

# Health Monitor GMON

„INDICATE Health Risks – RATE professionally – REACT prophylactically”

## Explanation to Register Body Measures / Further Measures



The single values of the bodily frame lie within a natural range of variation. The relations between those values correspond with the different (healthy) growth tendencies, which are also called bodily frame types, from the short - stout type to the tall - slim type. Besides the normal change of bodily values during the length grows there is also another individual change during the aging process. And the changes of body values go hand in hand with changes in the body composition.



To characterize the varying body values so called 5% resp. 95% percentiles are used, which are the values of a large reference group, where 5% maximum don't fall below and also 5% don't fall above.

There is no doubt, that the visceral body fat distribution corresponds with the some health risks. But there is no easy proof, if other body values correspond with overweight and all the other potential health risks.



Body values support the detailed description of the body and its composition. Their changes should always be seen in relation to moving and eating habits.



(A) Ranges used in the GMON (Men)  
(B) Ranges used in the GMON (Women)



Greil H: Alters-, geschlechts- und Gruppenspezifik von Körperbau und Ernährungszustand. Curare 16 (1993), S. 265 – 274.

Stolzenberg H, Kahl H, Bergmann KE: Körpermaße bei Kindern und Jugendlichen in Deutschland. Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz 50 (2007), S. 659 – 669.

Trippo U: Körperbau, Körperzusammensetzung und Ernährungsgewohnheiten bei Erwachsenen in Abhängigkeit von Alter und Geschlecht. Universität Potsdam, 2000.



[Overview about GMON modules](#)

general operation instruction, using goals values, other relevant parameters for health

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## Explanation to Register Body Measures / Further Measures

### (A) Ranges (Men, percentage of body height)

| <b>Chest circumference</b> | to low      | low           | good          | high          | to high    |
|----------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                | red         | yellow        | green         | yellow        | red        |
| 18 to 24                   | up to 45.8% | 45.8 to 47.0% | 47.0 to 59.3% | 59.3 to 64.7% | over 64.7% |
| 24 to 54                   | up to 47.5% | 47.5 to 50.8% | 50.8 to 63.8% | 63.8 to 68.2% | over 68.2% |
| over 55                    | up to 49.3% | 49.3 to 54.6% | 54.6 to 68.3% | 68.3 to 71.7% | over 71.7% |

| <b>Thigh circumference</b> | to low      | low           | good          | high          | to high    |
|----------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                | red         | yellow        | green         | yellow        | red        |
| 18 to 24                   | up to 25.6% | 25.6 to 27.8% | 27.8 to 35.0% | 35.0 to 38.1% | over 38.1% |
| 24 to 54                   | up to 25.7% | 25.7 to 28.2% | 28.2 to 35.7% | 35.7 to 38.8% | over 38.8% |
| over 55                    | up to 25.7% | 25.7 to 28.6% | 28.6 to 36.3% | 36.3 to 39.5% | over 39.5% |

| <b>Lower leg circumference</b> | to low      | low           | good          | high          | to high    |
|--------------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                    | red         | yellow        | green         | yellow        | red        |
| 18 to 24                       | up to 17.9% | 17.9 to 18.5% | 18.5 to 23.5% | 23.5 to 25.5% | over 25.5% |
| 24 to 54                       | up to 17.1% | 17.1 to 18.9% | 18.9 to 24.1% | 24.1 to 25.8% | over 25.8% |
| over 55                        | up to 16.2% | 16.2 to 19.4% | 19.4 to 24.6% | 24.5 to 26.1% | over 26.1% |

| <b>(Still) Upper arm circumference</b> | to low      | low           | good          | high          | to high    |
|--|-------------|---------------|---------------|---------------|------------|
| Age [years]                            | red         | yellow        | green         | yellow        | red        |
| 18 to 24                               | up to 12.0% | 12.0 to 13.7% | 13.7 to 18.8% | 18.8 to 20.2% | over 20.2% |
| 24 to 54                               | up to 12.5% | 12.5 to 14.6% | 14.6 to 19.9% | 19.9 to 21.3% | over 21.3% |
| over 55                                | up to 13.1% | 13.1 to 15.5% | 15.5 to 20.9% | 20.9 to 22.5% | over 22.5% |

