

Insert company logo

# Common Hazards in the Food Manufacturing Sector



Photo credit: Thong Siek Food Industry

This set of slides may be used to complement your company's in-house Workplace Safety & Health (WSH) training for workers.

Common hazards highlighted can be contextualised to meet your workplace needs. Case studies with recommendations serve as good learning points. Safe work practices can help to prevent workplace accidents and injuries.

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# 1. Workplace Safety & Health (WSH) Policy

The objective of the WSH Policy is to show the management's commitment in ensuring a safe and healthy environment for everyone, and this includes all employees, visitors, interns, vendors, contractors, etc at the workplace.

Example of a WSH Policy Statement (Source: [www.wshc.sg](http://www.wshc.sg))

*The WSH Council is committed to ensuring the safety and health of its members and employees. We believe that all WSH incidents are preventable. We will continually work towards building a strong WSH culture and achieving zero work injuries. We also recognise that every staff has a part to play in making the WSH Council a safe and healthy workplace for everyone.*

# Workplace Safety & Health (WSH) Policy

Insert your company's  
WSH Policy here.

## 2. WSH Rules and Regulations

1. Follow all safe work procedures (SWP) and instructions.
2. Report all unsafe work conditions and unsafe work practices to your supervisor or WSH Officer.
3. ... Please insert your organisation specific WSH rules and regulations here. This can include work flow processes, equipment operation and maintenance, emergency response etc.
4. ... Emphasise on the Risk Management programme to prevent injury and ill health to employees.
5. ... Includes Workplace Health programmes/initiatives for staff well-being, where applicable too.

# 3. Risk Assessment

- We can do our part to ensure a safe workplace for everyone.
- Simple risk assessment using **Look. Think. Do.**
  - **Look** out for danger or potential risk(s).
  - **Think** of how to protect yourself and fellow co-workers.
  - **Do** your work safely.

# Risk Assessment

**LOOK. THINK. DO.**  
Look out for danger. Think of how you can protect yourself. Do your work safely.

## 6 Basic Workplace Safety and Health (WSH) Rules for Food Manufacturing

Unsafe work practices and poor housekeeping in food manufacturing can cause slips, trips, and falls and serious injuries that can result in amputations. Every year, 1 worker dies and 400 workers are injured in the food manufacturing industry. Do your risk assessment before starting work.

<b>Report to your supervisor if you feel unwell.</b>	<b>Have adequate training before operating a machine.</b>
 	 
<b>Ensure safeguards are in place. Use a tool to keep your hands safe.</b>	<b>Lock-out and tag-out before cleaning, repair and maintenance.</b>
 	 
<b>Use non-slip footwear and replace when it is worn out.</b>	<b>Practice good housekeeping and clean up spills immediately.</b>
 	 



# 3.1 Addressing Risks

## Step 1 Identify the Hazards.

- Types (e.g., machinery hazards) and the associated risks.

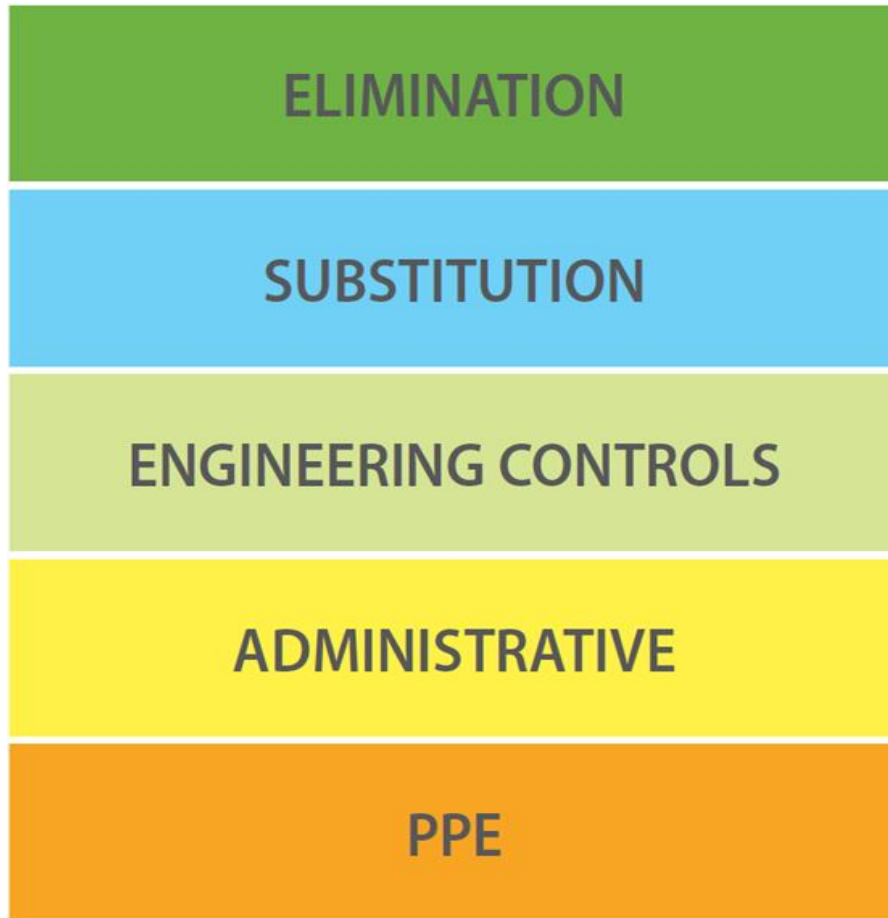
## Step 2 Evaluate the Risks.

- Is risk level acceptable? Low, medium and high.

## Step 3 Implement Risk Control Measures.

- Take action to eliminate or reduce risks.

