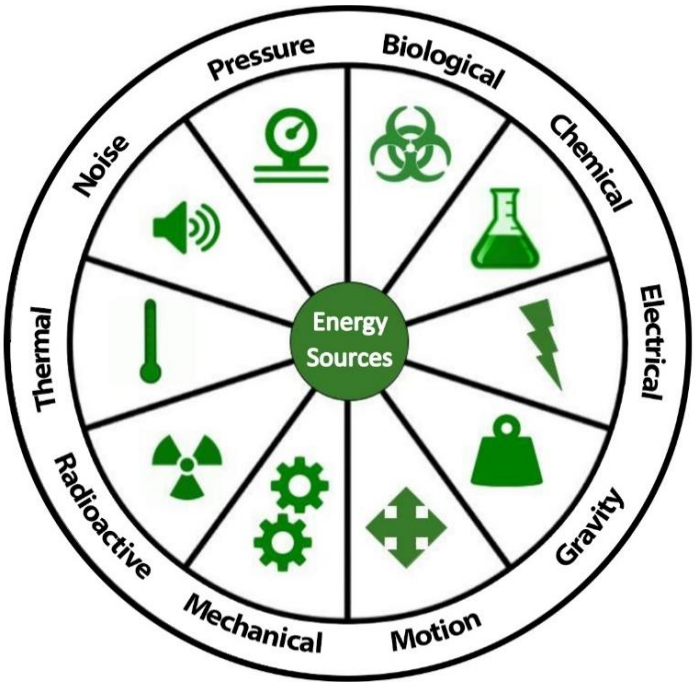
Tool Box Talk

The Hazardous Energy Wheel

The Energy Wheel

The Hazardous Energy Wheel is a tool designed to improve hazard recognition. It is gaining traction in construction and other industries. It consists of 10 listed sources of energy that may be present in the workplace. Workers use the categories on the wheel to find previously unknown or unidentified hazards. Hazards may fall into one or more of the categories.



The 10 Hazardous Energy Sources

- **Biological** - Hazards created by living organisms. Examples include blood-borne pathogens, insects, animals, plants, viruses, bacteria, as well as psychological hazards like harassment, violence, stress, conflict, poor workplace relationships and culture, etc.
- **Chemical –** Hazards created by chemicals and their reactions to one another. Examples include corrosive products, cleaning agents and solvents, toxic or flammable fumes and vapours, carcinogens, oxygen-deprived or enriched environments, etc.
- **Electrical –** Hazards created by the presence of electrical charge or current. Examples include overhead power lines, static discharge, lightning, cords, plugs, transformers, etc.
- **Gravity –** Hazards created by the downward force of mass towards the earth. Examples include falls from heights, materials or tools dropped from heights, collapse of structures, etc.
- **Motion –** Hazards caused by the motion of objects, machinery and people. Examples include repetitive motions, manual or mechanical lifting or pulling, vehicles and equipment, projectiles, etc.
- **Mechanical –** Hazards created by mechanical means. Examples include gears, cogs, turntables, motors, pulleys, augers, powered tools, springs, conveyors, etc.
- **Radioactive –** Hazards created by subatomic particles, electromagnetic waves and ionizing radiation. Examples include ultraviolet rays from the sun, welding, X-rays, microwaves, naturally occurring radioactive material (NORMS), radioactive waste, nuclear substances, etc.
- **Thermal –** Hazards created by thermal differences. Examples include extremely hot or cold environments, humidity levels, open flames, steam, hot or cold surfaces, liquid nitrogen, friction, etc.
- **Noise –** Hazards created by audible vibrations that interfere with hearing. Examples include heavy machinery, equipment, powered or pneumatic tools, impact tools, ambient noise levels, etc.
- **Pressure –** Hazards created by objects or substances with a high force per unit area. Examples include hydraulics, compressed cylinders, tanks, vessels, pipelines, etc.

Practical Application

Hazard identification is an important aspect of safety. If we do not identify, we are not aware of what can hurt us. Using this tool correctly can increase the amount of hazards identified by 30%. Workers should use this after “obvious hazards” have been identified, as the tool does not replace their knowledge, but intends to question where additional hazardous energy may be present.

This was designed to be a visual aid. To utilize this tool effectively, it must be seen while the hazard assessment is taking place. Consider using this tool while completing your next hazard assessment.

Training is available for free from WorkSafe Saskatchewan here:

- *https://worksafesask.bluedrop.io/storefront/worksafesaskatchewan/online-registration/24070*