

- We have to deliver water to transport the heat, which comes from your blood plasma, send hot water to blood capillaries and is sent out the body through sweat secretion
- Sweat is 98% water

Control of glands

- AUTONOMIC NERVOUS SYSTEM-system that keeps you in homeostasis
 - When one sebaceous gland is activated, all are
 - Merocrine is more specific location & amount

Local control

- The integument can respond independent of the endocrine system and nervous system.
- Mechanical stress can trigger stem cell divisions resulting in *calluses*.
- Regeneration occurs after damage.
- The inability to completely heal after severe damage may result in a cellular **scar tissue**.

Cancer

- > 1 in 2 men
- > 1 in 3 women
- > 2nd to heart disease for cause of death in Americans
- > Skin cancer is the most common (basal cell carcinoma)-relatively slow growing
- > Genetically altered/mutation cell in the body, then replicate as usual, dangerous when replicates in other tissues
- > Melanoma is the more dangerous type of skin cancer
- > Develop in exposed areas
- > Aged spots- damage from UV radiation that is not cancerous but has that potential
- > Metastasiz - by word for spread
- > Melanocytes- cells that become melanoma

Causes of Cancer

- **Genetic Factors**
 - Hereditary predisposition
- **Environmental Factors (70-80%)**
 - Carcinogens: directly/indirectly
 - Epithelial tissues – rapid cell divisions (skin, lining of intestines)
 - Low in nervous and muscle tissues – little to no divisions

Cancer Treatment

- Surgical removal of tumors
- Killing of metastasized cells
 - Chemotherapy
 - Slows regeneration and maintenance of epithelia (hair loss, nausea)

Warning signs:

- Change in bowel or bladder habits
- A sore that does not heal
- Unusual bleeding or discharge