A STUDY OF THE PREVALENCE OF OBESITY & OVERWEIGHT AMONG WORKERS OF OIL INDIA LIMITED

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Key Facts About Obesity

- Worldwide obesity has nearly doubled since 1980.

- In 2008, more than 1.4 billion adults, 20 years and older, were overweight. Of these over 200 million men and nearly 300 million women were obese.

- 35% of adults aged 20 years and over were overweight in 2008, and 11% were obese.

- 65% of the world’s population live in countries where overweight and obesity kills more people than underweight.

- More than 40 million children under the age of five were overweight in 2011.
**Health consequences of obesity**

- Obesity which is characterized by raised BMI is a major risk factor for non-communicable diseases such as:
  - Cardiovascular diseases;
  - Diabetes;
  - Musculoskeletal disorders;
  - Some cancers (endometrial, breast, and colon).

- The risk for these non-communicable diseases increases, with the increase in BMI.

- Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood.
Objective of the study

To determine the prevalence of obesity and overweight among the workers of Oil India Limited.
Methodology

- The study was retrospective in nature and the period of study was between 1st. April 2009 to 31st. March 2012.

- The sample size for the study was 2198 workers between the age of 18 to 60 years.

- The subjects were workers who came for PME and were in the permanent payroll of the company.

- This study was carried out in the Occupational Health Center of Oil India Hospital at Duliajan. Eight departments were taken up for this study.

- BMI was used to determine obesity and overweight in this study.

- WHO classification of BMI was used to categorize overweight and obesity.
BMI

- Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults.

- It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m²).

\[
\text{BMI} = \frac{\text{Weight in Kg}}{(\text{Height in meter})^2}
\]
## WHO classification of BMI

<table>
<thead>
<tr>
<th>BMI</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 – 24.9</td>
<td>Normal Weight</td>
</tr>
<tr>
<td>25.0 – 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30.0 – 34.9</td>
<td>Class I Obesity</td>
</tr>
<tr>
<td>35.0 – 39.9</td>
<td>Class II Obesity</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>Class III Obesity</td>
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</tbody>
</table>
Categories of weight in %

- Normal: 50.31%
- Overweight: 39.44%
- Obese: 8.53%
- Underweight: 1.72%
Distribution of obesity on the basis of class in %

- Class-I: 88.23%
- Class-II: 9.10%
- Class-III: 2.67%
BMI distribution of the study group in %

- <18: 1.72%
- 18-24.9: 50.31%
- 25-29.9: 39.44%
- 30-34.9: 7.54%
- 35-39.9: 0.77%
- >40: 0.22%
Department wise distribution of overweight in %

Field Engg. 32.03
Security 32.63
Civil Engg. 33.8
TS-Drilling 39.05
Drilling 39.45
Transport 41.66
Prod-Oil 44.39
Materials 48.03
Department wise distribution of obesity in %

- Field Engg.: 5.46%
- Security: 9.02%
- Civil Engg.: 6.61%
- TS-Drilling: 12.45%
- Drilling: 8.18%
- Transport: 8.33%
- Prod-Oil: 9.11%
- Materials: 6.86%
Department wise distribution of overweight & obesity in %

- Field Engg.: Overweight 32.03, Obese 6.46
- Security: Overweight 32.63, Obese 9.02
- Civil Engg.: Overweight 33.8, Obese 6.61
- TS-Drilling: Overweight 39.05, Obese 12.45
- Drilling: Overweight 39.45, Obese 8.18
- Transport: Overweight 41.66, Obese 8.33
- Prod-Oil: Overweight 44.39, Obese 9.11
- Materials: Overweight 48.03, Obese 6.86
Age wise distribution of overweight in %

<table>
<thead>
<tr>
<th>Age Range</th>
<th>% Employees</th>
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<tbody>
<tr>
<td>18-22</td>
<td>0</td>
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<tr>
<td>23-27</td>
<td>0</td>
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<tr>
<td>28-32</td>
<td>51.22</td>
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<td>33-37</td>
<td>53.57</td>
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<td>38-42</td>
<td>40.32</td>
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<td>43-47</td>
<td>37.98</td>
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<td>48-52</td>
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<tr>
<td>53-57</td>
<td>37.95</td>
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<tr>
<td>58-60</td>
<td>34.00</td>
</tr>
</tbody>
</table>
Age wise distribution of obesity in %

- 18-22: 0%
- 23-27: 0%
- 28-32: 4.88%
- 33-37: 3.57%
- 38-42: 5.65%
- 43-47: 9.56%
- 48-52: 8.95%
- 53-57: 8.18%
- 58-60: 8.05%

% of Employees
Age wise distribution of overweight & obesity in %

<table>
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<tr>
<th>Age Group</th>
<th>Overweight</th>
<th>Obese</th>
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<td>0</td>
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</table>
Result

- 39.44% of the workers were overweight and 8.53% were obese.

- Class I obesity was the predominant variety of obesity (88.23%).

- The overall prevalence of Class III obesity also known as Morbid obesity was 0.22%.

- A decreasing trend in BMI was observed starting with the age group 38 - 42 years for the overweight category.

- A similar trend was also observed starting with the age group 43-47 years for the obese category.

- BMI was the lowest in the age group 58-60 years.
Programs to control Obesity
WALKING TRACKS & FIELDS IN VARIOUS AREAS
Conclusion

- Overweight and obesity are associated with an increased burden of diabetes, hypertension, cardiovascular diseases, certain types of cancers and premature mortality.

- Early detection can prevent various complications associated with it.

- BMI is a simple tool that can be used to determine obesity and overweight in a community.

- Determining the prevalence of obesity and overweight can be the first step towards setting a preventive program.
Thank You