The Basics of Anti-Aging Nutrition

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Causes of Premature Aging

Not managing body weight, allowing oneself to become either overweight or underweight.

Consuming an inappropriate diet, receiving insufficient nutrients or too much of certain nutrients.

Not exercising regularly.

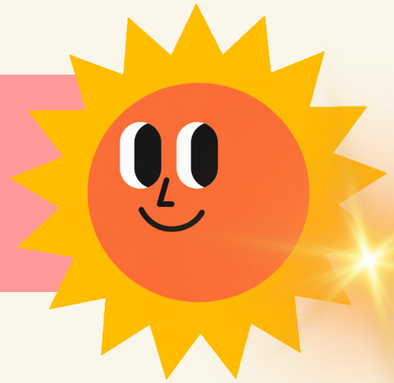
Not avoiding the consumption of harmful substances, such as tobacco, alcohol, contaminated food, heavy metals, and toxins.

Stress and insufficient rest lead to physical deterioration.

Antioxidants

Antioxidants are a form of oxygen that differs from the oxygen we breathe in. They have an unstable structure, allowing them to quickly form bonds with other substances, which can lead to those substances deteriorating. This process is called oxidation. Frequent oxidation in the body can contribute to premature aging and various diseases, such as cancer, diabetes, and heart disease.

Sunshine

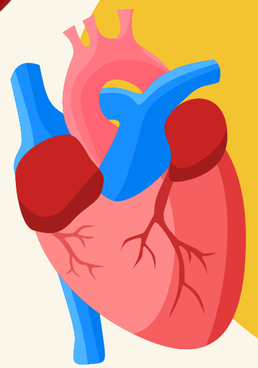


Sunlight contains ultraviolet (UV) rays, including UVA and UVB, which can cause sunburn and increase melanin production in the skin. Regular exposure to the sun, especially for those who work outdoors, significantly raises the risk of skin cancer. Sunlight is also a cause of skin wrinkling, darkening, sunburn, and skin cell damage.

Protecting the skin from sun damage is more crucial than merely using moisturizing creams. Even in shaded areas or on cloudy days, the skin can still be affected by UV rays due to their reflection and refraction. Therefore, it is important to apply sunscreen even when staying in the shade.

Toxic substances

Cigarette toxins



Cigarettes contain significant carcinogens, including nicotine, phenol, aldehyde aromatic, hydrocarbons, carbon monoxide, hydrogen cyanide, nitrogen oxide, formaldehyde, benzene, cadmium, toluene, and benzopyrene. Tar is a major cause of oral cancer, mucous membrane diseases, and darkening of the lips.

Nicotine stimulates tissues, leading to hardened blood vessels, increased heart rate, high blood pressure, elevated levels of fatty acids in the blood, and abnormal rapid heartbeats.

Toxic substances

Alcohol-related toxins

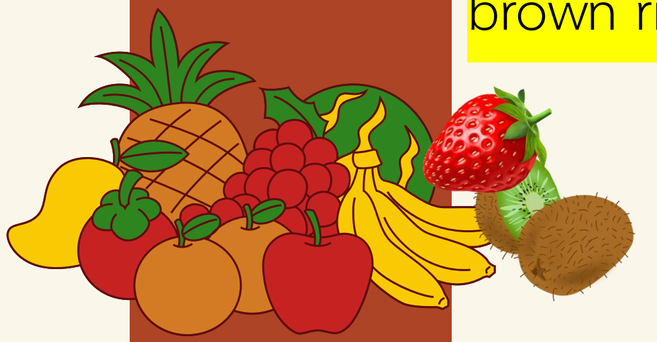
Alcohol increases fat buildup around the liver, leading to liver inflammation, cirrhosis, and potentially liver cancer.

Alcohol causes fat accumulation in the heart, reducing the heart muscle's ability to contract, leading to high blood pressure, coronary artery disease, and the risk of heart failure.