| <b>Lower arm circumference</b> | to low      | low           | good          | high          | to high    |
|--------------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                    | red         | yellow        | green         | yellow        | red        |
| 18 to 24                       | up to 12.0% | 12.0 to 13.5% | 13.5 to 16.4% | 16.4 to 17.1% | over 17.1% |
| 24 to 54                       | up to 12.5% | 12.5 to 14.0% | 14.0 to 17.2% | 17.2 to 18.2% | over 18.2% |
| over 55                        | up to 13.0% | 13.0 to 14.5% | 14.5 to 17.9% | 17.9 to 19.2% | over 19.2% |

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## Explanation to Register Body Measures / Further Measures

### (B) Ranges (Women, percentage of body height)

| <b>(Chest circumference</b> | to low      | low           | good          | high          | to high    |
|-----------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                 | red         | yellow        | green         | yellow        | red        |
| 18 to 24                    | up to 43.2% | 43.2 to 45.7% | 45.7 to 54.9% | 54.9 to 56.3% | over 56.3% |
| 24 to 54                    | up to 46.8% | 46.8 to 48.4% | 48.4 to 61.8% | 61.8 to 64.8% | over 64.8% |
| over 55                     | up to 50.5% | 50.5 to 51.2% | 51.2 to 68.7% | 68.7 to 73.2% | over 73.2% |

| <b>Thigh circumference</b> | to low      | low           | good          | high          | to high    |
|----------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                | red         | yellow        | green         | yellow        | red        |
| 18 to 24                   | up to 29.1% | 29.1 to 30.0% | 30.0 to 38.7% | 38.7 to 39.5% | over 39.5% |
| 24 to 54                   | up to 29.6% | 29.6 to 30.5% | 30.5 to 41.1% | 41.1 to 47.0% | over 47.0% |
| over 55                    | up to 30.1% | 30.1 to 31.0% | 31.0 to 43.5% | 43.5 to 54.4% | over 54.4% |

| <b>Lower leg circumference</b> | to low      | low           | good          | high          | to high    |
|--------------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                    | red         | yellow        | green         | yellow        | red        |
| 18 to 24                       | up to 18.6% | 18.6 to 19.1% | 19.1 to 23.6% | 23.6 to 24.4% | over 24.4% |
| 24 to 54                       | up to 18.8% | 18.8 to 19.3% | 19.3 to 24.8% | 24.8 to 25.9% | over 25.9% |
| over 55                        | up to 19.1% | 19.1 to 19.6% | 19.6 to 26.0% | 26.0 to 27.4% | over 27.4% |

| <b>(Still) Upper arm circumference</b> | to low      | low           | good          | high          | to high    |
|--|-------------|---------------|---------------|---------------|------------|
| Age [years]                            | red         | yellow        | green         | yellow        | red        |
| 18 to 24                               | up to 12.5% | 12.5 to 13.1% | 13.1 to 17.4% | 17.4 to 18.8% | over 18.8% |
| 24 to 54                               | up to 13.7% | 13.7 to 14.3% | 14.2 to 19.8% | 19.8 to 21.2% | over 21.2% |
| over 55                                | up to 14.8% | 14.8 to 15.5% | 15.5 to 22.1% | 22.1 to 23.5% | over 23.5% |

| <b>Lower arm circumference</b> | to low      | low           | good          | high          | to high    |
|--------------------------------|-------------|---------------|---------------|---------------|------------|
| Age [years]                    | red         | yellow        | green         | yellow        | red        |
| 18 to 24                       | up to 11.7% | 11.7 to 12.4% | 12.4 to 15.1% | 15.1 to 15.4% | over 15.4% |
| 24 to 54                       | up to 12.6% | 12.6 to 13.1% | 13.1 – 16.7%  | 16.7 to 18.5% | over 18.5% |
| over 55                        | up to 13.4% | 13.4 to 13.8% | 13.8 – 18.2%  | 18.2 to 21.5% | over 21.5% |

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