

# Hand Arm Vibration

## Toolbox Presentation

# Who is affected?

- **Over five million**  
workers are exposed to vibration at work
- **Two million**  
workers are at serious risk of  
developing HAVS
- **300,000**  
workers are showing advanced  
HAVS symptoms.



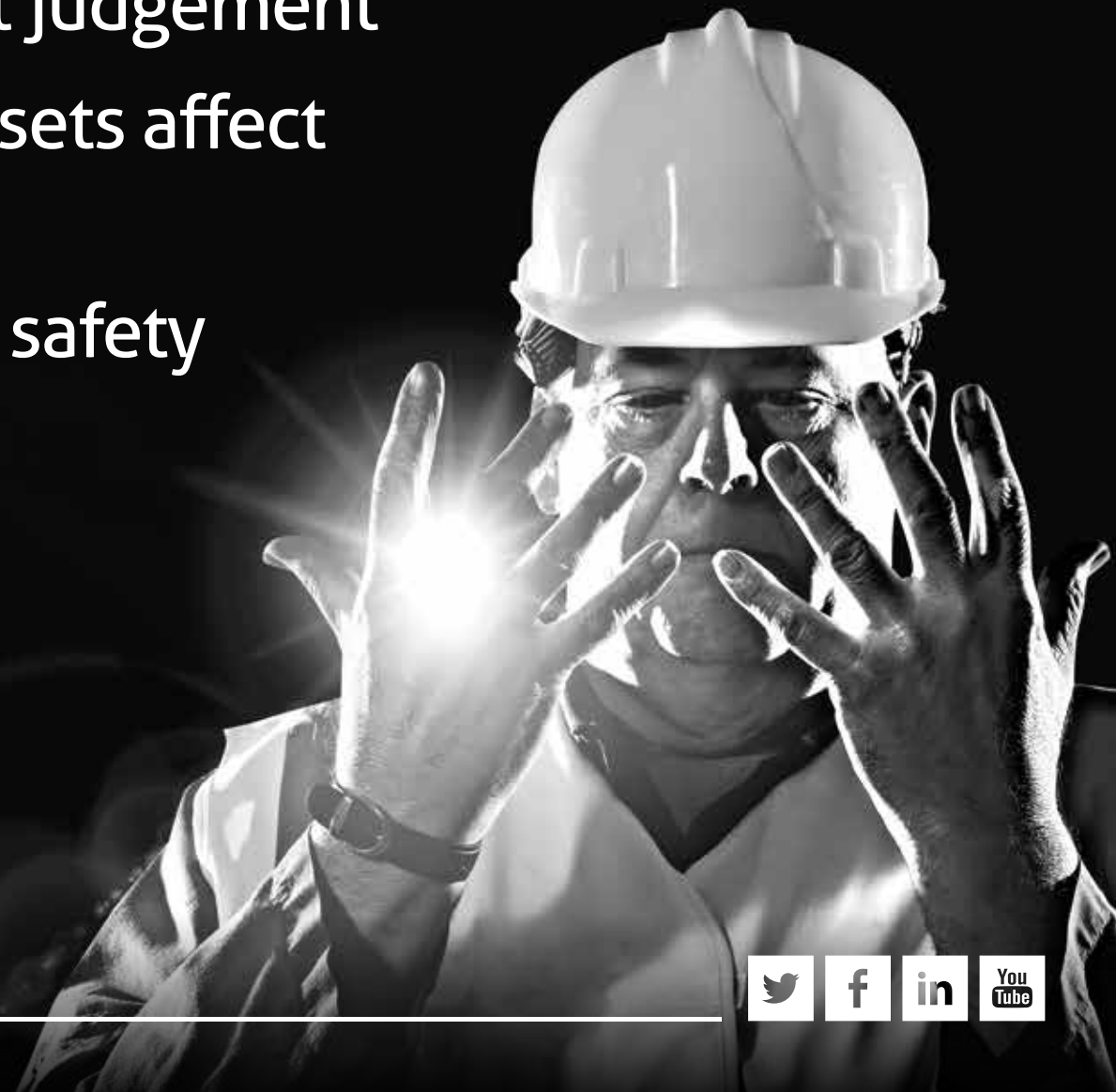
# But first a word on competence

- Construction is a dangerous industry
- Improving competence is key to reducing accidents
- It's people that often cause accidents
- Competence is skills, knowledge and behaviour
- Competence is thinking about:
  - Self-awareness: get to know yourself
  - Situational awareness: expect the unexpected
  - Risk awareness: think outside the box