Principles, Concepts, and Importance of Anti-Aging Nutrition

10 Principles of Anti-Aging Nutrition

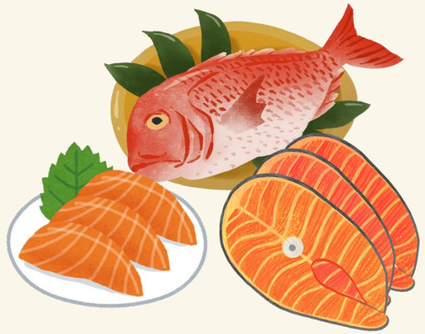
1. Consume unprocessed carbohydrates: Most modern foods are processed and refined, such as white rice, white sugar, sweets, candies, and soft drinks. Instead, focus on natural, unprocessed carbohydrates with high nutritional value. Specifically, whole grains that have not been refined are rich in soluble fiber, which helps lower cholesterol and reduce cancer risk. Examples include brown rice, fresh fruits, legumes, vegetables, and seeds.



Principles, Concepts, and Importance of Anti-Aging Nutrition

10 Principles of Anti-Aging Nutrition

2. Consume an adequate and appropriate amount of protein: Protein is found in plant seeds, vegetables, potatoes, legumes, low-fat milk, and seafood. Fish, in particular, contains beneficial omega-3 fats, which help support and reduce cell degeneration, strengthen the immune system, aid in blood clotting, alleviate depression, and protect against heart disease and cancer. To delay aging and stay healthy, it is recommended to eat fish at least twice a week.



Principles, Concepts, and Importance of Anti-Aging Nutrition

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3. Avoid fats from meats, oils, butter, and mayonnaise, especially fried foods: Foods that are fried in reused oil or cooked with excessive oil contribute to increased free radicals in the body, which accelerates aging and makes one more susceptible to various diseases. The most essential and beneficial fatty acids for the body are found in all types of seeds, nuts, and grains.

Principles, Concepts, and Importance of Anti-Aging Nutrition

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4. Consume vitamins from plant and animal sources: Natural vitamins are of higher quality than synthetic ones. The more stress you experience, the greater your body's need for vitamins and minerals to replace what is lost, more so than for the average person.

Principles, Concepts, and Importance of Anti-Aging Nutrition

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5. Focus on fresh vegetables and fruits: Your daily diet should include fresh vegetables and fruits, as they contain very little sodium. This can help delay aging and reduce the risk of various diseases, particularly cancer and hypertension. However, some fruits may be high in fats and cholesterol, such as olives, coconuts, and avocados.

Principles, Concepts, and Importance of Anti-Aging Nutrition

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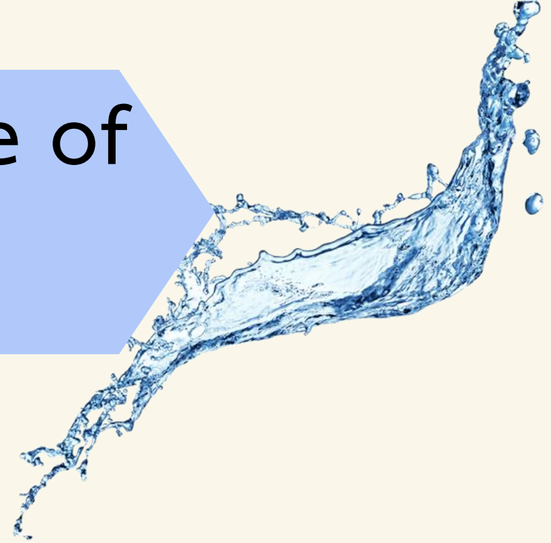
6. Avoid processed foods: This includes overly sweet foods, ready-made meals, and sodium, which is found in salt, MSG, baking powder, and various food additives. These foods offer little nutritional value and can be more harmful to the body.

Principles, Concepts, and Importance of Anti-Aging Nutrition



10 Principles of Anti-Aging Nutrition

7. Drink at least 8 glasses of clean water daily: Water helps transport nutrients throughout the body. It is best to drink clean water before or after meals, at least 1 hour before or after, to allow for optimal digestion. Additionally, drink 3 to 5 glasses of water upon waking in the morning. Avoid beverages with caffeine, alcohol, and soft drinks, as they provide no essential nutrients.

