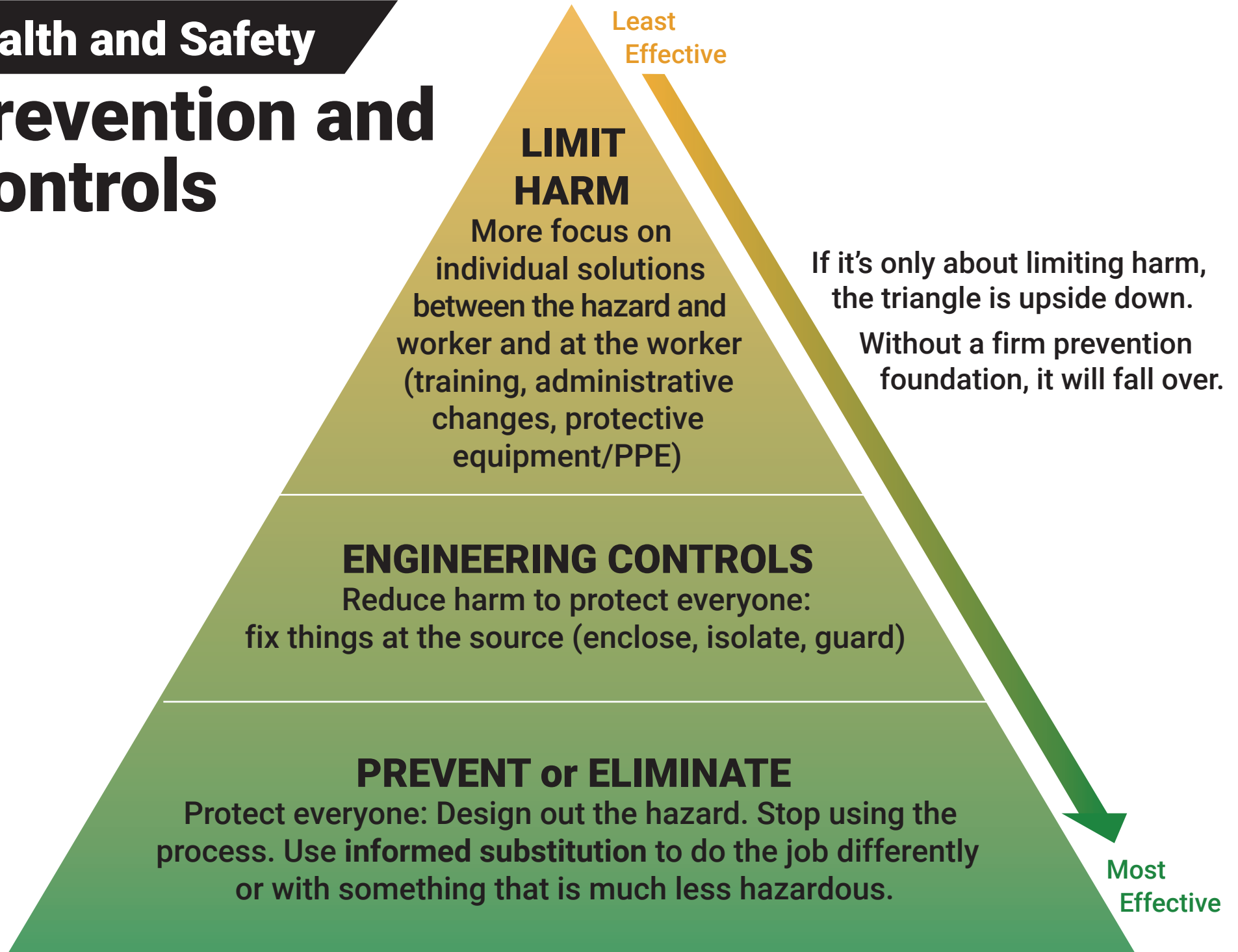


Health and Safety

Prevention and Controls



What's Behind the Prevention Triangle?

The triangle borrows two concepts from the environmental movement.

- ▶ **INFORMED SUBSTITUTION** is about getting rid of toxic substances whenever a healthier and/or safer substance is available. Replacements are non-toxic or much less hazardous materials. It also describes changes about how things are done, using a different technology or re-organizing a task to really reduce or get rid of hazards.

For more information, visit:

<https://www.saferalternatives.org>,

https://www.turi.org/Our_Work/Research/Alternatives_Assessment/Tools_and_Methods, and

<https://www.wigmorising.ca/cleaning-products-can-be-green/>

The **precautionary principle** – “better safe than sorry” – is part of several environment and health and safety laws. The idea is that there must be proof that something is not harmful before it goes on the market, rather than using workers or the community as guinea pigs, and only taking action when problems appear.

For more information, see the European Environment Agency's publications, starting at:

https://www.eea.europa.eu/publications/environmental_issue_report_2001_22

Health and safety specialists may use the word ‘controls’ to describe ‘fixes for health and safety hazards’. But ‘controls’ don’t get rid of the hazard. Their language is changing to emphasize prevention, as opposed to putting up with a hazard. The Belgians offer a very useful way to do this, with levels of prevention.

For more information visit:

<http://www.employment.belgium.be/defaultTab.aspx?id=556>

- ▶ **PREVENT or ELIMINATE** is best. These methods get rid of a hazard or avoid introducing a new one (when you use the precautionary principle). They are collective solutions, protecting everyone. This is where informed substitution with non-toxic options is most effective. Public health practitioners would call this primary prevention.
- ▶ **ENGINEERING SOLUTIONS or CONTROLS** at the source also can be a collective solution. The hazard is still there but ways to prevent harm to (almost) everyone include:
 - scrubbing ventilation enclosing the hazard, taking it all out of the workplace (without damaging the environment);
 - enclosures to reduce noise levels to avoid cardiovascular effects, speech interference, and the need for hearing protection;
 - isolating the hazard or people exposed to it.

- ▶ **LIMITING HARM** involves putting something between workers and the hazard. The methods usually depend on individuals doing something (e.g., things can go wrong, PPE may not fit).

Controls along the path include:

- local ventilation that does not totally enclose the hazard;
- general ventilation;
- mechanical guards/devices; and
- some administrative controls (e.g. breaks).

Controls at the worker include personal protective equipment/clothing (PPE) and:

- some administrative activities (e.g., rotating workers, which just spreads the hazard around and may even make it worse for some, especially if hazards can harm your back);
- work procedures, training and supervision, emergency plans;
- housekeeping, repair and maintenance programmes, and hygiene practices/facilities; and
- things to take care of yourself (especially when you’re stressed).

These solutions are the least acceptable, and most ineffective, ways to fix a hazard. Of course, some are necessary or required of employers by law (e.g., training, housekeeping, maintenance).



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