## 3.2 Risk Control Measures



- Reduce the need for direct interaction with machine through the use of technology or automation.
- Replace with a safer machine or manufacturing process.
- Use of machine guards and interlock system.
- Use of safe work procedures and lock-out tag-out.
- Use of hardhat, safety goggles, safety gloves, hearing protectors and safety footwear etc.

## 4. Communication of WSH Hazards

- Supervisor to highlight site-specific/equipment-specific WSH hazards (e.g., during toolbox meetings).
- Workers are encouraged to inform Supervisor of any unsafe situation encountered at their worksite.
- Near-miss incidents should be reported so that actions can be taken to prevent accidents.

Ref: WSH Guide to Effective Toolbox meeting. Click [guide](#).

## 5.2 Caught in machine

- Machines with moving parts, if not handled properly, can cause severe injuries.
- Injuries may also occur when working with unguarded machinery.
- Many machines pose mechanical hazards which may lead to cuts, entanglement, crushing, etc.
- Use of machine guard is an effective engineering risk control measure.



Mixer without guard



Interlock installed such that mixer will shut off once the cover is lifted

# Caught in machine

## Do:

- Allow only trained, competent and authorised personnel to operate the machine.
- Install warning sign(s) to alert machine operator the presence of hazard.
- Ensure machine guarding is in place before operating the machine.
- Turn off the main power switch before carrying out repair, maintenance and inspection.
- Apply Lockout Tagout ([LOTO](#) ) procedure.



# Caught in machine

## LOTO procedure

- Announce the shutdown
  - Notify all affected workers that the machine is to be shut down.
- Shutdown the machine
  - Proceed to shut down machine after ensuring that all moving parts have come to complete stop.
  - Ensure that there is no hazard caused to the workers during the shutting down of the machine.
- Disconnect the energy source
  - Ensure the hazardous energy to the machine is properly isolated using circuit breakers, valves or isolating switches.
  - Confirm stored energy (e.g., present in springs, electrical, hydraulic and pneumatic systems) is dissipated before starting work.

# Caught in machine

## LOTO procedure

- Apply lockout tagout
  - Use a padlock to ensure hazardous energy cannot be restored unexpectedly or accidentally.
  - Affix a durable tag to provide identity of the person placing the lockout, and to warn that a work activity on the machine is in progress.
- Verify the isolation and lockout
  - Check isolation and lockout is in use and effective.
  - Test the machine to confirm that it is unable to start by switching the controls to 'on' position.
  - Switch back to 'off' after the test.

# Caught in machine

## Do not:

- Work if you are unwell or on medication that can affect your alertness at work.
- Wear loose clothing or jewellery when operating the machine.
- Place your hands inside the machine while it is in operation.





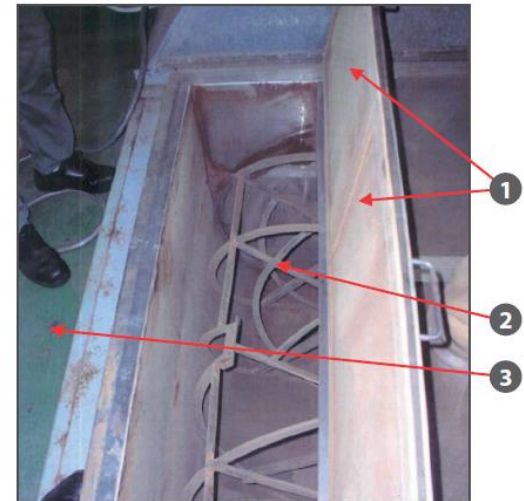
# Caught in machine

## Case Study

- Worker was collecting a sample of blended food product from a mixing tank.
- Mixing tank was still in operation when the worker opened its cover to collect the sample.
- Co-worker found the injured worker inside the mixing tank and he was pronounced dead at the scene.

## Recommendations

- Install a safety interlock to power off the mixing tank once its cover is opened.
- Collect the sample from the mixing tank only if the mixer rotating mechanism has been de-energized.
- Collect the sample from a safe location (e.g., from the storage container of blended product) instead of directly from the mixing tank.



The mixing tank where the worker was found.

1. Covers
2. Mixer Rotating Mechanism
3. Work Platform

# Cases in the news

Past cases where machine guarding could be used to prevent accidents:

1. Worker caught by mixer rotating arm while preparing bean paste.

URL: <https://www.straitstimes.com/singapore/bakery-owner-died-when-he-was-caught-by-rotating-mixer-arm-and-pulled-inside>

2. Worker's arm caught in meat grinder in supermarket.

URL: <https://www.straitstimes.com/singapore/giant-supermarket-worker-hurt-after-arm-caught-in-meat-grinder>

# Caught in machine

All hand injuries are preventable!



**"I CAN PREVENT HAND INJURIES."**

Use the right tools to keep your hands safe.  
You can prevent injuries at work. LOOK out for dangers.  
THINK of how you can protect yourself. DO your work safely.  
To find out more on how you can prevent hand injuries, visit [wshc.sg](http://wshc.sg)

**SAFE HANDS**

WSHCOUNCIL  
MINISTRY OF MANPOWER  
ntuc  
SNEF  
Prevent all injuries.  
VISION ZERO

## 6.1 Cut by object

When preparing raw food for processing, hand injuries may occur if working with sharp tools (e.g., knives) or machines (e.g., band saw).

### Do:

- Use designated tool and ensure that it is sharp before use.
- Work on flat surfaces to ensure stability when cutting.
- Wear cut-resistant gloves when working with a sharp tool.
- Segregate sharp tools from other tools.
- Return tools to designated place after use.



Use of sharp tools

# Cut by object

## Do:

- Wrap all waste containing sharp objects before disposing.
- Use push plate when cutting meat with a band saw.



Use of push plate

END