Principles, Concepts, and Importance of Anti-Aging Nutrition

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8. Eat appropriate portion sizes for each meal: **Avoid eating to the point of discomfort; aim to eat until you are almost full.** Breakfast should provide energy for the day’s activities, while lunch should be moderate to prevent afternoon drowsiness. Dinner should be light, as it is close to bedtime, allowing the stomach and intestines to rest during sleep.

Principles, Concepts, and Importance of Anti-Aging Nutrition

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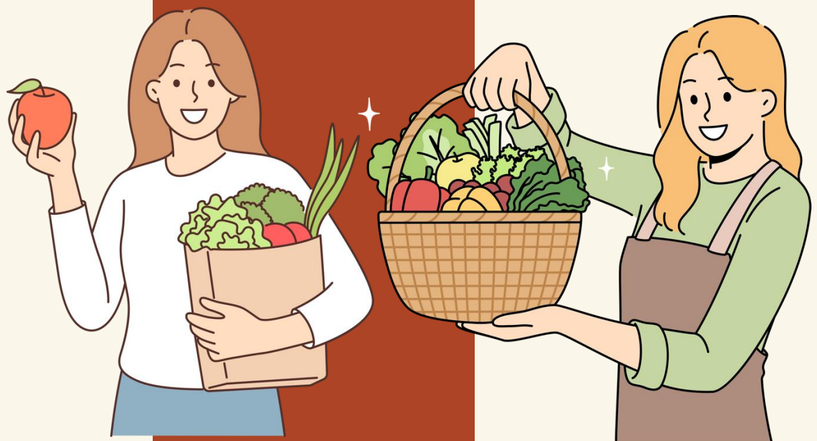
9. Eat seasonal and locally available foods: Consuming seasonal fruits, vegetables, and plants helps the body maintain balance with changing environmental conditions. Foods that are out of season or imported may be treated with chemicals or radiation.



Principles, Concepts, and Importance of Anti-Aging Nutrition

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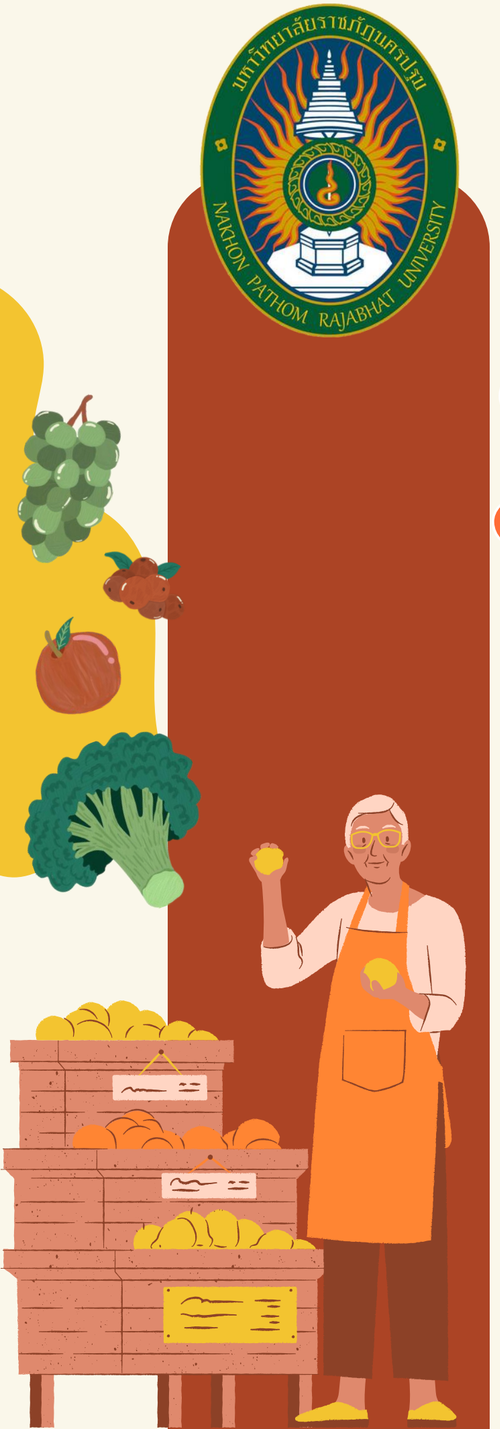
10. Adjust your food intake according to daily energy expenditure: If you work at a desk in an air-conditioned office, you should not eat as much as someone who performs physically demanding labor outdoors in the sun.

