

# Health Monitor GMON

„INDICATE Health Risks – RATE professionally – REACT prophylactically”

## Explanation to Register Body Measures / BMI



BMI (Body Mass Index) is calculated by dividing a person's body weight [in kg] by the square of their height [in m]:

$$\text{BMI [kg/m}^2\text{]} = (\text{weight in kg}) / (\text{height in m})^2$$

BMI has become an international indicator of overweight as it is easy to calculate and is currently one of the best indirect methods for calculating fat mass.



Carrying excess weight is not an illness in itself, but it has been proven that being overweight results in a clear risk of developing accompanying and secondary diseases. If overweight exceeds a certain level it is known as obesity, which is classified as a disease.



**BMI as the sole criterion indicating overweight and obesity is only informative up to a certain point!**

Changes in BMI are assigned with signal colours in the [graphic depiction](#) to display the qualitative changes in health risks.



- (A) Classification referred to [WHO](#) [WHO 2000].
- (B) Classification according to age [Mensink 2005, Stevens 1998].
- (C) Asian classification referred to [JASSO](#) and [AOASO](#) [Nishida 2004].
- (D) Classification for China/Taiwan referred to Bureau of Health Promotion [BHP 2004].
- (E) Implications of the Revised Consensus Body Mass Indices for Asian Indians [Aziz N et al. 2014].
- (F) Classification for children and young people referred to Health Promotion Administration, Ministry of Health and Welfare, Taiwan.
- (G) Guidelines values for children and young people [Kromeyer 2001].



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*Adiposity*: <lat. 'adipo-' 'fat', or 'pertaining to fat', 'obesity'> Obesity is characterized by excess weight and a BMI > 30.  
AOASO: Asia-Oceania Association for the Study of Obesity  
JASSO: Japan Society for the Study of Obesity  
WHO: World Health Organisation

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general operation instruction, using goals values, other relevant parameters for health [Index](#) of the GMON program

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### (A) Classification referred to WHO

Classification	Traffic light colour	BMI in kg/m <sup>2</sup>
Underweight	Yellow	up to 18.5
Normal weight	Green	from 18.5 and less than 25.0
Overweight	Yellow	from 25.0 and less than 30.0
Obese	Red	from 30.0

### (B) Classification according to age [in kg/m<sup>2</sup>]

Classification	Traffic light colour	19 - 24 years	25 - 34 years	35 - 44 years	45 - 54 years	44 - 65 years	> 65 years
Underweight	Yellow	< 19.0	< 20.0	< 21.0	< 22.0	< 23.0	< 24.0
Normal weight	Green	19.0-24.0	20.0-25.0	21.0-26.0	22.0-27.0	23.0-28.0	24.0-29.0
Overweight	Yellow	24.0-30.0	25.0-30.5	26.0-31.0	27.0-31.5	28.0-32.0	29.0-32.5
Obese	Red	≥ 30.0	≥ 30.5	≥ 31.0	≥ 31.5	≥ 32.0	≥ 32.5

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### (C) Asian classification referred to JASSO and AOASO

Classification (JASSO)	Traffic light colour	BMI in kg/m <sup>2</sup>
Underweight	yellow	up to 18.5
Normal weight	green	from 18.5 and less than 25.0
Obese I	yellow	from 25.0 and less than 30.0
Obese II - IV	red	30.0 and more

  

Classification (AOASO)	Traffic light colour	BMI in kg/m <sup>2</sup>
Underweight	yellow	up to 18.5
Normal weight	green	from 18.5 and less than 23.0
Obese I	yellow	from 23.0 and less than 27.0
Obese II - IV	red	27.0 and more

### (D) Classification referred to the Bureau of Health Promotion (China/Taiwan)

Classification	Traffic light colour	BMI in kg/m <sup>2</sup>
Underweight	Yellow	up to 18.5

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Normal weight	Green	from 18.5 and less than 24.0
Overweight	Yellow	from 24.0 and less than 27.0
Obese	Red	27.0 and more

