

“Watch Your Step”

Safer Work Stairs and Steps

Information Sheet

May 2017

Every working day in Ireland one person is hurt in a slip, trip and fall (STF) on stairs and steps at work. Slips are more common. Many STF accidents occur while descending stairs and steps. This information sheet will help employers, the self-employed, employees, suppliers, designers, installers and facility managers understand how to control slips, trips and falls on stairs and steps at work.

What the law requires?

The Building Regulations specify structural requirements for stairs and steps and are enforced by local authorities. Safety legislation specifies general requirements for stairs and steps in the workplace. The Safety, Health and Welfare at Work Act 2005 requires safe access and also requires safe systems of work and training. Work stairs and steps should comply with the relevant Building Regulations and occupational safety legislation. Any structural changes to stairs and steps may require design consideration and must comply with the relevant laws.

There are four interdependent elements of work stairs and step safety. No one element should be considered in isolation. The four holistic elements are:

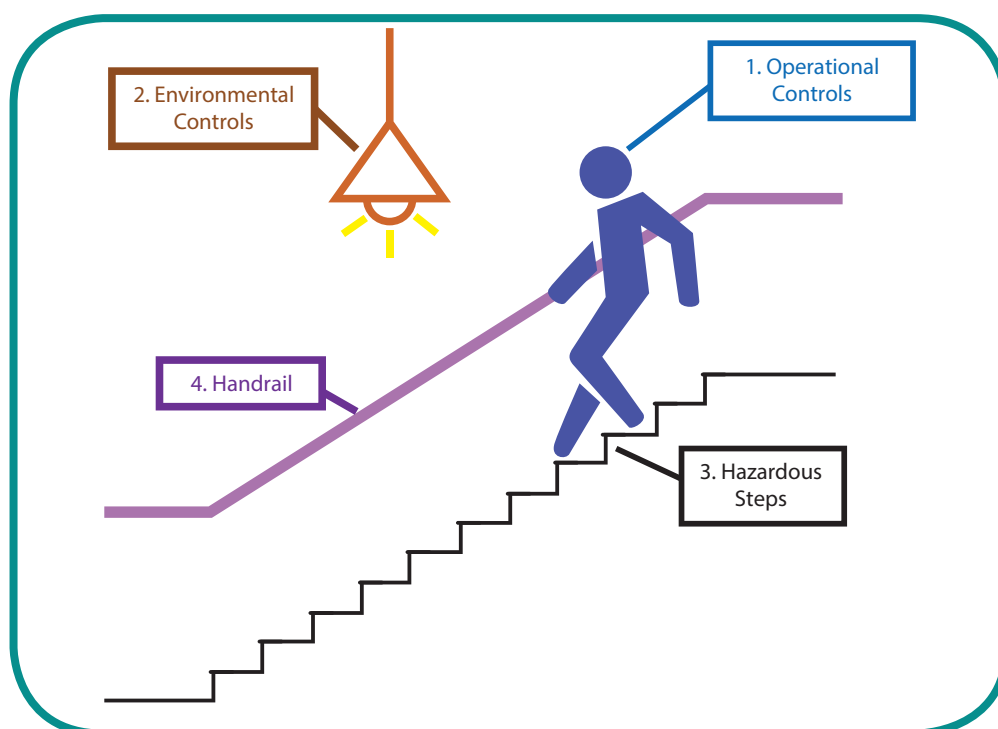


Figure 1: Key elements of work stairs and steps safety

1. Operational Controls

Operational controls are the rules and policies around the use of stairs and steps in the workplace. Common sense rules, when applied in a practical way, can prevent serious accidents. Practical rules and policies can include prohibition of hazardous activities such as rushing, keeping hands in pockets, use of hand-held devices or phones, reading, cleaning steps while in use, carrying items especially open liquids and storing items on steps.

Good practices can include showing the location of lifts, use of lifts when safer (e.g. going down) and use of handrails when required. In extreme cases such as inadequate support for the ball of the foot during forward-facing descent, users can descend by holding the handrail(s) and facing the steps. Operational controls are the simplest form of control to implement and can be specific to individual steps or stairs. To maximise effectiveness, these controls should be developed in consultation with staff and clearly communicated to all.



Figure 2: Sample safety signs

2. Environmental Controls

Environmental controls refer to the visual clues around stairs and steps. Adequate lighting is essential on stairs and steps. Local lighting can also be provided at the handrail if needed. Posters, signs and notice boards can be distracting and should not be positioned on or around stairs or steps. Safety signage can reinforce policies around stairs and steps, for example, no rushing or no mobile devices.

Contrasting materials on the step edge/nosing and handrail can provide a very effective visual safety trigger. Contrasting materials are about lightness or darkness, not colour. Colours that look different may, in fact, have little contrast. A black and white image can provide a useful indication of the visual contrast. Contrasting materials should be right at the step edge.



Figure 3: Step nosing position

3. Hazardous Steps

There are four main types of hazardous steps:

(a) Slippery Steps: A slippery step is one that does not have enough grip, especially at the step edge/nosing.