Promoting Healthy Eating Behaviors and Anti-Aging



1

Eating a moderate amount of food regularly as a habit: Overeating to the point of habit can cause the stomach to stretch, leading the body to require more food to feel full.

2

Eating at regular times: Digestive enzymes are released in response to food intake. If food is not consumed at the usual time, the stomach acid may start digesting the stomach lining instead, potentially leading to ulcers if this occurs frequently.

Promoting Healthy Eating Behaviors and Anti-Aging

3

Drink fresh vegetable and fruit juices immediately after preparation: They should not be left for more than 30 minutes to retain their vitamins and minerals and prevent nutrient loss. For instance, vitamins A and C can rapidly degrade when exposed to air. If the juice is extracted using a juicer, you will also benefit from the enzymes. However, when drinking blended fruit or vegetable juices, the enzymes are no longer present.

Promoting Healthy Eating Behaviors and Anti-Aging

4

Water-soluble vitamins, such as B vitamins and vitamin C, along with several minerals, have a short lifespan of just a few hours in our bodies before being excreted or converted.

5

Foods should not be too hard to chew or difficult to swallow: Such foods can make the stomach work harder, leading to digestion issues and symptoms like bloating and gas.

Promoting Healthy Eating Behaviors and Anti-Aging

6. **Foods should not be excessively spicy or sour**, as they can negatively impact the digestive system.

7. **You should have breakfast, lunch, and dinner without making any of them heavy or high in fat**. Avoid eating right before bed, as it can lead to bloating, difficulty in digestion, and weight gain.

8. **Choose cost-effective foods**, which are those that are readily available locally or in season, such as local vegetables and garden herbs.

Promoting Healthy Eating Behaviors and Anti-Aging

Choose foods that are free from toxins and pathogens.

Avoid foods that may contain toxins, such as borax in preservatives, sulfur dioxide in bleached foods, red dye boosters, and brightly colored artificial additives.

Do not reheat food in its original can, as this can be dangerous due to the potential release of chemicals or metals from the can lining. If you have leftover canned food, transfer it to a clean, covered container and store it in the refrigerator.

Anthropometric assessment

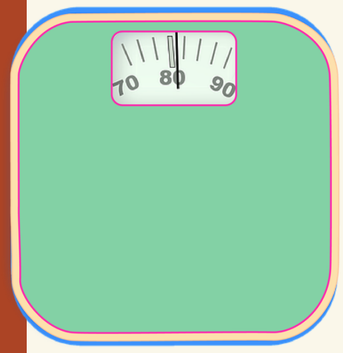
Body weight

Actual body weight refers to the weight measured using a weighing scale.

Elderly individuals at risk of falling should use a scale with handrails.

Individuals who are unable to stand on their own should use a wheelchair scale.

Bed scale



Anthropometric assessment

Body weight

Ideal body weight for adults is the weight that is considered appropriate or standard for optimal health.

For males the ideal body weight (kilograms) = height (centimeters) - 100

For females the ideal body weight (kilograms) = height (centimeters) - 110

Example Female age 30 year old height 165 cm.

the ideal body weight = 165-110 = 55 kg.

