



# SLEEP: A BUSINESS CASE FOR BEDTIME

November 3, 2015  
Amsterdam, the Netherlands

## Key Findings





## A NOTE FROM OUR LEADER



### MATTIEU ROUOT

Managing Director, MAXIS Global Benefits Network

We had the honour of welcoming more than 70 participants - including clients, consultants, brokers, MAXIS GBN network members, and medical professionals - to our 2015 Global Health Event.

Sleep is a major issue worldwide, and we are pleased that our conference helped bring attention to this critical issue:

- Sleep problems increase the risk of being injured at work by **62%**.
- Lost productivity due to fatigue is costly. In the U.S. alone, it results in lost productivity costing **\$2,280** on an individual level, and **\$63.2 billion** across the entire American workforce.
- Getting less than 5 hours of sleep per night increases the risk of death by all causes by **15%**

We hope that MAXIS GBN can be a part of the solution to these troubling trends and thank you for taking the time to learn more.

It is our pleasure to share the highlights of the conference through this booklet.

We hope you will join us for next year's Global Health Event and look forward to helping you and your workforce be healthier, happier, and more prosperous.

Mattieu Rouot

## Executive Summary- The 2015 Global Health Event at a glance



**Dr. Francois Duforez**

- Using his experience as founder of the European Sleep Center, Dr. Duforez explained how to get a good night's rest and ensure high performance at work all day by taking power naps. He also provided tips to better cope with jetlag.



**Dr. Leena Johns**

- MAXIS GBN Global Medical & Wellness Director, shared actionable insights from the latest MAXIS GBN whitepaper "Sleep: The Business Case for Bedtime."



**Case studies**

- Case studies from **Shell International B.V.** and **Renault Group** showed us how forward thinking employers can successfully improve the sleep habits of their workforce.





## How to Manage Sleep and Alertness : A Win-Win Strategy

# Dr. Francois Duforez



### Founder, European Sleep Center

Dr. Francois Duforez is a physiologist and sport physician who specializes in helping patients manage their chronobiological rhythms and cope with stressful environments. He has founded vielife Ltd, a global Health & Wellness solutions company based in London, as well as the European Sleep Center, which is located in Paris. He is an INSEAD alumni. Prior to his current roles, he was the Head of Clinic for the Hospitals of Paris and consulted at the Hotel-Dieu Hospital, a renowned sleep and epidemiology center. He has spent 17 years assisting Formula 1 racing teams manage their wakefulness and has participated in the 24 hour du Mans race since 1994. He also works with athletes at the Vendee Globe international sailing competition and at the Olympic Games.



# The Sleep Cycle- How to wake up refreshed



WAKE



DEEP SLEEP



REM SLEEP

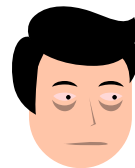
Sleep cycles of average 90 minutes- can vary by individual

- ✓ Physical energy is restored
- ✓ The body repairs itself and builds up energy
- ✓ Immune function increases
- ✓ Stimulates growth and development
- ✓ Knowledge Memory is Consolidated
- ✓ Sleep of dreams
- ✓ Regenerates mental energy
- ✓ Reduces stress
- ✓ Structures all types of memories

## A COMPLETELY DARK, COOL, COMFORTABLE ENVIRONMENT

(16 - 19 °C/60 - 67 °F)

can help you get the best night's sleep possible



## FEELING OF WAKEFULNESS

after sleep depends on when you wake up in sleep cycle, not just how much sleep  
Waking during deep sleep will leave you feeling groggy and tired

## SLEEP IS INDIVIDUAL

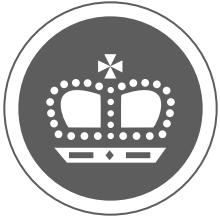
the amount of sleep a person needs varies significantly  
Women typically need more sleep than men to feel refreshed





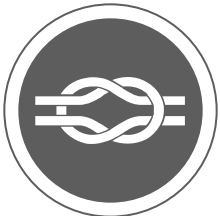
# Stay energized and alert all day by taking a power nap

## Types of naps



**90 min**  
(1 cycle)

**Royal nap**



**between 10  
and 30 mn**

( Keeps you alert for  
155 mins more)

