

# Calorie Use in the Body

Use this handout in conversation with your dietitian.

## Your body organs need calories to work properly

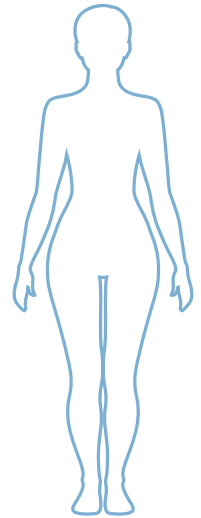
The human body is like a machine and requires fuel — or energy — to work. No matter how much activity you're getting, your organs need energy to work well. Energy demands continue even when you're asleep.

The energy your body uses is measured in calories. When calories are restricted, your body uses available energy for the most essential functions first. That means less essential body functions may suffer. The table below shows how much energy common body functions require.

Body function	Average calories needed every day
<b>1. Survival:</b> heart, lungs, kidneys, brain, liver, etc.	<b>800</b>
<b>2. Luxuries:</b> temperature control, hair, nails, wound healing, menstruation, memory/concentration	400
<b>3. Growth or pregnancy</b>	200-300
<b>4. Activity:</b> varies	500
<b>5. Storage:</b> only when calorie intake exceeds above needs	?
<b>Total</b>	<b>1,900*</b>

## In 24 Hours, the average body does all the following:

- The heart beats 115,200 times
- Blood travels 12,000 miles
- More than 20,000 words are spoken
- 100 billion brain cells are used
- Over 70,000 thoughts are thought
- Nails grow about 0.0039 inches
- Hair grows 0.017 inches
- The body gives off 85.6° F of heat
- The body turns 25 to 30 times during sleep
- About 750 major muscles are used



\*This amount will vary from person to person.

## Effects of starvation

When calories are restricted and the body is starved, it has to make adjustments in order to survive. This causes physical, mental, and emotional changes. Below are some examples of how starvation impacts the human body.

### Emotional and social changes

- Depression
- Anxiety
- Irritability, anger
- Unstable moods
- “Psychotic” episodes
- Personality changes
- Social withdrawal

### Food attitude and behavior changes

- Preoccupation with food
- Collection of recipes, cookbooks, and menus
- Unusual eating habits
- Increased consumption of coffee, tea, and spices
- Binge eating

### Physical changes

- Sleep disturbances
- Weakness
- Gastrointestinal disturbances
- Increased sensitivity to noise and light
- Edema or swelling
- Poor temperature regulation
- Tingling, prickling, or nerve pain
- Decreased metabolism
- Decreased sexual interest

### Mental changes

- Decreased memory and concentration
- Poor judgment
- Lack of interest or concern

## Where can I learn more?

- <http://www.heart.org>
- Keys, A. et al. *The Biology of Human Starvation*. Minneapolis, MN: U of Minnesota Press; 1950.
- Meyers, E.S. *Winning the War Within: Nutrition Therapy for Clients with Eating Disorders*. 2nd ed. Dallas, TX; (2006).
- [http://www.loni.usc.edu/about\\_loni/education/brain\\_trivia.php](http://www.loni.usc.edu/about_loni/education/brain_trivia.php)

Intermountain Health complies with applicable federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. Se proveen servicios de interpretación gratis. Hable con un empleado para solicitarlo. 我們將根據您的需求提供免費的口譯服務。請找尋工作人員協助。

© 2022-2024 Intermountain Health. All rights reserved. The content presented here is for your information only. It is not a substitute for professional medical advice, and it should not be used to diagnose or treat a health problem or disease. Please consult your healthcare provider if you have any questions or concerns. FS556 - 11/24 (Last reviewed - 08/22) Also available in Spanish.