Anthropometric assessment

Body weight ⟫ Unintentional weight change

$$\text{Weight Change (\%)} = \frac{\text{(Normal Body Weight– Actual Body Weight)}}{\text{Normal Body Weight}} \times 100$$

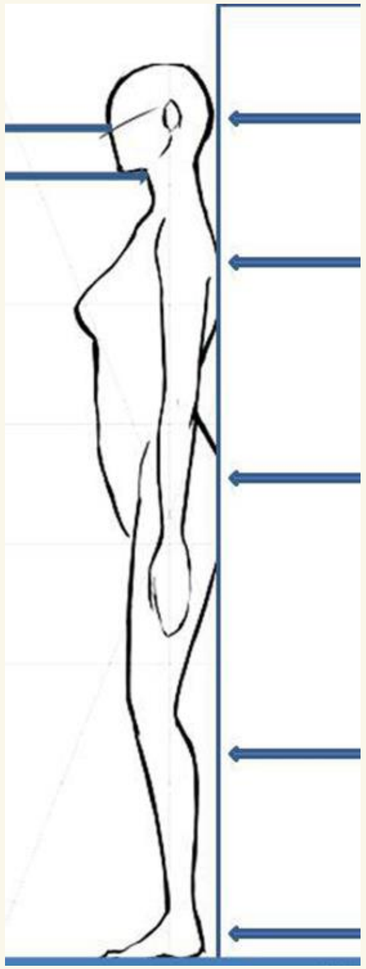
Example A female age 40 year old weighed 60 kg. 3 months ago now weighs 50 kg. and isn't currently on a weight management program.

$$\text{Weight Change} = \frac{60-50}{60} \times 100 = 16.7\ \%$$

Within 3 months, if there is weight loss, further investigation is required to identify the cause of the weight loss.

Anthropometric assessment

Height



To measure height, follow these steps:

1. Remove shoes and socks.
2. Stand on a flat surface with your heels touching the height measurement device.
3. Keep your knees straight, back, and head in contact with the height measurement device.
4. Look straight ahead.
5. Place a right angle tool on top of your head, ensuring it is perpendicular to the measurement device.
6. Read the measurement at eye level.

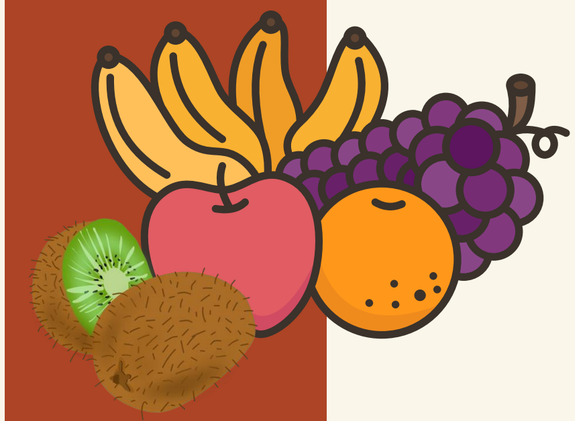
Anthropometric assessment

Body Mass Index: BMI

Body Mass Index (Kg./ m^2) = $\frac{\text{Body Weight (Kg.)}}{\text{Height } (m^2)}$

Example Body Weight 60 Kg. height 165 cm.