# Self-awareness get to know yourself

- Think about **YOURSELF** and your role
- Consider your frame of mind
- Late nights and hang-overs can affect judgement
- Domestic disputes and emotional upsets affect concentration
- All these can affect performance and safety



# Situational awareness expect the unexpected

- Don't assume today will be the same as yesterday. Things change
- Take note of the broader context in which you work
- Stop and think about what's going on around you
- Things change so expect the unexpected risk



# Risk awareness think outside the box

- Risk awareness is more than risk assessment
- It recognises the additional risks of:
  - Age
  - Inexperience
  - Poor eyesight
  - Fading light
  - Language
- Consider out-of-context risk due to new jobs and unfamiliar surroundings



# Hand Arm Vibration

## Stops you doing the simplest things

- Turning pages of a paper
- Picking up small items
- Fastening buttons
- Tying shoe laces
- Zipping up your trousers!



# Meet the symptoms

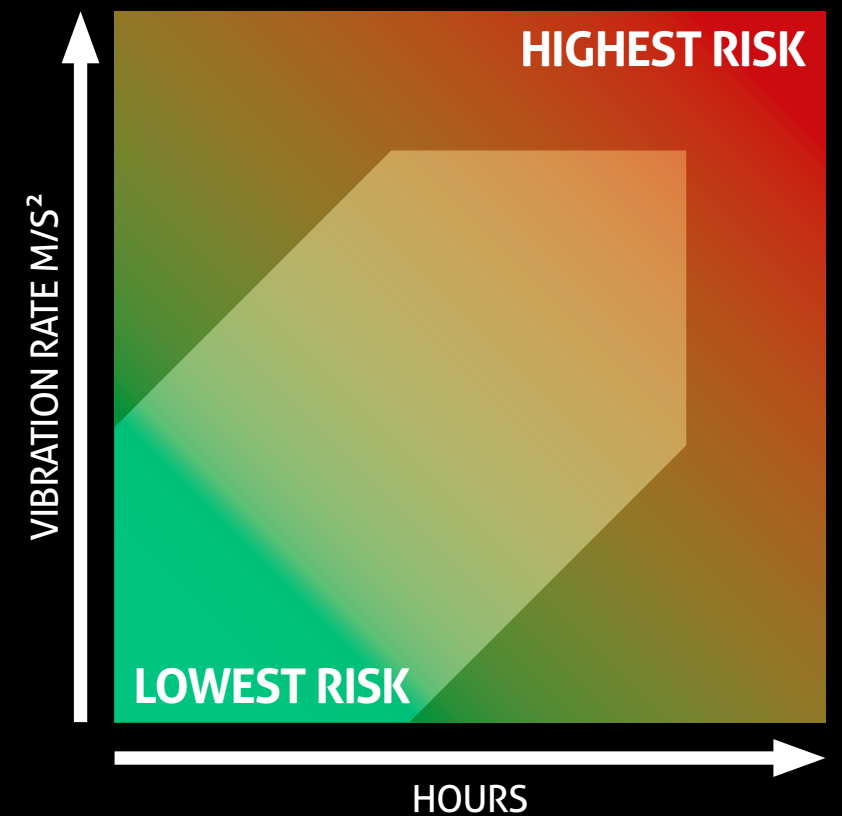
- Pins and needles
- Loss of sense of touch
- Severe pain and numbness
- Fingers turn white
- Loss of grip strength





# How to identify the risk

- Look for measurement – metres per second squared ( $m/s^2$ )
- The higher the number the higher the vibration
- The higher the number the less time the machine can be used
- Use these numbers to compare machines



# How to control exposure

- Don't use vibrating tools if at all possible
- If in doubt, shout – ask your supervisor
- Well maintained machines and sharp tools work faster
- Do not 'force' the machine
- Remember **YOU** matter. Protect **YOURSELF**



# Do you have any choice?

## What the law says **EMPLOYERS** have to do:

“All employers shall take action to control and reduce exposure, provide information, instruction, training and regular health checks.”

## What the law says **EMPLOYEES** have to do:

“All employees shall take all reasonable steps to ensure that they comply with safety procedures, training and operating guidelines set out by the employer.”