**Sailor nap**



**between 15 sec  
and a few mins**

**Flash nap**

## How to identify timing for power nap

Blinking eyes

Yawning

Stiff neck

Blurred eye  
sight

Reading same  
thing twice





## Dealing with jetlag- what you can do to cope



### Checklist for wakefulness



Fly west, stay awake



Fly east, stay asleep



Adjust your watch to local time



During the flight, drink water, avoid drinking alcohol and eat healthy food in small amounts. Bring your ear plugs, neck support cushion, elastic support socks



On arrival, increase exposure to daylight and light physical exercise



Use melatonin or weak sleeping pill if needed



## Sleep Deprivation: A Hidden Global Health Issue

# Dr. Leena Johns



## Global Medical & Wellness Director

Dr. Leena Johns has been involved with life, health, disability and long term care products for over a decade. Trained as a medical doctor, she worked as an ER physician and has held the roles of Global Medical Director, Operations Manager and Medical advisor for several insurance operations internationally.

Dr. Johns joined MetLife in February 2014 and as a physician within the MetLife Global Employee Benefit's team, her responsibilities are diverse including; being the subject matter expert on health data analytics<sup>1</sup>, and working with clients and brokers to assess the medical portfolio of the clients providing an in-depth claim analysis with plan design recommendations. She is also responsible for developing and implementing health and wellness strategies globally in conjunction with local operations.

Her skills and experiences include medical case management, wellness and health analytics, international and local claims management, abuse/fraud and overuse detection and management, claims litigation, claims audit and appeals and grievances management. She is also a television presenter for a U.S. based Asian network presenting a show on health and is a magazine columnist writing on health and wellness.

1. Health data analytics are based on aggregated and anonymous data





# Serious Health Consequences for Sleep Deprived Employees



Just **one week** of insufficient sleep alters the activity of our genes, which control our response to stress, immunity, inflammation, and overall health<sup>5</sup>



## Immune Function

2.94 times more likely to get a cold<sup>6</sup>

**Chance of death from all causes increased from 15%<sup>7</sup>**



## Diabetes

Increased risk of developing Type 2 diabetes<sup>8</sup>



## Obesity

For every hour of lost sleep, the odds for obesity become five times higher<sup>9</sup>



## Cardiovascular Disease

The risk of a stroke doubles with less than 6 hours of sleep<sup>10</sup>



## Cancer

Sleeping less than six hours a night has a 50% spike in risk of colorectal adenomas, which can turn malignant over time<sup>11</sup>

5. Medical News Today, "Lack Of Sleep Can Make Our Genes Less Active." Feb. 2013.

6. MayoClinic.org, "I'm having trouble sleeping lately. Does this increase my chances of getting sick?"

7. Godet-Cayré V; Pelletier-Fleury N; Le Vaillant M et al., "Insomnia and absenteeism at work. Who pays the cost?" SLEEP 2006;29(2): 179-184.

8. Knutson KL, Ryden AM, Mander VA, Van Cauter E. "Role of Sleep Duration and Quality in the Risk and Severity of Type 2 Diabetes Mellitus," Arch Intern Med 2006;166:1768-176

9. Pennsylvania State University Research, Journal of the Academy of Nutrition and Dietetics (1996-2011)

10. Harvard Health Publications, Harvard Medical Sleep, "Sleep Problems, Heart Disease Often in Bed Together"

11. Cheryl L. Thompson PhD, Emma K. Larkin PhD et. al, "Short Duration of Sleep Increases Risk of Colorectal Adenoma," October 2010



# Why Should an Employer Care?



Sleep-deprivation leaves employees vulnerable to safety and productivity gaps. It's a **threat** to a company's bottom line.

Decreased communication and reaction time

Risk of injuries at work increase by 62%<sup>18</sup>

Both medical & indirect costs were about \$1,253 higher<sup>16</sup>

Workers Compensation costs per employee per year is 5 times higher<sup>17</sup>

Greater risk of injury

Decrease in productivity and decision making



Risk of Injuries at work increase by 62%<sup>18</sup>

A company can pay more than \$3,200 per employee per year in health costs due to sleep loss<sup>19</sup>

Increased risk of becoming distracted

Workers Compensation costs per employee per year is 5 times higher<sup>17</sup>

10-20% increase in healthcare utilization<sup>20</sup>

Sickness absenteeism days - increased by 28%<sup>21</sup>

16. Ozminowski RJ, Wang S, Walsh JK. The direct and indirect costs of untreated insomnia in adults in the United States. Sleep. 2007;30(3):263-273.

