



# Understanding and Influencing Risk Tolerance

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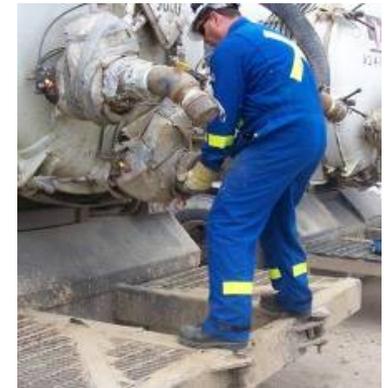
*Director, Dave Fennell Safety Inc.*

## Overview

- What is Risk Tolerance
- Risk Tolerance Principles, 10 Influencing Factors, Supporting tools, Strategies

### Risk Tolerance

- Risk tolerance involves weighing a number of factors that influence a decision to either accept or reduce risk

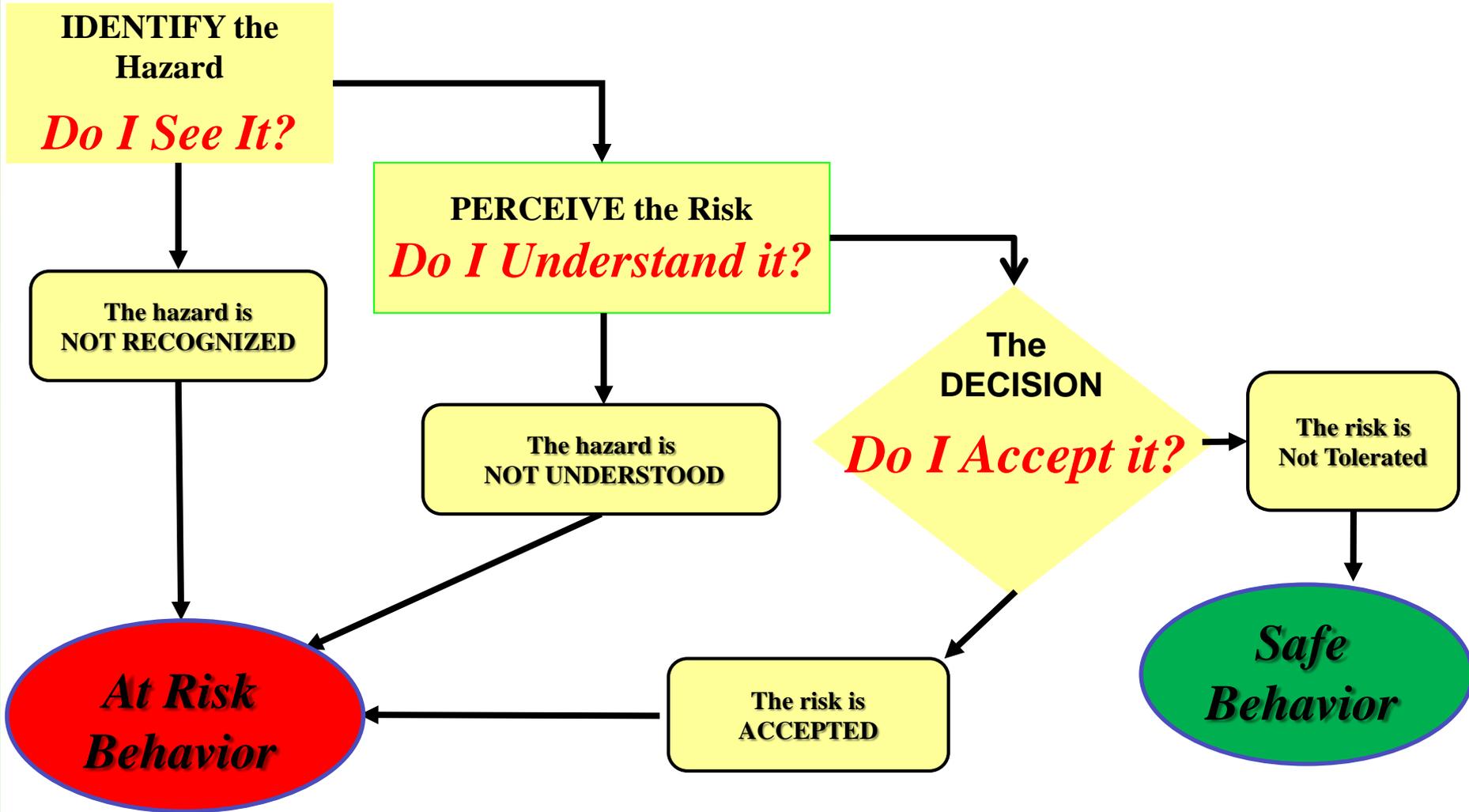


- How these factors are perceived and weighed in the mind of the worker and work group