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### **(E) Consensus Statement for Asian Indians**

Classification	Traffic light colour	BMI in kg/m <sup>2</sup>
Underweight	Yellow	up to 18.5
Normal weight	Green	from 18.5 and less than 23.0
Overweight	Yellow	from 23.0 and less than 25.0
Obese and Morbidly Obese (> 32.5)	Red	25.0 and more

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**(F) Classification for children and young people referred to Health Promotion Administration, Ministry of Health and Welfare, Taiwan. [in kg/m<sup>2</sup>]**

Age (years)	Boys				Girls			
	Under-weight	Normal weight	Over-weight	Obese	Under-weight	Normal weight	Over-weight	Obese
<b>Traffic light colour</b>	yellow	green	yellow	red	yellow	green	yellow	red
0.0 – 0.5	<11.5	11.5-14.8	14.8-15.8	>15.8	<11.5	11.5-14.7	14.7-15.5	>15.5
0.5 – 1.0	<15.2	15.2-18.9	18.9-19.9	>19.9	<14.6	14.6-18.6	18.6-19.6	>19.6
1.0 – 1.5	<14.8	18.8-18.3	18.3-19.2	>19.2	<14.2	14.2-17.9	17.9-19.0	>19.0
1.5 – 2.0	<14.2	14.2-17.5	17.5-18.5	>18.5	<13.7	13.7-17.2	17.2-18.2	>18.2
2.0 – 2.5	<14.2	14.2-17.4	17.4-18.3	>18.3	<13.7	13.7-17.2	17.2-18.1	>18.1
2.5 – 3.0	<13.9	13.9-17.2	17.2-18.0	>18.0	<13.6	13.6-17.0	17.0-17.9	>17.9
3.0 – 3.5	<13.7	13.7-17.0	17.0-17.8	>17.8	<13.5	13.5-16.9	16.9-17.8	>17.8
3.5 – 4.0	<13.6	13.6-16.8	16.8-17.7	>17.7	<13.3	13.3-16.8	16.8-17.8	>17.8
4.0 – 4.5	<13.4	13.4-16.7	16.7-17.6	>17.6	<13.2	13.2-16.8	16.8-17.9	>17.9
4.5 – 5.0	<13.3	13.3-16.7	16.7-17.6	>17.6	<13.1	13.1-16.9	16.9-18.0	>18.0
5.0 – 5.5	<13.3	13.3-16.7	16.7-17.7	>17.7	<13.1	13.1-17.0	17.0-18.1	>18.1
5.5 – 6.0	<13.4	13.4-16.7	16.7-18.0	>18.0	<13.1	13.1-17.0	17.0-18.3	>18.3
6.0 – 6.5	<13.5	13.5-16.9	16.9-18.8	>18.5	<13.1	13.1-17.2	17.2-18.8	>18.8
6.5 – 7.0	<13.6	13.6-17.3	17.3-19.2	>19.2	<13.2	13.2-17.5	17.5-19.2	>19.2
7.0 – 7.5	<13.8	13.8-17.9	17.9-20.3	>20.3	<13.4	13.4-17.7	17.7-19.6	>19.6
7.5 – 8.0	<14.0	14.0-18.6	18.6-21.2	>21.2	<13.7	13.7-18.0	18.0-20.3	>20.3
8.0 – 8.5	<14.1	14.1-19.0	19.0-21.6	>21.6	<13.8	13.8-18.4	18.4-20.7	>20.7
8.5 – 9.0	< 14.2	14.2-19.3	19.3-22.0	>22.0	<13.9	13.9-18.8	18.8-21.0	>21.0
9.0 – 9.5	<14.3	14.3-19.5	19.5-22.3	>22.3	<14.0	14.0-19.1	19.1-21.3	>21.3
9.5 – 10.0	<14.4	14.4-19.7	19.7-22.5	>22.5	<14.1	14.1-19.3	19.3-21.6	>21.6
10.0 – 10.5	<14.5	14.5-20.0	20.0-22.7	>22.7	<14.3	14.3-19.7	19.7-22.0	>22.0
10.5 – 11.0	<14.6	14.6-20.3	20.3-22.9	>22.9	<14.4	14.4-20.1	20.1-22.3	>22.3
11.0 – 11.5	<14.8	14.8-20.7	20.7-23.2	>23.2	<14.7	14.7-20.5	20.5-22.7	>22.7
11.5 – 12.0	<15.0	15.0-21.0	21.0-23.5	>23.5	<14.9	14.9-20.9	20.9-23.1	>23.1
12.0 – 12.5	<15.2	15.2-21.3	21.3-23.9	>23.9	<15.2	15.2-21.3	21.3-23.5	>23.5
12.5 – 13.0	<15.4	15.4-21.5	21.5-24.2	>24.2	<15.4	15.4-21.6	21.6-23.9	>23.9
13.0 – 13.5	<15.7	15.7-21.9	21.9-24.5	>24.5	<15.7	15.7-21.9	21.9-24.3	>24.3
13.5 – 14.0	<16.0	16.0-22.2	22.2-24.8	>24.8	<16.0	16.0-22.2	22.2-24.6	>24.6
14.0 – 14.5	<16.3	16.3-22.5	22.5-25.0	>25.0	<16.3	16.3-22.5	22.5-24.9	>24.9
14.5 – 15.0	<16.6	16.6-22.7	22.7-25.2	>25.2	<16.5	16.5-22.7	22.7-25.1	>25.1
15.0 – 15.5	<16.9	16.9-22.9	22.9-25.4	>25.4	<16.7	16.7-22.7	22.7-25.2	>25.2
15.5 – 16.0	<17.2	17.2-23.1	23.1-25.5	>25.5	<16.9	16.9-22.7	22.7-25.3	>25.3
16.0 – 16.5	<17.4	17.4-23.3	23.3-25.6	>25.6	<17.1	17.1-22.7	22.7-25.3	>25.3
16.5 – 17.0	<17.6	17.6-23.4	23.4-25.6	>25.6	<17.2	17.2-22.7	22.7-25.3	>25.3
17.0 – 17.5	<17.8	17.8-23.5	23.5-25.6	>25.6	<17.3	17.3-22.7	22.7-25.3	>25.3
17.5 – 18.0	<18.0	18.0-23.6	23.6-25.6	>25.6	<17.3	17.3-22.7	22.7-25.3	>25.3

