Embracing the Inevitable Wrinkles

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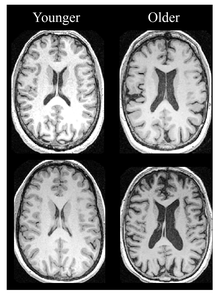
Introduction

What is Aging?

-Aging is associated with profound changes of both cognitive capacities and physical characteristics.

- **Cognitive/Brain Changes**



-Decreases in brain volume and white matter integrity, particularly evident in frontal and temporal regions.
-Generalized slowing i.e. the cognitive processing speed slowdown that accompanies aging.
- Increased risk of short term memory loss and age related diseases, i.e. Alzheimer's disease.
-Decreased lateralization specialization: the HAROLD model states that older adults show less specificity , such that what was once done by both.

- **Physical Changes**

-Cosmetic changes, height and weight decrease
-Osteopenia, i.e. mild loss of bone density
-Presbyopia, i.e. decline in accommodation with near-vision decline, increased difficulty with glare and dark adaptation

The Problem

-Life expectancy nearly doubled within the span of a century; new age related ailments that are formulating and are causing concern in our culture.
-Lack of knowledge toward the process of aging increases a negative perception among our culture.
-This lack of knowledge also allows discriminations and assumptions to occur toward the process of aging; as a form of ageism.

Public Knowledge

-Society tends to have an increased negativity toward the process of aging. According to research market firm, "Global Industry Analyst forecast anti-aging products will increase from $80million to $114billion by 2015," (Crary, 2012).

Goals

-To propose a model for healthy aging that will enforce a more positive perception toward the process of aging.
-To relate knowledge of contemporary research on how a healthy lifestyle can optimize cognitive capacity in older adulthood, and how such factors can ultimately be beneficial towards continued brain health.

Research

Rat pups raised in an enriched environment with social interaction and exercise and demonstrated :significant gains increased learning, increased brain weight, greater neuron counts, and increased synaptic connections between neurons.

Rosenzweig, 1984

The Colman & Weindruch (2009) study began 20 years ago involving two monkey groups: Control and Diet.

-The diet consist of antioxidants, folic acid essential fatty acids and phytoestrogen, all consistent with promoting brain health.

- The diet group showed significantly less diabetes, cancer, and heart and brain disease.

Colman & Weindruch, *Science*, 2009

The two monkeys are part of a study of the links between diet and aging.

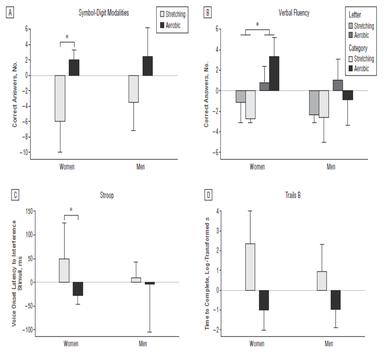
Baker et al. (2010) studied older adults with mild cognitive impairment (MCI) by assigning subjects to two groups:

Exercise: high-intensity aerobic exercise

Control: supervised stretching activities

Measures: cognitive tests given at baseline and after 6-months

Baker et al. 2010



Older adults with MCI showed significant improvements on tests of executive function after six-months of aerobic training

A Model for Optimizing Cognitive Capacity in Older Adulthood

Maintain an Enriched Environment

- Travel , learn something new, i.e. musical instrument, knitting, or take up a new game.

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Maintain Social Interaction

- Dine-out with friend and family, join a new club, participate in local charities, or help community service groups .

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Maintain a Healthy Diet

- Incorporate healthy foods full of: antioxidants (blueberries, strawberries, and spinach), folic acids (wheat, leafy greens, liver, oranges, asparagus), essential fatty acids (salmon, flaxseed, soybean oil, and walnuts) and phytoestrogen (broccoli, berries, and soy).

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Maintain an Exercise Regimen

- Engage in some aerobic activity that is enjoyable whether it is biking, dancing, swimming, or a brisk walk. Incorporating an aerobic activity at least one day per week for thirty minutes.

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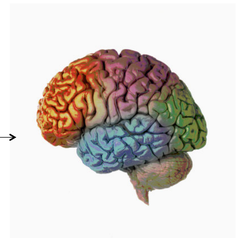
★Incorporating these aspects into daily schedules will optimize cognitive capacity!!



Conclusion

In brief, the process of aging is inevitable. However, the deleterious effects so often associated with aging are not. Research , such as the limited few we have reviewed in this study suggest that there are way to in which to stave off the dreaded , in ways such as maintaining an enriched environment, social interaction, a healthy diet, and an exercise regimen. By in large, the greatest defense against t the negative effects of aging are prevention . Aging therefore can be seen as a graceful, remarkable occurrence as one approaches twilight.

References

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