# Risk Perception and Tolerance Model

## EXPOSURE



# ***Risk Perception / Tolerance Model***

**Hazard Identification**  $\neq$  **Risk Tolerance**



Risk Tolerance is more than just hazard identification





# 10 Factors That Influence Risk Tolerance

1. **Overestimating Capability/Experience** ↑
2. **Familiarity with the Task** ↑
3. **Seriousness of Outcome** ↓
4. **Voluntary Actions and Being in Control** ↑
5. **Personal Experience with an Outcome** ↓
6. **Cost of Non-Compliance** ↓
7. **Confidence in the Equipment** ↑
8. **Confidence in Protection and Rescue** ↑
9. **Potential Profit & Gain from Actions** ↑
10. **Role Models Accepting Risk** ↑

# 1) Overestimating Capability/Experience

“I can lift 75 kg in the gym ... I can lift this nitrogen bottle”

“I have driven in worse conditions than this and did just fine”



## Strategies for Reducing Tolerance

- Reflect on your role as a mentor
- Acknowledge that the capability or skill may be sufficient and then reinforce the way that it should be done.

## 2) Familiarity with the Task - Complacency



“He had done this task 500 times without hurting himself”



“We had stack about 200 of them when ...”



“You get used to it after a while”

### Strategies for Reducing Tolerance

- ‘Situational Awareness’ – Every time like the first time .... ***‘Stop and Think’***
- ‘What could go wrong **this** time?’
- ‘How would I teach a new person to do this?’

### 3) Seriousness of the Outcome

#### How Bad Could it Be?

‘Pinch Point’ ... or is it a ‘Crush’ or ‘Amputation’ point



#### Strategies for Reducing Tolerance

“It’s just a skid steer”

- **Stop and Think** “How bad could it be? Really ...How bad could it be?”

Hot Water????

Dust????

Sweet Gas????

# 4) Voluntary Actions and Being in Control

Key factor in off the job risk – **28 times** more likely



**Before and during a task or activity**

	What am I trying to do here? What could go wrong? How bad could it be?	
	Is this the safest way to do this? Has anything changed? Could something change? Am I physically and mentally ready? Do I have the right tools and equipment?	
	What do I need to do to make this safe? Use the right tools. Use the correct procedure. Reduce the risk! <b>STOP</b> if it can't be done safely!	



## Strategies for Reducing Tolerance

- Integrate **'Stop and Think'** into your personal activities

## 5) Personal Experience with an Outcome

If you have seen a serious outcome, you will be less tolerant of the risk

**Challenge:** If we haven't seen it, we become **Sceptical**



### Strategies for Reducing Tolerance

- ‘Expert observers’, supervisors, ‘keepers of the corporate memory’ have the obligation to ensure workers know:
  - a) Incidents **have** occurred because of not following that standard
  - b) Demonstrate that there **have** been serious consequences

## 6) Cost of Non Compliance

Greater cost for non-compliance can lower risk tolerance

Effective when used selectively



### Strategies for Reducing Tolerance

- Identify the cost of non compliance and increase it where necessary
- Remove barriers and increase reward for compliance



## 7) Confidence in the Equipment

“Ladder is twice as stable, therefore ... ”

- 1995 US Study – Drivers of vehicles with ABS and airbags have more accidents
- Parachuting – *Risk Homeostasis*



“It’s got a trip wire”

### Strategies for Reducing Tolerance

- Training on limitations of the equipment and engineering
- Stop and Think ... What will happen **if** it does fail?

## 8) Confidence in Protection and Rescue

Excellent PPE can result in over confidence in it's ability to protect



### Strategies for Reducing Tolerance

Understand the **limitations of protection & rescue**  
See them as **'last lines of defence'**

“Every job should be able to be done safely by a 65 year old with a bad back and ...” Howie Dingle



## 9) Potential Profit and Gain from Action

- US Highways Study – deaths on highways tracks directly with the economy
- Alberta WHS – fatalities and lost time incidents in the oil patch increase and decrease with the price of oil.



