Safety Talk on Microsleep, Inattention & Distractions

10 Mar 2016
changiairportgroup.com
Safety Workshop
Microsleep, Inattention & Distractions

• Microsleep
  • Water Truck Incident
  • Airtug Incident
  • Prevention Measures

• Inattention & Distractions
  • Using Handphone /walkie talkie while driving
  • Eating while driving
  • Picking up fallen objects while driving
  • Failing to apply handbrakes fully when parking vehicle
  • Distractions caused tractors to hit guard rail, road divider and worker
Water Truck hitting T3 baggage structure on 21 Mar 2014 at 0532hrs

Water truck drove straight into the BHA. [No brake markings were found at the accident scene]
Injury Accident involving Water Truck hitting T3 BHA on 21 Mar 2014 at 0532 hrs
Injury minimized – Driver wore seat belt!
An airtug collided onto pillar fronting T2 BHA RT4 13/02/2014 04:05

An Airtug was travelling along R7S towards bay E20.

The airtug drifted to the left and collided onto the pillar fronting RT4 of T2 BHA supporting the building structure.

A few shops in transit level were affected as the floor caved in.
An Airtug collided onto pillar fronting T2 BHA RT4 13/02/2014 04:05
How do I know that I am going to microsleep?

<table>
<thead>
<tr>
<th>If you have difficulty focusing, heavy eyelids or frequent blinking</th>
<th>If you find yourself daydreaming, wandering or having disconnected thoughts</th>
<th>If you find that you're yawning repeatedly or rubbing your eyes a lot</th>
</tr>
</thead>
</table>

How do I know that I am going to microsleep?

<table>
<thead>
<tr>
<th>If you find yourself missing exits or traffic signs</th>
<th>If you are drifting from your lane, tailgating, or find yourself driving over a shoulder rumble strip</th>
<th>If you have trouble keeping your head up</th>
</tr>
</thead>
</table>
A microsleep is a sleep which may last for a fraction of a second or up to thirty seconds.*

- This is due to a lack of sleep, fatigue or medical conditions ie. sleep apnea, hypoxia, narcolepsy, or hypersomnia.
- Microsleeps is extremely dangerous when one is driving a vehicle
- You may not know that you are having a microsleep while driving

“According to a study of the umbrella organisation of the German insurance business (GdV), **microsleep is the cause of 24% of fatal motorway accidents.**”

- **Battle against microsleep** 2002-07-12 - By Philip Byrne
<table>
<thead>
<tr>
<th>Speed of vehicle</th>
<th>Duration of microsleep</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 sec</td>
</tr>
<tr>
<td>15 km/h</td>
<td>4.2m</td>
</tr>
<tr>
<td>30 km/h</td>
<td>8.3m</td>
</tr>
<tr>
<td>50 km/h</td>
<td>13.9m</td>
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</tbody>
</table>

Width of Road lane width – 5m Width of Perimeter Road – 3.5m

If one has a 1 sec microsleep when driving at 30km/h, his vehicle would have travelled about 8m. It could have drifted to the opposite road lane or the next lane which is about 5m away!
Sleep Zones

1am - 6am
2pm - 4pm

Prevention

Keep yourselves alert by doing stretching exercise

Have a short coffee break!
Do stretching exercises to overcome microsleep tendency!

1. **Lower wrist**
   - With finger tips up, palm facing away, press fingers against steering wheel gently bending wrist back.

2. **Upper wrist**
   - With palm down, hold top of finger tips to steering wheel gently bending wrist down and forward.

3. **Shoulder and neck**
   - Anchor arm by holding chair seat. Lift chin up and away from anchored arm.

4. **Upper arm and shoulder**
   - Place fist in the middle of your back then gently lean back against chair.
Have a short coffee break!

Coffee Breaks save Money!
Why do Accidents occur when driving on straight roads?
An "eye accessing cue chart" in Bandler & Grinder's *Frogs into Princes* (1979).

Inattention & distraction

Avoid Day Dreaming! You are not looking where you are going!
Accidents at Airside due to Inattention and Distractions!

- Van veered of the road & hit PLB pillar at Bay A14 on 18 Nov 2012 at 0606hrs
- FOOD Van hit Lamp Post no.20 and Drain Metal Grating on 14/02/2014 at 1910hrs
- Airtug skidded and mounted onto kerb at R7S roadway 24/02/2014 1450 hrs
- A lavatory truck hit tractor at Gate G21, near Bay 602 on 12 Sep 2014 1405H
- Twin cap pickup hit column pillar at R4S roadway westbound near bay D30 09/10/2013 23:36 hrs
- Hand Brakes - Partially engaged
- Hit Guard rails
- Hit Road Divider
- Hit Worker

Distractions
Van driver, while driving, was talking with his supervisor using the walkie talkie.

As he was distracted, he did not see that his van was approaching a bend.

When he finished talking, he placed it on the dashboard. Only then, he realized that van has veered off the road and hit the PLB pillars.

He was also travelling at about 40 km/h. He was also not wearing his seat belt.

He lost one of his eyes.
Using Handphone /walkie talkie while driving - Van veered of the road & hit PLB pillar at Bay A14 on 18 Nov 2012 at 0606hrs
Van mounted kerb and dislodged the lamp post
FOOD Van hit Lamp Post no.20 and Drain Metal Grating) on 14/02/2014 at 1910hrs

Do not eat or drink while driving!

Fasten the Seat Belt!
Tow Tug Skidded And Mounted Onto Kerb Along R7S link Roadway 24/02/2014 1450 hrs
Tow Tug Skidded And Mounted Onto Kerb Along R7S link Roadway 24/02/2014 1450 hrs

- Place loose items eg ear muffer in a secure area.
- Do not be distracted if any loose items roll off inside the cabin while driving.
- Stop your vehicle at a safe location before picking up the fallen item.
A twin cap pickup hit a column pillar along R4S roadway westbound beside bay D30
09/10/2013 23:36 hrs
A twin cap pickup hit a column pillar along R4S roadway westbound beside bay D30
09/10/2013 23:36 hrs

Water bottle & file fell off the dashboard
A twin cap pickup hit a column pillar along R4S roadway westbound beside bay D30 09/10/2013 23:36 hrs

- Place personal items or documents in a secure place in the cabin
- Do not attempt to retrieve fallen objects in the cabin while driving
Distraction – Retrieving a fallen box at passenger seat
A lavatory truck hit tractor at Gate G21, near Bay 602 on 12 Sep 2014 1405H
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Distraction – Retrieving a fallen box at passenger seat
A lavatory truck hit tractor at Gate G21, near Bay 602 on 12 Sep 2014 1405H

Box and face shield were placed on the passenger seat at the material time

Lavatory Truck driver demonstrated on how he tried to prevent the box from sliding from the seat.
Other Distractions!
Aircraft (A320) unable to enter Bay C18 due to a Van left unattended on the ERA on 13 Nov 2014 at 1151hrs

Park your vehicle properly
- Switch-off engine & engage hand brakes fully
What was the position of the hand brakes at the material time?

Hand Brakes - Fully engaged

Hand Brakes - Partially engaged

Hand Brakes - Not engaged
Distracted Tractor driver hit BHA worker while making a left turn from RT10 into offloading area(Belt 37) at T2 BHA on 18 Marv2015 at 0840 hrs

- 3 BHA workers were going for break. They were walking from belt 35 towards belt 37. Two were walking on the kerb and another was walking on the drive way.

- As tractor with 3 container trolleys turned left from RT10 towards arrival belt 37 and hit a BHA worker.

- The worker was injured on his right leg and was given 8 days medical leave.
Thank you