Body Mass Index = $60/(1.65)^2$ = 22.04 Kg./ m^2



Anthropometric assessment

Skinfold thickness

Anthropometric assessment

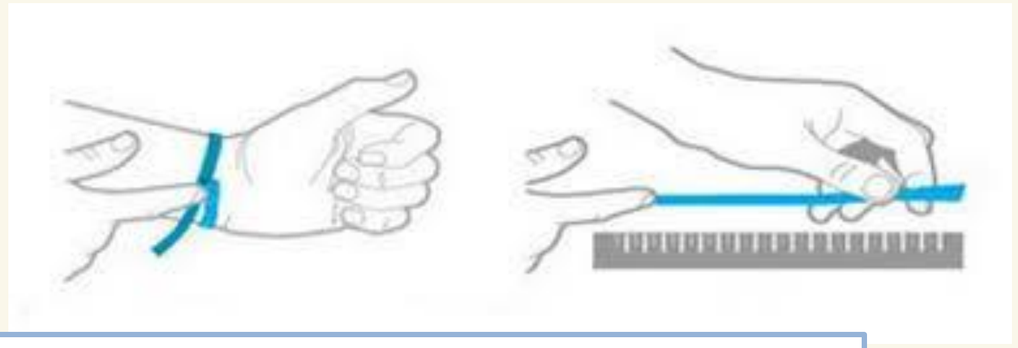
Waist circumference

Normal for Waist Circumference Should not exceed 80 cm. (32 inches) in females

Should not exceed 90 cm. (36 inches) in males

Anthropometric assessment

Body frame



Body frame size interpretation, categorized by sex, is divided into three types: small, medium, and large bone structure.

Example A male height 170 cm., wrist circumference 16.5 cm.

Waist-hip ratio: WHR = 170/16.5 = 10.3 medium structure.

Anthropometric assessment

Muscle strength

Interpretation by sex using muscle strength values divided by body weight (kilograms of muscle strength per kilogram of body weight)

Biochemical Assessment

Laboratory tests are used when body measurements or physical examinations show abnormalities, in order to identify the causes or monitor issues related to nutrition.

Clinical assessment

General appearance

Ectomorph

Minimal body fat accumulation, little muscle, small skeletal frame, thin and slender body, with a short torso but long neck, arms, and legs. Narrow shoulders, flat chest, small hips, minimal body fat, and muscle with a thin, elongated, and minimal appearance. Metabolism in the body is fast.

Clinical assessment

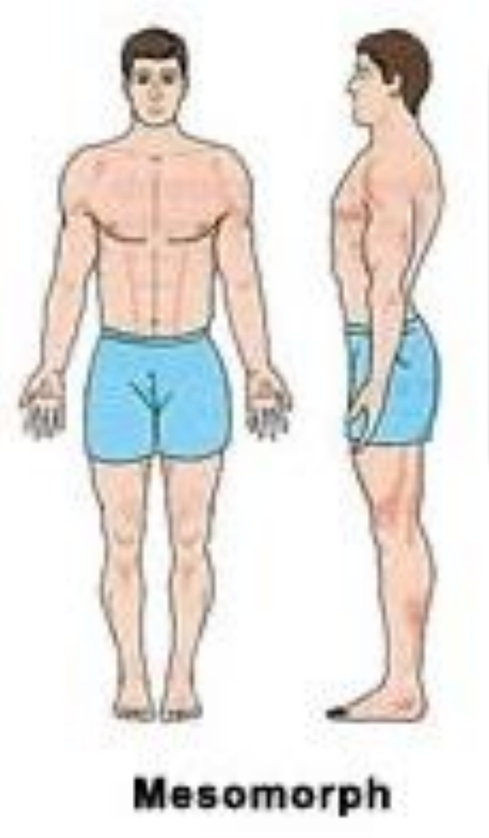
General appearance

Endomorph

High body fat accumulation, little muscle, large skeletal frame, overweight, with a short neck, arms, and legs, and a round face. The upper, middle, and lower parts of the torso are similarly large, with a lot of fat cells and no visible muscle. Metabolism in the body is slow.

