

VITAMIN D PRODUCTION

1. UV light causes skin to produce a precursor molecule of vitamin D
 2. Precursor is carried by blood to liver where it is modified
 3. Next to kidneys where it is modified again to form active vitamin D
- **Vitamin D** can also be ingested through fish oils, fortified milk, eggs, and butter.
 - **Vitamin D** stimulates intestine to absorb calcium and phosphate (bone growth and muscle function)

VITAMIN D PRODUCTION

- Body temp. should be 98.6°C
- Rate of chemical reactions (metabolism) is altered by changes in temp.

To cool body:

- blood vessels in dermis dilate and heat is transferred from deep in tissues to skin and sweat is produced

Too heat body:

- blood vessels constrict to reduce blood flow to skin and heat is retained

VITAMIN D PRODUCTION

- Blood flow decreases and skin becomes thinner due to decreased amounts of collagen
- Decreased activity of sebaceous and sweat glands make temperature regulation more difficult
- Loss of elastic fibers causes skin to sag and wrinkle

CLASSIFICATION of BURNS

1ST DEGREE:

- damages only epidermis
- redness, slight swelling, pain
- heals within 2-3 days (usually no scar)
- includes sunburns or exposure to cold

2ND DEGREE:

- damages epidermis and upper dermis
- redness, swelling, pain, blisters
- heals in 2 weeks with some scarring

3RD DEGREE:

- destroys epidermis and dermis
- burned areas are cherry red to black
- nerve endings are destroyed
- skin graft might be necessary

TYPES of SKIN CANCER

BASAL CELL CARCINOMA:

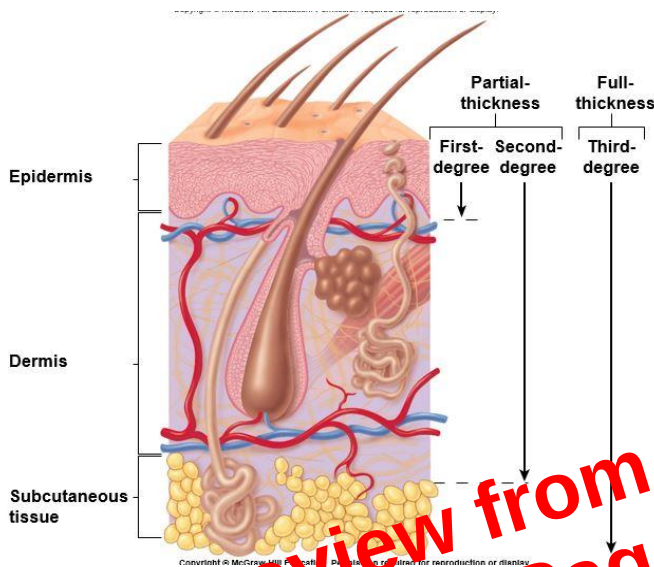
- cells in stratum basale affected
- cancer removed by surgery

SQUAMOUS CELL CARCINOMA:

- cells above stratum basale affected
- can cause death

MALIGNANT MELANOMA:

- arises from melanocytes in a mole
- rare type
- can cause death



SKIN CANCER

- Most common cancer
- Mainly caused by UV light exposure
- Fair-skinned people more prone
- Prevented by limiting sun exposure and using sunscreens
- UVA rays cause tan and is associated with malignant melanomas
- UVB rays cause sunburns
- Sunscreens should block UVA and UVB rays



(a)



(b)

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(c)
Cancer Institute