

Aging changes in skin

Aging changes in the skin are a group of common conditions and developments that occur as people grow older.

Information

Skin changes are among the most visible signs of aging. Evidence of increasing age includes wrinkles and sagging skin. Whitening or graying of the hair is another obvious sign of aging.

Your skin does many things. It protects you from the environment, helps control your body temperature and fluid and electrolyte balance, and contains nerve receptors that allow you to feel sensations such as touch, pain, and pressure.

Although skin has many layers, it can be generally divided into three main parts:

- The outer part (epidermis) contains skin cells, pigment, and proteins.
- The middle part (dermis) contains blood vessels, nerves, hair follicles, and oil glands. The dermis provides nutrients to the epidermis.
- The inner layer under the dermis (the subcutaneous layer) contains sweat glands, some hair follicles, blood vessels, and fat. Each layer also contains connective tissue with collagen fibers to give support and elastin fibers to provide flexibility and strength.



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Components of skin

Skin changes are related to environmental factors, genetic makeup, nutrition, and other factors. The greatest single factor, though, is sun exposure. This can be seen by comparing areas of your body that have regular sun exposure with areas that are protected from sunlight.

Natural pigments seem to provide some protection against sun-induced skin damage. Blue-eyed, fair-skinned people show more aging skin changes than people with darker, more heavily pigmented skin.

AGING CHANGES

With aging, the outer skin layer (epidermis) thins, even though the number of cell layers remains unchanged.

The number of pigment-containing cells (melanocytes) decreases, but the remaining melanocytes increase in size. Aging skin thus appears thinner, more pale, and clear (translucent). Large pigmented spots (called age spots, liver spots, or lentigos) may appear in sun-exposed areas.

Changes in the connective tissue reduce the skin's strength and elasticity. This is known as elastosis and is especially pronounced in sun-exposed areas (solar elastosis). Elastosis produces the leathery, weather-beaten appearance common to farmers, sailors, and others who spend a large amount of time outdoors.

The blood vessels of the dermis become more fragile. This leads to bruising, bleeding under the skin (often called senile purpura), cherry angiomas, and similar conditions.

Sebaceous glands produce less oil as you age. Men experience a minimal decrease, usually after the age of 80. Women gradually produce less oil beginning after menopause. This can make it harder to keep the skin moist, resulting in dryness and itchiness.

The subcutaneous fat layer thins, reducing its normal insulation and padding. This increases your risk of skin injury and reduces your ability to maintain body temperature. Because you have less natural insulation, you can get hypothermia in cold weather.

Some medications are absorbed by the fat layer, and loss of this layer changes the way that these medications work.

The sweat glands produce less sweat. This makes it harder to keep cool, and you are at increased risk for becoming overheated or developing heat stroke.

Growths such as skin tags, warts, and other blemishes are more common in older people.

EFFECT OF CHANGES

As you age, you are at increased risk for skin injury. Your skin is thinner, more fragile, and the protective subcutaneous fat layer is lost. In addition, your ability to sense touch, pressure, vibration, heat and cold may be reduced. Thus, your skin is at higher risk for injury.

Rubbing or pulling on the skin can cause skin tears. Fragile blood vessels are easily broken. Bruises, flat collections of blood (purpura), and raised collections of blood (hematomas) may form after even a minor injury.

This is most easily seen on the outside surface of the forearms, but can occur anywhere on the body. Skin changes and loss of subcutaneous fat, combined with a tendency to be less active, as well as some nutritional deficiencies and other illnesses contribute to pressure ulcers.

Aging skin repairs itself more slowly than younger skin. Wound healing may be up to 4 times slower. This contributes to pressure ulcers and infections. Diabetes, blood vessel changes, lowered immunity, and similar factors also affect healing.

COMMON PROBLEMS

Skin disorders are so common among older people that it is often difficult to tell normal changes from those related to a disorder. More than 90% of all older people have some type of skin disorder.

Skin disorders can be caused by many conditions, including:

- Blood vessel diseases such as arteriosclerosis
- Diabetes
- Heart disease
- Liver disease
- Nutritional deficiencies
- Obesity
- Reactions to medications
- Stress

Other causes of skin changes:

- Allergies to plants and other substances
- Climate
- Clothing
- Exposures to industrial and household chemicals
- Indoor heating

Sunlight can cause:

- Loss of elasticity (elastosis)

- Noncancerous skin growths (keratoacanthomas)
- Pigment changes such as liver spots
- Thickening of the skin

Sun exposure has also been directly linked to skin cancers, including basal cell cancer, squamous cell carcinoma, and melanoma.

PREVENTION

Because most skin changes are related to sun exposure, prevention is a lifelong process.

- Prevent sunburn if at all possible.
- Use a good quality sunscreen when outdoors, even in the winter.
- Wear protective clothing and hats as necessary.

Good nutrition and adequate fluids are also helpful. Dehydration increases the risk of skin injury. Sometimes minor nutritional deficiencies can cause rashes, skin lesions, and other skin changes, even if you have no other symptoms.

Keep skin moist with lotions and other moisturizers. Do not use soaps that are heavily perfumed. Bath oils are not recommended because they can cause you to slip and fall. Moist skin is more comfortable and will heal more quickly.

RELATED TOPICS

- Aging changes in body shape
- Aging changes in hair and nails
- Aging changes in hormone production
- Aging changes in organs, tissues, and cells
- Aging changes in the bones, muscles, and joints
- Aging changes in the breast
- Aging changes in the face
- Aging changes in the senses

Alternative Names

Wrinkles - aging changes; Thinning of skin

References

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Updated by: David C. Dugdale, III, MD, Professor of Medicine, Division of General Medicine, Department of Medicine, University of Washington School of Medicine. Also reviewed by David Zieve, MD, MHA, Medical Director, A.D.A.M. Health Solutions, Ebix, Inc.

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