

CENTRAL NERVOUS SYSTEM: SPECIAL SENSES

Skin

Increased pigmentation and atrophy of the epidermis, sweat glands and hair follicles. Elasticity and subcutaneous fat loss. Hair greys and recedes. Most age changes in the skin are proportional to the extent of environmental damage from sun and wind or heat and cold.

Eye

Loss of orbital fat with sunken eye appearance and lid laxity. Lipid deposits in cornea, reduced tears and dry cornea.

Ear

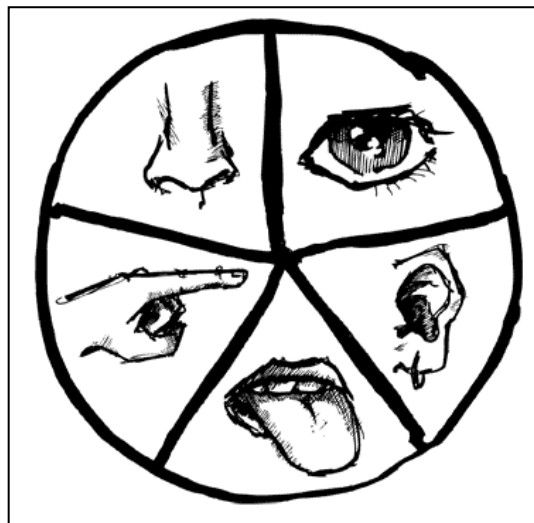
Degeneration of hair cells and neurones in cochlea and temporal cortex. Impaired elasticity affects vibration of basilar membrane. There can be excessive wax accumulation.

Nose

Atrophic changes in the mucosae with impaired sense of smell.

Taste

Atrophic changes in throat mucosae and neuronal degeneration with taste buds reduced 64% by the age of 75. Diminished reflex to cough and swallowing as well as a decrease in salivary secretion.



Lens elasticity loss plus degenerative changes in muscles of the eye affect lens contraction. Visual fields and colour detection alter, and floating objects become more common. Accommodation to sudden changes in light decreases; an increased dependency on sight for balance develops. If applicable, check spectacles are clean and that the patient is wearing the correct pair, e.g. not their reading glasses when walking, and ensure the treatment area is well lit. Instruction leaflets and exercise sheets should be in large, bold type.

Skin **is** prone to discolouration, thins, wrinkles and can dry, become fragile and bruise. **So**, watch for tears, sensitivity to treatments (ice or heat), or intolerance to mobilisation or massage. Orthoses or prolonged immobility on bony points may cause pressure areas. All may be compounded by oedema and pain, from conditions such as cellulitis, ulcers, pressure sores and neuropathies, with a resultant effect on range of movement and strength.

Touch shows a decrease in tactile sensitivity affecting proprioception. **So**, treat them in their bare feet to increase input, or alter the shape of their foot to increase base – you may need special orthoses to maintain alignment

Degeneration of hair cells in semicircular canals affects reflex postural control, with uncertainty and unreliability to move in darkness. Middle ear ossification impairs tone sensitivity, perception of background noise and sound localisation.

Confusional states can be caused by sensory deprivation or **communication** may be affected. It is important to talk more slowly and clearly than loudly. Check hearing aids are working correctly, and keep a communicator at hand, but be ready to use written communication methods or basic sign language. If repetition of a sentence is necessary, initially do not change the order of the words you used; it may be that person may not have heard you fully, rather than because they have misunderstood what you have said.

60% of 70–80 year olds have impaired smell. With decreased taste, this affects appetite. Energy systems are low affecting tolerance and fatigue. Undetected toxic fumes can poison the body.