## Strategies for Reducing Tolerance

- Remove rewards for risk taking
- Eliminate barriers to doing it the ‘right way’

## 10) Role Models Accepting Risk

- When Role Models in a work group accept a certain level of risk, they influence the decisions to accept risk by other members of the group.



### Strategies for Reducing Tolerance

- Identify and address the risk takers (including yourself – where are you on the ‘risk-taking’ scale?)
- Recognize ‘Erosion of Standards’ and address immediately

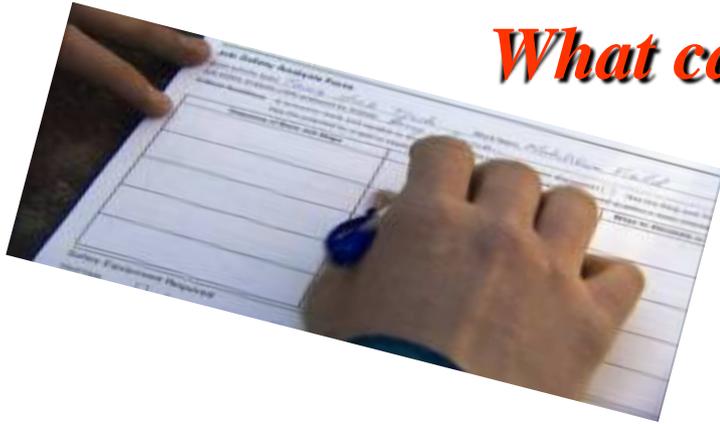


# Move to Action

*What Could Go Wrong?*

*How Bad Could It Be?*

*What can I do about this?*



# ***“I Choose to Reduce Risk”***

## **Before and during a task or activity**



What am I trying to do here?  
What could go wrong?  
How bad could it be?



**STOP** & Think

Is this the safest way to do this?  
Has anything ever gone wrong?  
Am I physically fit to do this?  
Do I have the right tools?

What do I know?  
Use the right tools  
Reduce the risk

## **I Choose to Reduce Risk**

Identify one personal behaviour that you know presents a risk at your work site:

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I am committing to take the following action to eliminate that risk from my work:

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by (date)

Signature

# Resources to Get You Started

**Before and during a task or activity**

Stop

What am I trying to do here?  
What could go wrong?  
How bad could it be?



**STOP** & Think

Think

Is this the safest way to do this?  
Has anything changed? Could something change?  
Am I physically and mentally ready?  
Do I have the right tools and equipment?

Act

What do I need to do to make this safe?  
Use the right tools. Use the correct procedure.  
Reduce the risk! **STOP** if it can't be done safely!

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## 10 Factors That Influence Risk Tolerance

- 1) Overestimating Capability and Experience**
  - Reinforce the correct way of doing the job (LPO, Stop & Think)
- 2) Familiarity with the Task**
  - What could go wrong THIS time?
  - How would I teach a new person how to do this tasks?
- 3) Seriousness of Outcome**
  - How bad could it be?
- 4) Voluntary Actions and Being in Control**
  - Integrate Stop & Think into personal and voluntary activities
- 5) Personal Experience with an Outcome**
  - Keep the 'corporate memory' active
  - Find personal stories to reduce scepticism
- 6) Cost of Non-Compliance**
  - Remove barriers to compliance
  - Increase cost of non compliance
- 7) Confidence in the Equipment**
  - Stay informed on the limitations of the equipment
  - Stop and Think ... "What would happen if it failed?"
- 8) Confidence in Protection and Rescue**
  - PPE is a last line of defence and has limitations
- 9) Potential Profit & Gain from Actions**
  - Remove rewards for risk taking
  - Eliminate barriers to doing the tasks the 'right way'
- 10) Role Models Accepting Risk**
  - Address risk takers immediately
  - Recognize 'Erosion of Standard' address it immediately
  - Calibrate risk tolerance at every Stop and Think moment

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**Before and during a task or activity**

Stop

What am I trying to do here?  
What could go wrong?  
How bad could it be?



**STOP** & Think

Think

Is this the safest way to do this?  
Has anything changed? Could something change?  
Am I physically and mentally ready?  
Do I have the right tools and equipment?

Act

What do I need to do to make this safe?  
Use the right tools. Use the correct procedure.  
Reduce the risk! **STOP** if it can't be done safely!

Tailgate

JSA

FLHA

LMRA



***You can create a safety culture that  
lowers Risk Tolerance***

***Dave Fennell***

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