Healthy versus Pathological Aging

Disorders of Aging

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Support for brain health, cognitive aging, and acquired brain injury

Healthy versus Pathological Aging

Disorders of Aging

Outline

- Conceptual framework :
  - What does Aging mean?
  - Primary (healthy/normal) versus Secondary (impaired/pathological) Aging
  - What are Disorders of Aging (age-dependent versus aging-dependent disorders)
  - Differentiation and Types of Dementias
- References

What does Aging mean?

- Aging refers to the accumulation of physiological changes over time that result in increased risk of disease and death (Ashok & Ali, 1999); however aging itself is not considered a disease (Fortney, 1999)
- Rather, age-related changes follow the principle of multi-directionality of development, that is, over time, some functions may show negative changes (i.e. sensory functions, bone loss) while other functions may show positive changes (i.e. crystallized intelligence, improved knowledge base through familiarity with one's language and culture) (Krauss Whitbourne, 2005)
- Hayflick (1998) argues that the aging process (primary aging) itself can be differentiated from processes that cause disease (secondary aging)

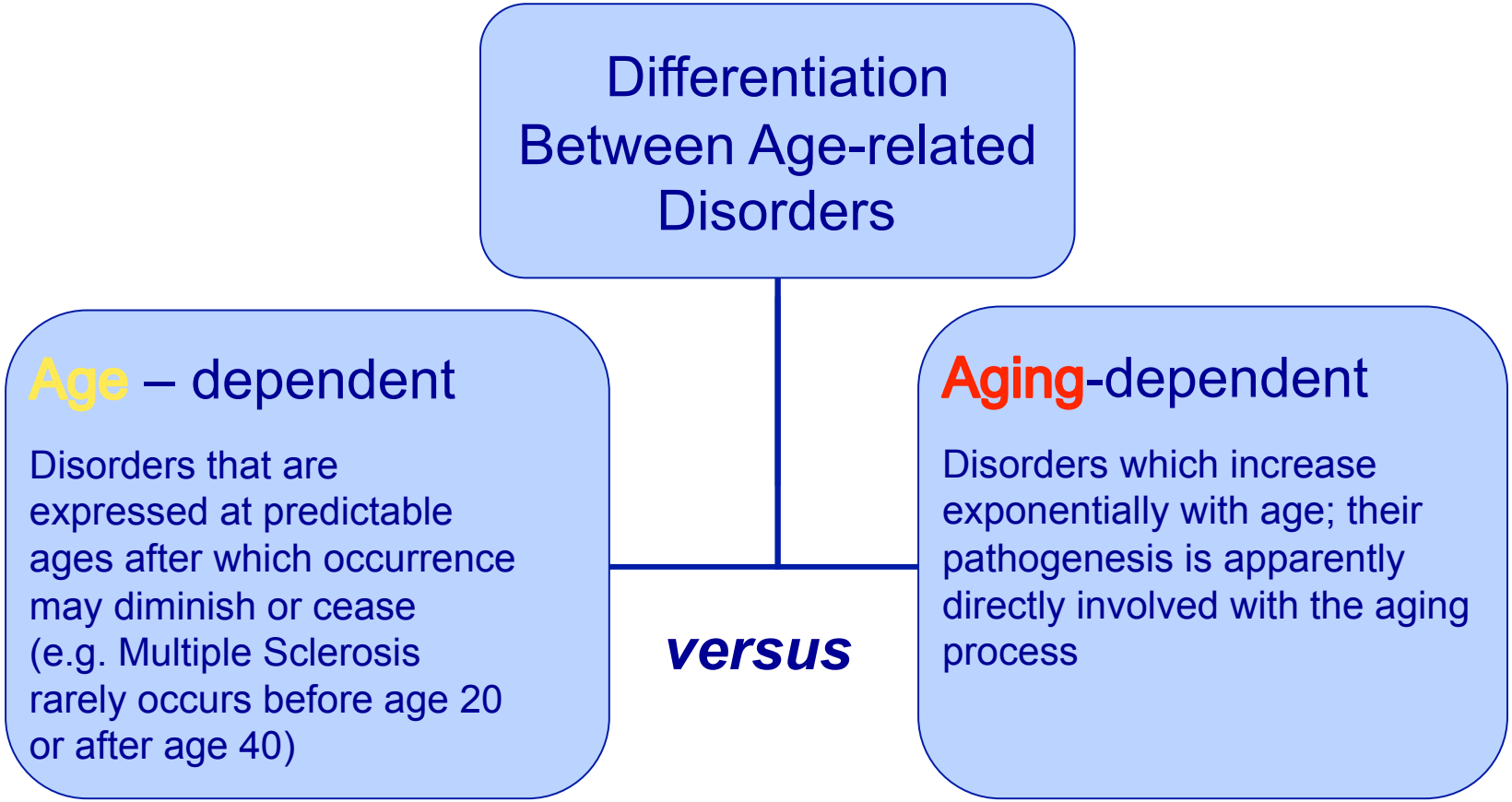
Primary versus Secondary Aging

Krauss Whitbourne, S. (2005)

Primary (healthy) aging **(does not require therapeutic interventions, but being proactive about one's health is beneficial)**	Primary aging refers to age-related changes that are intrinsic, progressive, and universal, i.e. these changes are built into the hard-wiring of the organism, but can occur at different rates in different individuals, and include changes such as wrinkling of skin, graying of hair, decrease in muscle strength and bone mass
Secondary (pathological) aging **(requires therapeutic interventions)**	Secondary, i.e. impaired, aging refers to age-related changes that are due to disease > these do not occur in all individuals

Differentiation between primary and secondary aging is important to identify diseases, and to allow for therapeutic measures to be taken when appropriate (i.e. disease-related processes)

