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whole organism that cannot be predicted from the properties of its separate parts- essentially human beings are more than the sum of their parts.

- Treating the person!
 - A patient's perceptions, emotional responses to life, and confidence in the health professional profoundly affect the outcome of the treatment.
- **Anatomical Variation:**
 - No 2 humans are exactly alike.

1.6 Human Function

- **Characteristics of life**
 - From a biological viewpoint, life is not a single property. It is a collection of properties that help to distinguish living from the nonliving things.
 - **Organization:** living things exhibit a far higher level of organization than the nonliving world around them. They expend a great deal of energy to maintain order.
 - **Cellular organization:** Living matter is always compartmentalized into one or more cells.
 - **Metabolism:** Living things take in molecules from the environment and chemically change them into molecules that form their own structures, control their physiology, or provide them with energy.
 - Metabolism is the sum of this internal change.
 - Two classes of reactions: Anabolic and catabolic
 - ◆ **Anabolic:** Where relatively complex molecules are synthesized from simpler ones
 - ◆ **Catabolism:** relatively complex molecules are broken down into simple ones.
 - Metabolism produces chemical wastes, requiring excretion: the separation of wastes from the tissues and their elimination from the body.
 - **Responsiveness and movement:** The ability of organisms to sense and react to stimuli (changes in their environment)

- **The integrating (control) Center:** Mechanism that processes this information, relates it to other available information, and "makes a decision: about what the appropriate response should be.
- **The effector:** the cell or organ that carries out the final corrective action.
- **Vasodilation:** the widening of blood vessels.
 - When blood vessels of the skin dilate, warm blood flows closer to the body surface and loses heat to the surrounding
- **Vasoconstriction:** a narrowing of the blood vessels in the skin, which serves to retain warm blood deep in your body and reduce heat loss. (if this is not enough your brain activates shivering)



- **Positive feedback and Rapid Change**

- **Positive feedback** is a self-amplifying cycle in which a physiological change leads to even greater change in the same direction, rather than producing the corrective effects of negative feedback.
- Normal way of producing a rapid change
- Frequently, positive feedback is a harmful or even life-threatening process. This is because its self-amplifying nature can quickly change the internal state of the body to something far from its homeostatic set point.