17. Circadian 24/7 Workforce Solutions, The Myths and Realities of Fatigue whitepaper, 2009

18. Uehli, Miedinger, et al. "Sleep problems and work injuries: a systematic review and meta-analysis," 2013

19. Sleep and Breathing 6(2): 85-102: "The Prevalence, Cost Implications, and Management of Sleep Disorders: An Overview," Hossain JL, Shapiro CM., 2002.

20. Optisom.com, "Sleep Benefits," 2014

21. Journalsleep.org, "Sleep and sickness absence: A nationally representative study," Volume 37 Issue 09, 2015



## Action Plan to Remedy the Sleep Issue Under the 4 pillars of Wellness

1



### Education and Awareness

Teach, educate, beseech. Implement seminars, in-services, guest speakers, newsletters, flyers and intranet articles. Steep sleep into your wellness programs. Help managers create reasonable policies for people who works long hours. Better ergonomics at the work place.

2



### Prevention and Screening

Evaluate the depth of the problem in the workplace by surveys. Screen workers for sleep disorders. Remove potential disrupters- learn proper ergonomic principles. Make schedules more predictable - breaks, flex time, telecommuting. Avoid giving double and excessive shifts to shift workers. Take work breaks outside in the sunlight. Power down after hours.

3



### Intervention Programs

Incorporate nap pods or calm rooms into policy. Promote ideal 20 minutes naps between 1:00 - 3:00 PM. Champion a "Take Back Our Sleep Week" at your office(s) to foster education. Create an effective Fatigue Risk Management Systems (FRMS). This looks at staffing levels, workload forecasting and modeling, onsite and online training programs, behavioral check list, fatigue risk model, analysis of duty-rest and shift schedules, reserve crew policies and shiftwork overtime policies, & workplace evaluation and design.

4



### Behavior modification

Empower employees to control the factors within their own lives. Sleep hygiene. Expose employees to brief sessions of blue light after lunch. Remove your sunglasses in the morning. Avoid alcohol, cigarettes and heavy meals in the evening. Opt for foods that enhance sleep in the evening. Implement healthy eating, nutrition, and obesity/weight loss programs.



## Panel discussion (extracts)



**RENAULT  
GROUP**



**SHELL  
INTERNATIONAL B.V.**

## Renault Group : Collective information - Individual protocol & Calm Space



**CALM SPACE**

OUVERT À PARTIR DE 9H  
JUSQU'À 20H

Une sieste  
qui réveille !!!

20 MINUTES  
POUR AMÉLIORER VOTRE MÉMOIRE, VOTRE CRÉATIVITÉ,  
VOTRE CONCENTRATION, VOTRE DYNAMISME,  
RÉDUIRE VOTRE STRESS ET VOTRE FATIGUE.

The poster features a blue background with white text and illustrations of sheep jumping over a white fence on a green hill.



Every 6 months a group medical survey  
+ group training for people travelling



Development of individual protocol to  
improve awareness & vigilance



Introduction of sleep break  
at work with Calm Space:

- Open from 8am to 8pm
- 6 boxes equipped with natural noises
- 20 minutes' nap
- Nap pods available at HQ, may be implemented at other sites in the future

DIRECTION ÉTABLISSEMENT RENAULT SIÈGE







## Shell International B.V.: Global Fatigue Program

### FATIGUE RISK MANAGEMENT SYSTEM

1

2

3

4

5



### 5 important protocols

1. Identify and record HSSE critical positions
2. Establish and maintain a Fatigue Risk Management Plan for all HSSE critical positions
3. Provide Fatigue management awareness training for supervisors and personnel who are in roles that apply the Fatigue Risk Management Plan
4. Include the potential contribution of Fatigue risk when investigating significant and high potential incidents
5. Make individuals in identified HSSE critical positions aware of the risks of fatigue via training courses



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