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### (G) Guideline values for children and young people [in kg/m<sup>2</sup>]

Classification (girls)	Traffic light colour	7 – 8 years	9 – 10 years	11 – 12 years	13 – 14 years	15 – 16 years	17 – 18 years
Underweight	yellow	< 13.8	< 14.3	< 15.1	< 16.4	< 17.5	< 18.2
Normal weight	green	13.8-18.9	14.3-20.4	15.1-22.0	16.4-23.7	17.5-24.8	18.2-24.0
Overweight	yellow	18.9-20.9	20.4-23.0	22.0-25.0	23.7-26.7	24.8-27.6	24.0-27.8
Obese	red	> 20.9	> 23.0	> 25.0	> 26.7	> 27.6	> 27.8

  

Classification (boys)	Traffic light colour	7 – 8 years	9 – 10 years	11 – 12 years	13 – 14 years	15 – 16 years	17 – 18 years
Underweight	yellow	< 14.0	< 14.4	< 15.2	< 16.2	< 17.3	< 18.4
Normal weight	green	14.0-18.6	14.4-20.2	15.2-21.8	16.2-23.4	17.3-24.0	18.4-24.0
Overweight	yellow	18.6-20.6	20.2-22.8	21.8-25.0	23.4-26.6	24.0-27.8	24.0-28.6
Obese	red	> 20.6	> 22.8	> 25.0	> 26.6	> 27.8	> 28.6

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