CHAPTER: 15

BODY MASS INDEX

[1]VISHAL RAJPUT
[1]Students of Apeejay Stya University

[2]HITESH SHARMA
[2]Students of Apeejay Stya University

ABSTRACT

The body mass index is used for defining characteristics in adults and for classifying (categorizing) them into groups. The interpretation is that BMI represents an index of an individual's fatness. it is widely used in determining public health. The BMI helps in defining specific categories of body mass as a health issue. Body fatness plays an important psychosocial issue among humans.

In contrast, images of obese peoples all males or females, are never presented in ancient Egyptian funerary wall paintings, or statues suggesting that fatness was not considered to be a desirable trait. However, BMI may have depended on the availability of a reliable food supply and the effort required in obtaining it. BMI depends on height and weight and with access to the proper equipment, individuals can have their BMI routinely measured and calculated with reasonable accuracy and below I also attached the programming code for calculating BMI.

Programming code for Calculating BMI:

```
#include<stdio.h>

int main()

{

float weight, height, heigh, BMI;

printf("Enter your weight in kg: ");

scanf("%f", &weight);

printf("\nEnter your height in meter: ");

scanf("%f", &height);

printf("\nYour Weight for BMI is: %f", weight);

heigh = height*height;

printf("\nYour height for BMI is: %f",heigh);

BMI = weight/(heigh);

printf("\nYour BMI is: %f",BMI);

if(BMI<15){

printf("\nYou are in starvation category.");

}
```

```
else if(BMI>=15.1 && BMI <= 17.5){

printf("\nYou are in Anorexic category.");

}

else if(BMI>=17.6 && BMI<=18.5){

printf("\nYou are in Underweight category.");

}else if(BMI>=18.6 && BMI<= 24.9){

printf("\nYou are in Ideal category.");

}else if(BMI>=25 && BMI<= 29.9){

printf("\nYou are in Overweight category.");

}else if(BMI>=30 && BMI <=39.9){

printf("\nYou are in Obese category.");

}else if(BMI >= 40){

printf("\nYou are in Morbidly obese.");

}else{

printf("\n Wrong inputs.");

}

return 0;

}
```

Code explanation

This code is used for calculating the BMI of an individual person. In this first the person who wants to calculate the BMI is required to enter the weight first in KGs and then He/She needs to enter his height in meter. After that when an individual enters its values then the BMI is calculated. And after that BMI value will be printed out as the output and the category will also be printed out as the output in which He/She will be lying like whether it is in Obese category or in ideal category.

Different BMI levels:

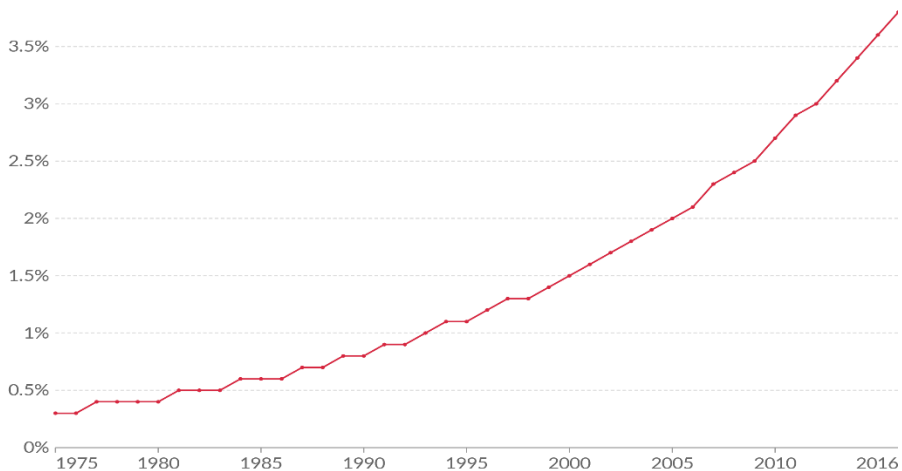| BMI	Weight Status
Below 18.5	Underweight
18.5-24.9	Normal
25.0-29.9	Overweight
30.0 and above	Obese

Theoretical formula for calculating BMI

BMI = weight/Height

Where, weight will be in KG.

And Height will in meter and height should also be in meter square.

Obesity measure graph for India

Obesity in BMI is defined as the measure of BMI when equals to or greater than 30. Obesity can be caused by eating soo much and working less or we can say that eating more calories and burning less calories.

Causes for poor BMI

1) Pregnancy -> During pregnancy sometimes weight gaining occur and which will be difficult to loose. So, it will lead to obesity which means poor BMI.

2) Genetics -> Sometimes peoples get genes from its previous generation. So, we gain weight so that's why Genetic factor is also responsible.

3) Not proper sleep -> Sometimes due to not getting proper sleep hormonal changes will occur and which can lead to make you feel more hungry and due to which you will lead to eat more food.

Causes for good BMI

1) Proper sleep -> By taking proper sleep less hormonal changes occur and sue to which extra food intake became less and your weight will remain constant.

2) Healthy food -> By taking healthy and green leafy food weight remains constant and body will be fit that

3) Exercise -> By doing regular exercise human body will remain fit and extra weight gaining will reduced. So, our BMI will remain in normal category.

REFERENCES

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3) *https://www.cdc.gov/obesity/downloads/bmiforpactitioners.pdf*

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