Clinical assessment

General appearance



Mesomorph

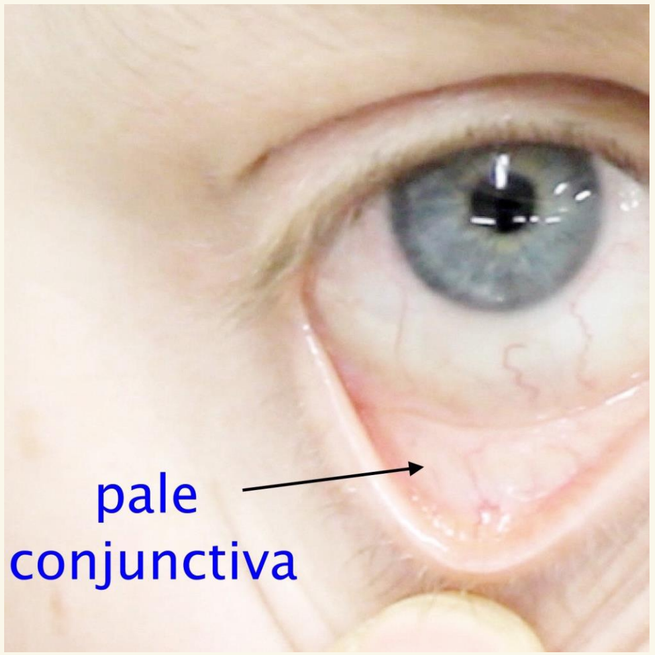
Low to moderate body fat accumulation and moderate to high muscle mass. The skeletal frame is large, and the muscles covering it are also large and dense. Broad shoulders, wide and thick chest, long torso tapering to a narrow waist in a V-shape. Wrists, fingers, and forearms are large. Body fat levels are low, muscles develop easily and are clearly visible. Metabolism in the body is fast.

Clinical assessment

Physical Examination

Assessment of Paleness:

- Examine the lower conjunctiva of the eyelid, which may appear pale.
- Additionally, observe the palms of the hands for signs of pallor.



Clinical assessment

Physical Examination

Assessment of jaundice involves examining the sclera (white part of the eyes) to detect yellowing (icteric sclera). Additionally, observing the palms can help determine the presence of jaundice. If the palms and body are yellow but the sclera is not, it is often due to excessive intake of foods high in beta-carotene, such as pumpkin, papaya, and carrots. Discontinuing these foods typically leads to the normalization of yellowing in the palms and body.

Clinical assessment

Physical Examination

Corneal arcus

Accumulation of phospholipids and cholesterol in the cornea, forming a ring that is white, light gray, or blue in color, is known as corneal arcus. This opacity of the cornea is commonly observed in the elderly.

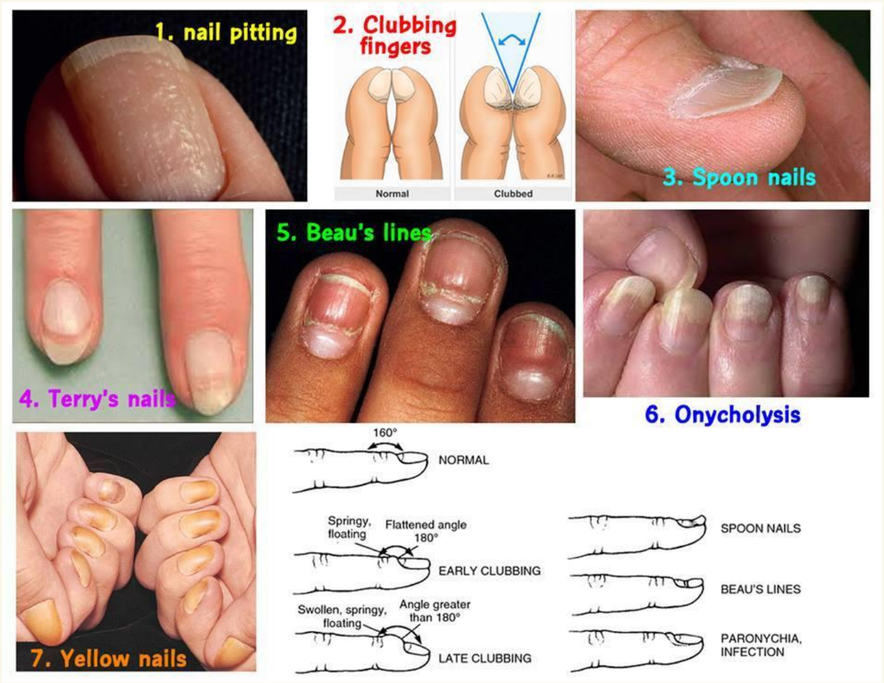
Clinical assessment

Xanthelasma: Fatty deposits on the skin near the eyes, known as xanthelasma, can serve as supporting evidence for hyperlipidemia (high blood lipid levels).