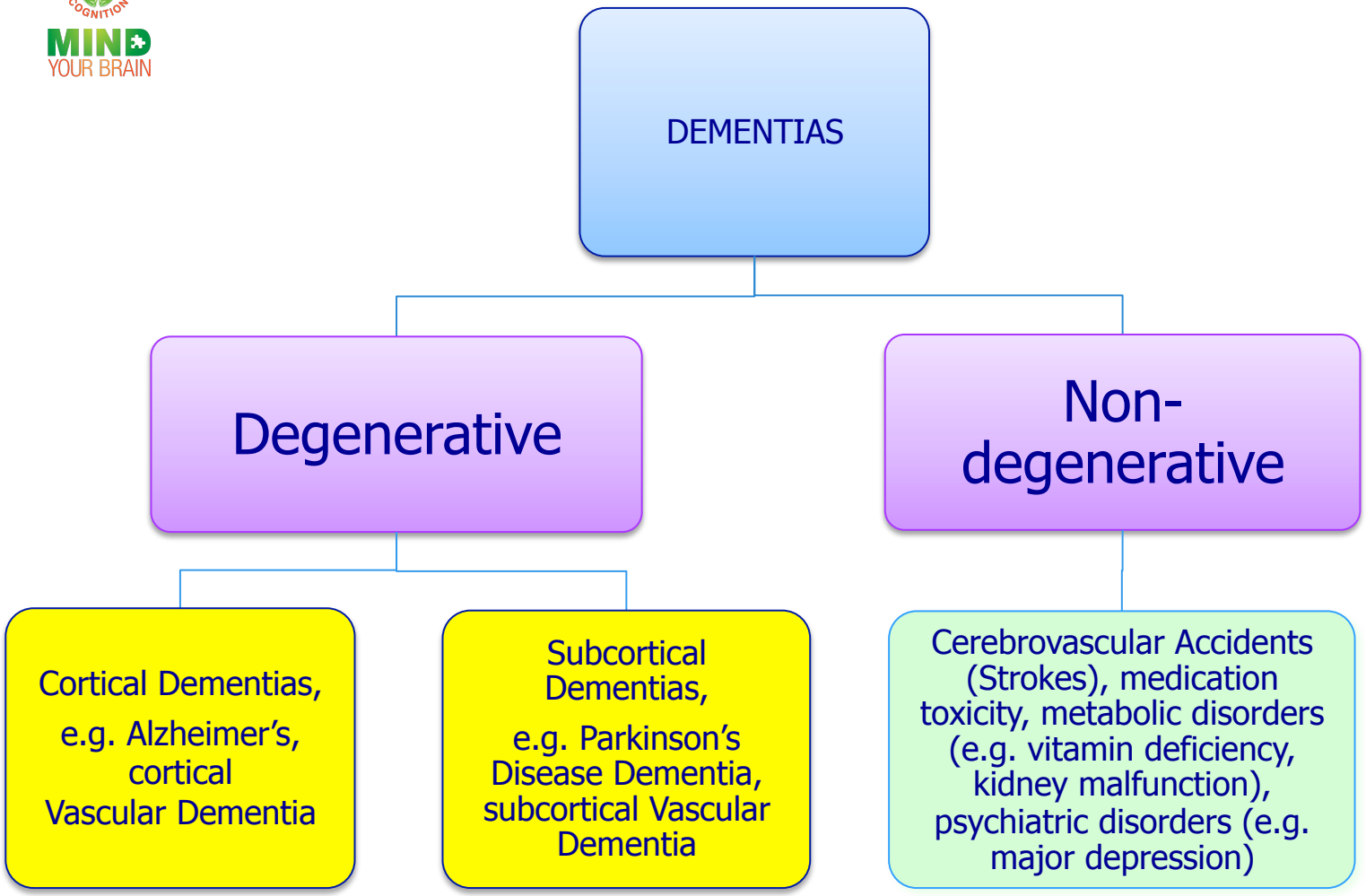
What are Disorders of Aging



Aging-dependent disorders are considered Disorders of Aging

Butler, Warner, William, Austad, Brody, Campisi, Cerami, Cohen, Cristofalo, Drachman, Finch, Fridovich, Harley, Havlik, Martin, Miller, Olshansky, Pereira-Smith, Smith, Sprott, West, Wilmoth, Wright (2004); Brody & Schneider (1986)

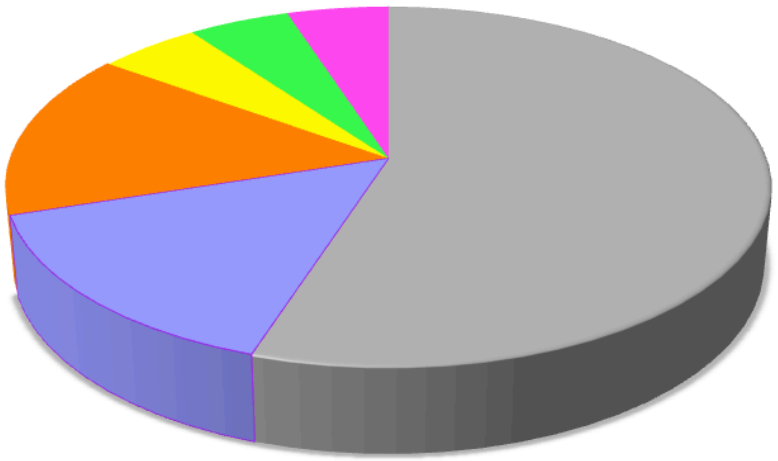
Differentiation of Dementias (Kempler, 2005)



Progressive and irreversible damage

Can often be stopped, and damage can be reversible > recovery of function possible

Types of Progressive Dementia in the population 65+



- Alzheimer's Disease (AD- accounts for 55% of all dementias)
- Vascular Dementia (VasD - accounts for 15% of all dementias)
- mixed AD+ VasD (accounts for 15% of all dementias)
- Parkinson Disease Dementia (PDD - accounts for 5% of all dementias, although others state up to 10%)
- Dementia with Lewy bodies (DLB - accounts for 5% of all dementias, although others state up to 10-15%)
- Other (e.g.frontotemporal dementia) (account for 5% of all dementias)

Dugue, Neugroschl, Sewell. & Marin (2003); McKeith, Mintzer, Aarsland, Burn, Chiu, Cohen-Mansfield, Dickson, Dubois, Duda, Feldman, Gauthier, Halliday, Lawlor, Lippa, Lopez, Machado, O'Brien, Playfer & Reid, (2004); Grossman, Bergmann, & Parker (2006)

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The End

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