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PHYSIOLOGICAL PARAMETERS

Physiological parameters, such as heart rate, blood pressure, body temperature, serum levels of various stress hormones (e.g. cortisol) and immunological functions (e.g. suppression of lymphocyte activity) can be used to assess welfare. Measurement of many of these parameters requires invasive monitoring techniques. Their normal value deviates in diseased condition.

The following are normal complete blood count results for adults:

Red blood cell count	**Male:** 4.35-5.65 trillion cells/L* (4.35-5.65 million cells/mcL**) **Female:** 3.92-5.13 trillion cells/L (3.92-5.13 million cells/mcL)
Hemoglobin	**Male:** 13.2-16.6 grams/dL*** (132-166 grams/L) **Female:** 11.6-15 grams/dL (116-150 grams/L)
Hematocrit	**Male:** 38.3-48.6 percent

	Female: 35.5-44.9 percent
White blood cell count	3.4-9.6 billion cells/L (3,400 to 9,600 cells/mcL)
Platelet count	**Male:** 135-317 billion/L (135,000 to 317,000/mcL) **Female:** 157-371 billion/L (157,000 to 371,000/mcL)

Some laboratory reference ranges in healthy adults :

- Ammonia: 15-50 µmol/L.
- Ceruloplasmin: 15-60 mg/dL.
- Chloride: 95-105 mmol/L.
- Copper: 70-150 µg/dL.
- Creatinine: 0.8-1.3 mg/dL.
- Blood urea nitrogen: 8-21 mg/dL.
- Ferritin: 12-300 ng/mL (men), 12-150 ng/mL (women)
- Glucose: 65-110 mg/dL.

Some physiological parameters & its significance are follows :

1) Basal metabolic rate (BMR) is often used interchangeably with resting metabolic rate (RMR). While BMR is a minimum number of calories required for basic functions at rest, RMR — also called resting energy expenditure (REE) — is the number of calories that your body burns while it's at rest.

An average man has a BMR of around 7,100 kJ per day, while an average woman has a BMR of around 5,900 kJ per day. Energy expenditure is continuous, but the rate varies throughout the day.

2) A blood sugar level less than 140 mg/dL (7.8 mmol/L) is normal. A reading of more than 200 mg/dL (11.1 mmol/L) after two hours indicates diabetes. A reading between 140 and 199 mg/dL (7.8 mmol/L and 11.0 mmol/L) indicates prediabetes.

3**) A normal total cholesterol level** for adults without heart disease is less than 200 mg/dL. An HDL cholesterol level of 60 mg/dL and above is considered protective against heart disease, while a level less than 50 mg/dL for women or 40 mg/dL for men is considered a major risk factor for heart disease.

4) Normal body temperature varies by person, age, activity, and time of day. The average normal body temperature is generally accepted as 98.6°F (37°C). Some studies have shown that the "normal" body temperature can have a wide range, from 97°F (36.1°C) to 99°F (37.2°C).

5) A normal resting heart rate for adults ranges from 60 to 100 beats per minute. Generally, a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness.

6) Ideal blood pressure is considered to be between 90/60mmHg and 120/80mmHg. high blood pressure is considered to be 140/90mmHg or higher. low blood pressure is considered to be 90/60mmHg or lower.

Normal values of some of the electrolytes :

Sodium	136-146 mEq/L (136-146 mmol/L)
Chloride	96-106 mmol/L
Potassium	3.5-4.5 mEq/L (3.5-4.5 mmol/L)

Bicarbonate 22-29 mEq/L (23-29 mmol/L)

HEIGHT TO WEIGHT RATIO CHART

Female				Male			
Height	**Low**	**Target**	**High**	**Height**	**Low**	**Target**	**High**
4′ 10″	100	115	131	5′ 1″	123	134	145
4′ 11″	101	117	134	5′ 2″	125	137	148
5′ 0″	103	120	137	5′ 3″	127	139	151
5′ 1″	105	122	140	5′ 4″	129	148	155
5′ 2″	108	125	144	5′ 5″	131	145	159
5′ 3″	111	128	148	5′ 6″	133	148	163
5′ 4″	114	133	152	5′ 7″	135	151	167
5′ 5″	117	136	156	5′ 8″	137	154	171
5′ 6″	120	140	160	5′ 9″	139	157	175
5′ 7″	123	143	164	5′ 10″	141	160	179
5′ 8″	126	146	167	5′ 11″	144	164	183
5′ 9″	129	150	170	6′ 0″	147	167	187
5′ 10″	132	153	173	6′ 1″	150	171	192
5′ 11″	135	156	176	6′ 2″	153	175	197
6′ 0″	138	159	179	6′ 3″	157	179	202