

Balance – In search of the lost sense by Scott McCredie

Lots of anecdotes and ideas about how balance really is an important sense.

Ch 1: Sickness from motion

Vision, proprioception, vestibular system. If the three don't give the same input, you can get sick.

Vestibular diagrams

Ways of training you to resist it

Ch 2. Van Gogh's ear

Van Gogh might have had vestibular problem

Lots of anecdotes

Ch 3. Spin doctors and the discovery of 'multimodality'

Early history of science and the sense of balance

Ch 4. How balance contributes to survival

Sense of balance is one of earliest to develop in a fetus – indicates importance.

Neanderthals might not have had as good a sense of balance as modern humans (relative size of vestibular canals)

Role of running in human evolution

Ch 5. "Ear deaths" and "Graveyard spirals"

"Graveyard spirals" refers to pilots who spiral into the earth when visual cues fail.

Ch 6. Tonic and stimulant

Stimulating the vestibular system "may be important for organising other sensory and motor abilities"

Ch 7. Extreme equilibrium

Circus performers – good sense of balance to start with, then incredible amounts of practice

Ch 8. The Wallenda within

"All three primary sensory inputs for balance begin to atrophy in middle age. People who enjoyed good vision during their younger years usually require reading glasses. ... Proprioceptors on the bottoms of the feet lose sensitivity, causing a lag in communication with the brain about the foot's position on the earth. And the tiny hairs within the vestibular system's semicircular canals and otoliths also lose sensitivity, decreasing the speed at which the gravity and motion sensors relay information to the brain."

Falling is a major source of accidents among the elderly. In America, leading cause of accidental death after age 75.

Fear of falling for those who have had a fall often leads to becoming more sedentary which in turn increases the likelihood of another fall.

Tai chi is a great help in slowing or even reversing balance degeneration. Suits almost anyone from the 'frail elderly' to younger athletic types.

Athletic shoes reduce the information flow from the feet to the brain – not good for balance..

Walking on rough, uneven terrain can be beneficial (WW bushwalking qualifies).

Dancing and gardening are other good exercises.

"There is almost no difference in the sway patterns of elders who have exercised all their lives and those who begin after retirement, indicating that it's never too late to start a strength- and balance-training program."

“Older adults can maintain their equilibrium by strengthening key muscles and stimulating the balance system.”

“If you want to maintain your balance right through to the end, you’ve got to challenge and stimulate it with balance specific sports and exercises.”

Ch 9. The cognitive connection.

Balance exercises seem to help overcome dyslexia and improve other cognitive tasks.

I found it one of the most interesting chapters. Research now being done, despite resistance from people who don’t believe it can possibly work.

Ch 10. New balance

Sensory substitution – training other senses to assist with balance.

Almost miracles.

Ch 11. Staying glued to the wire

Height vertigo at least partially caused by absence of nearby visual reference points. (Fits me, I think.)

“As we age, we need to allow the brain time to compensate for our naturally deteriorating balance faculties. The only way it can do that is to continually challenge the balance system.”

Balance challenges may help you stay mentally sharp as well.

Appendix; Balance exercises (photocopied for me).