- The step surface, especially the step edge/nosing, should have adequate slip resistance
- Material with directional slip resistance must provide slip resistance in the direction of travel
- Identify and control potential sources of spills or contamination
- Monitor and replace treads and step edges/nosings as required

(b) Surprise Steps: A surprise step is one that is not clearly visible or expected. It could be at the bottom of a flight of stairs or a single unexpected step.

- Where possible, remove any unnecessary level changes
- Use striped (red-and-white or yellow-and-black) slip-resistant step edges/nosings at irregular step(s) or surprise steps. For some visually impaired people, striped floor coverings should be avoided
- Consider using “*Mind the Step*” signs



Figure 4:
Mind the step sign

(c) Short Steps: A short step does not provide adequate support for the ball of the foot to enable safe forward-facing descent.

- Check if the ball of the foot fits on the step for safe forward facing descent. As much as possible, try to ensure step design does not reduce available foot space

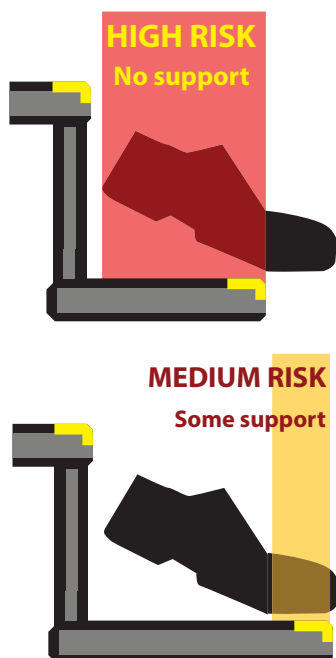


Figure 5: Risky going

- If short steps cannot be eliminated, ensure operational controls, environmental controls and handrails are in place



Figure 6:
Short steps sign

(d) Irregular Steps: An irregular step is longer or shorter than the other steps in a flight of stairs.

- If possible, correct irregular steps
- Use striped (red-and-white or yellow-and-black) slip-resistant step edges/nosings at irregular step(s) or surprise steps. For some visually impaired people, striped floor coverings should be avoided
- Ensure operational controls, environmental controls and handrail(s) are in place if irregular steps cannot be eliminated



Figure 7:
Irregular steps sign

Crouch-and-Sight Check

The crouch-and-sight check provides a very useful visual indication in identifying if steps are irregular.

1. Stand at the top of a flight of steps
2. Slowly crouch and look (sight) down the step nosings
3. If nosings do not all line up, steps may not be consistent. Take detailed measurements if needed

Crouch-and-sight

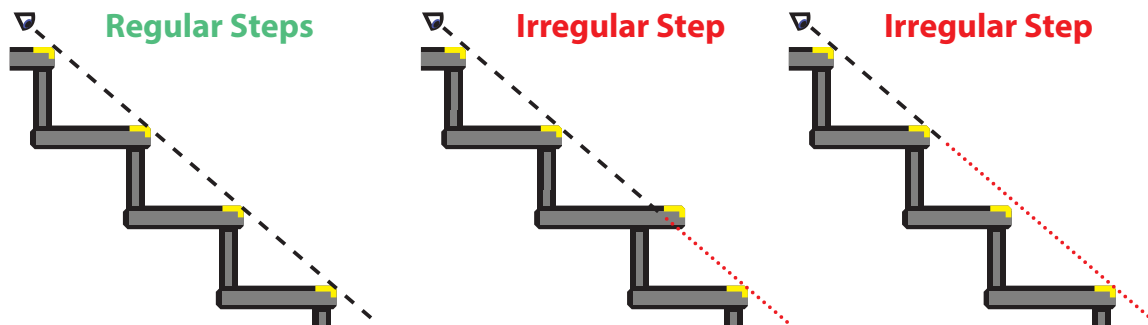


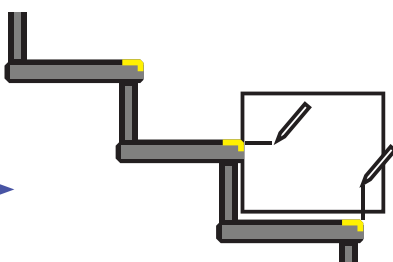
Figure 8: Crouch-and-sight test

Step Check

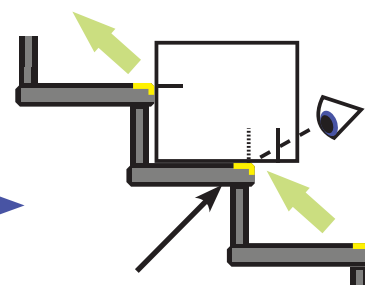
The step check provides another very useful indication in identifying if steps are inconsistent.



1. Get envelope, A4 ream or similar



2. Mark rise and going of bottom step



3. Check all steps for differences

Figure 9: Step check

Professional advice must be sought as required for anything but the most minor adjustments

4. Handrails

A handrail may be the last hope of stopping a fall that has started. Handrail use can also discourage rushing.

- Check handrail(s) are at the appropriate height and have a visual contrast so they are obvious for users
- Check handrail(s) permit a **‘power grip’**
- Ensure external handrails are user friendly and made of material that is warm to the touch



Figure 10: Power grip

Further information

Visit our website at www.hsa.ie/slips

email: wcu@hsa.ie or telephone 1890 289 389.