Clinical assessment

Nail Assessment

- **Koilonychia (Spoon Nails)**: Nails that are spoon-shaped and uneven often indicate iron deficiency.
- **Muehrcke's Lines**: White transverse lines across the nails suggest severe protein deficiency.
- **Leukonychia**: White spots on the nails may indicate a temporary protein deficiency.



Clinical assessment

Assessment of Edema:

Observe the face, hands, and feet. To evaluate pitting edema, apply pressure to the shins, hands, or feet for 5 seconds and then release. If a depression remains, it indicates pitting edema. The severity of pitting edema is categorized into four levels:

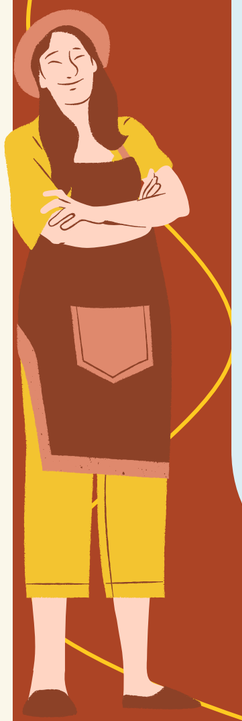
- **1+**: Depression of 2 mm
- **2+**: Depression of 4 mm
- **3+**: Depression of 6 mm
- **4+**: Depression of 8 mm

Clinical assessment

Assessment of Dehydration

Skin Turgor: Pinch the skin on the back of the hand and then release it. If the skin remains elevated and does not return to its normal position quickly, it indicates dehydration.

Summary



Aging can be slowed down by focusing on consuming foods rich in antioxidants, such as fresh fruits and vegetables, natural vitamins, and healthy fats from fish and whole grains. This should be combined with avoiding processed foods, fried foods, sweets, and saturated fats that can damage cells. Additionally, drinking enough clean water, exercising regularly, and getting adequate sleep are essential for strengthening the immune system and supporting cell repair.

Nutritional assessment is also an important part of health care. It can be done by measuring body mass index (BMI), body fat percentage, waist circumference, biochemical tests, and muscle strength. These indicators help plan appropriate dietary habits and overall body care.

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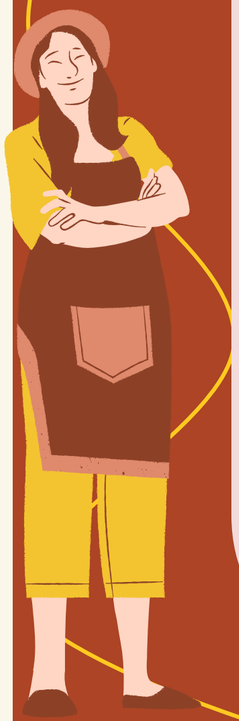

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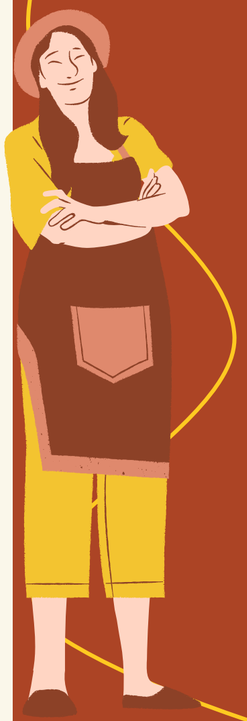

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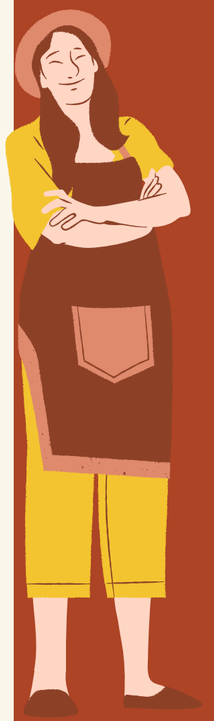

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