Fatigue Management Awareness
**What is fatigue?**

**fatigue** [fu-h-teeg]

- The lack of energy resulting from prolonged, extensive mental or physical activity, or from insufficient sleep

Progressive decline in alertness and performance
What is fatigue?

- Shift work
- Long Hours
- International or domestic travel across multiple time zones
What is fatigue?

Falling asleep while:
- Driving
- Monitoring equipment
- Performing other vigilance tasks

Obviously a serious problem
What is fatigue?

Adversely affect your judgment

Your physical coordination

Lead to serious incidents or crashes
Introduction

Natural part of the daily cycle of life

Major factor in many serious accidents

- Extensive training
- Proper safety equipment
- Perfect track record of experience

Cannot compensate for fatigue

Level 1 and 2 training
Introduction

Accustomed to long hours

Frequent changes of schedule

Long hours of travel

Can lead to profound fatigue
Schlumberger has launched a Fatigue Management campaign

Equip every employee with a greater ability

- Recognize the potential risks of fatigue
- Respond to them successfully
What are the signs of fatigue?

Onset of fatigue can be recognized in ourselves and others.

Signs of fatigue are largely universal.

Cognitive and Physical.
What are the signs of fatigue?

**Cognitive**
- Negative mood
- Reduced communication
- Slips and lapses
- Poor memory
- Reduced attention
- Impaired problem solving
- Increased risk taking

**Physical**
- Fidgeting
- Rubbing eyes
- Repeated yawning
- Staring blankly
- Blinking
- Difficulty keeping eyes open
- Head nodding
What are the causes of fatigue?

To prevent or manage the effects of fatigue

Understand how and why
What are the causes of fatigue?

Circadian rhythms

Time of Day

0 5 10 15 20 25 30 35 40 45 50 55
0 1 2 3 4 5 6 7 8 9 10 11 12

Peak Alertness
Slightly Impaired
Reduced Alertness
Dangerous Drowsy

Schlumberger
What are the causes of fatigue?

- Poor performance
- Reduced alertness
- Increased likelihood and frequency of accidents and mistakes in judgment

Circadian rhythms

![Graph showing peak alertness and time of day]
What are the causes of fatigue?

Circadian rhythms

Two periods of maximum sleepiness each day:
- 2 a.m. - 6 a.m
- 2 p.m. - 4 p.m
What are the causes of fatigue?

At times of day when fatigue would not normally be a problem:

- Disrupted schedules
- Unusually long periods of sustained work
- Create a dangerous level of fatigue
What are the causes of fatigue?

In our own industry

- Many examples of serious accidents
- Injuries and deaths
- Fatigue played a critical role

Piper Alpha disaster
North Sea
Loss of 167 lives
July 6, 1988

- Fatigue was a major contributing factor
What are the causes of fatigue?

Numerous tragedies on a smaller scale have occurred
Some within our own company
All of them might have been prevented
Greater awareness of the risks of fatigue
How to manage them safely
Why is alertness critical to safety?

Time of day
Length of time since you last had a period of consolidated sleep
Duration and quality of that sleep
Too many consecutive days
Effects of sleep deprivation are cumulative
Shaving an hour or two from proper sleep, day after day
Like going with no sleep at all for 24 hours
Why is alertness critical to safety?

Schlumberger employees:
- Hazard of fatigue
- Vigilance task of driving
- Deadly combination

50 percent of fatal crashes on highways caused by drivers falling asleep or briefly nodding off.
How do we manage fatigue?

Practical countermeasures for fatigue:

- Taking a pre-work nap
- Avoiding vigilance tasks during times of low alertness
- Varying your job routine
- Taking breaks
- Adjusting the work environment
- Managing your nutritional intake
How do we manage fatigue?

- Right and responsibility of every person to stop the job for any quality, health, safety or environmental hazard.

Alertness required to ensure we continue to be excellent in execution.
How do we manage fatigue?

- Health Hub
- Driving Hub
- QHSE Training and Certification Catalog
- QUEST
- Fatigue Management pocket guide
How to Manage fatigue related to driving?

- Driving hub
- Driving training – both theory and practical training
- Journey Management (JM) plan
Schlumberger recognizes the importance of understanding fatigue
Recognizing its causes and symptoms
Taking effective steps to prevent its consequences
Fatigue can affect every aspect of our business and private lives
Managing it successfully is a shared responsibility
Summary

Must be proactive in managing fatigue

Not only is our own safety at risk

We share the workplace and the roads
Summary

Fatigue is a fact of life

We cannot eliminate fatigue altogether

We can learn to recognize its causes

Manage the risks it presents