention
Exposed wires on damaged extension cord get wet and start sparking.	5	3	8	Regularly inspect cords for damage.
Overloaded power strip overheats.	5	2	7	Make sure the power strip is not plugged into another power strip and they must have an overload switch.

Vulnerability Evaluation Chart

What Could go Wrong	Chance it will Happen Here 1-5	Human Impact 1-5	Total	Prevention