(source: HSE)



# Controlling exposure



**JCB with breaker attachment**



**Concrete and steel nailer**



**Heavy duty road breaker – petrol**



**Cut-off saw**



**Vibration management system**



**Diamond drilling rig**

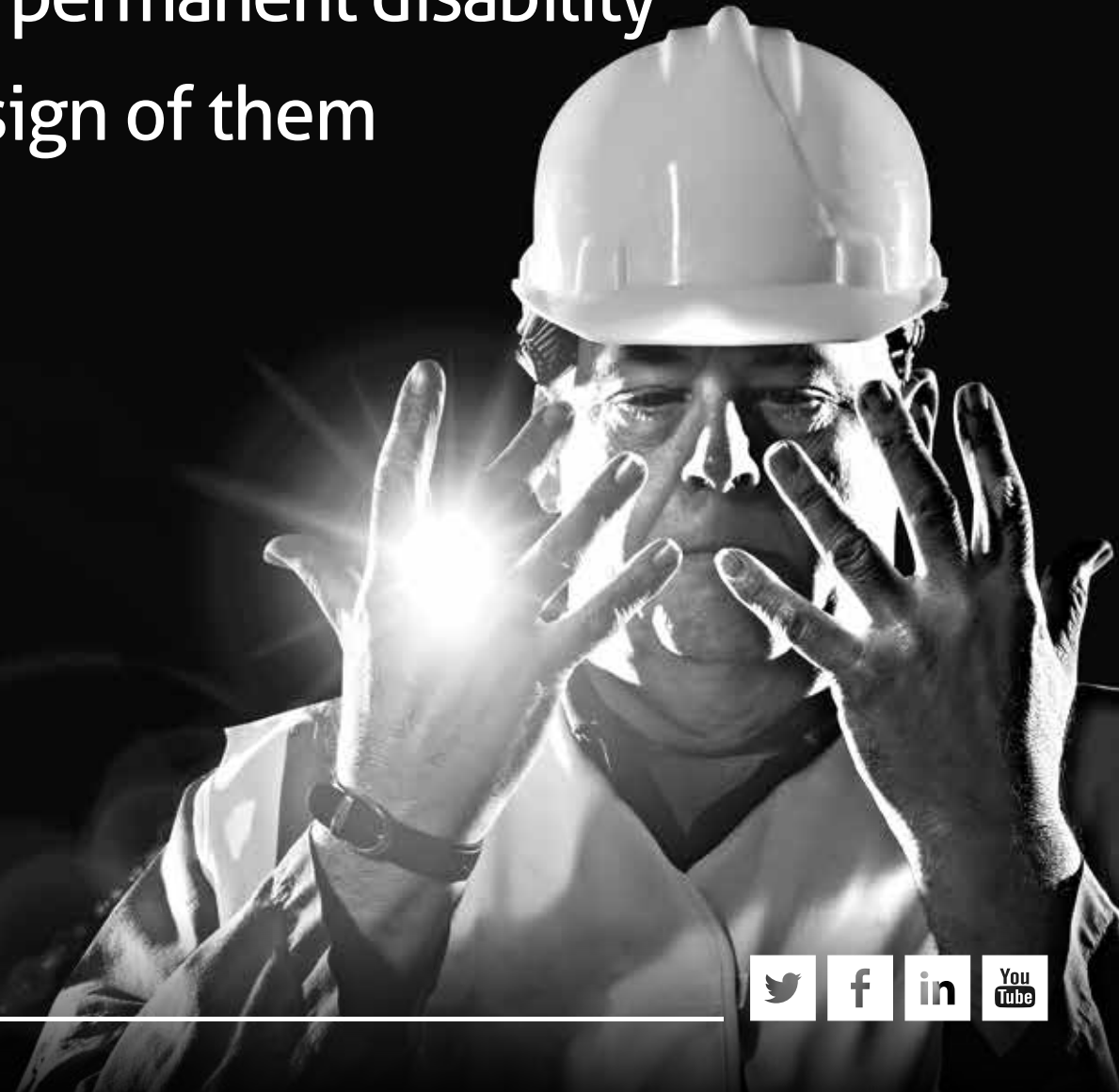
# What you should do

- Select the best tool and consumables for the job
- Use tools correctly
- Keep your hands warm and dry
- Know the symptoms and keep looking for them
- Report any symptoms



# Summary

- Competence is key – it's skills, knowledge and behaviour
- Think differently about vibrating equipment
- There is NO safe level of vibration
- It's about avoiding long-term pain and permanent disability
- Know the symptoms and report any sign of them



# Quick quiz

1. Competence requires skills and knowledge and what else?
2. What are the three human factors we need to focus on to improve competence?
3. What are the regulations that cover hand arm vibration?
4. What are the symptoms of HAVS?
5. How many people suffer from HAVS?
6. What does  $m/s^2$  stand for?
7. According to the HSE what should a good roadbreaker measure in  $m/s^2$ ?
8. Is there a safe level of vibration?
9. How can you reduce exposure to vibration?
10. Which products can help you reduce exposure?

**Remember you are responsible for your safety and that of your mates**