Importance of Nutrition in the Prevention and Management of Dementia

Alexia J. Alford
Nutrition Specialist
Nutritional and Health-Related Environmental Studies
Division of Human Health
IAEA
Risk factors for Dementia

- Lifelong disease process resulting from multiple risk factors
- 35% attributable to 9 modifiable risk factors
Early life Prevention Risk Factors

- Reduced body size
- Food insecurity
- Obesity

Dementia
Early life Prevention - Nutrition

• Breastfeeding
  – ↓ obesity/↓ stunting
  – ↑ cognitive outcomes
  – mothers who breastfeed have ↓ AD

• Infant and young child interventions
  – ↓ stunting
  – ↓ obesity
Early life Prevention – Physical Activity

• regular engagement in childhood activity
  – structural brain changes $\rightarrow$ $\uparrow$ cognitive development $\rightarrow$ $\uparrow$ cognitive reserve
  – $\uparrow$ adult physical activity

Doubly labelled water to assess total energy expenditure
Midlife-Late Prevention

- Obesity in mid-life increases the risks of cognitive conditions by 60%.
- ↑ Polyunsaturated fats - Omega-3 and 6
- ↑ Antioxidants - Vitamin B, C, E
Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND)

- vegetables
- nuts
- berries
- beans and lentils
- wholegrains
- seafood
- poultry
- olive oil
- wine

30% to 35% lower risk of cognitive impairment during aging
Midlife-Late life Prevention
Midlife-Late life Prevention

• 45 minutes of intensive exercise 3/week
  – any exercise leaving you breathless
  – both aerobic and resistance-type training

• Tai Chi and Yoga
  – significantly increases brain volume and cognitive ability
Malnutrition and Dementia

Dementia
Cognitive impairment

- Weight loss
- Nutritional deficiencies

Pathophysiological changes

↓ Energy intake
↑ Energy Requirements

Olfactory and taste dysfunction
Chewing and swallowing difficulties
Medication side effects
Functional deficits
Refusal to eat
Nutrition care in Dementia

- Screen and closely monitor body composition
- Encourage positive eating environment
- Avoid dietary restrictions
- Use oral nutrition support
Management – Physical Activity

• Physically active patients $\rightarrow$ ↓ mortality

• Physical Options
  – Carer-delivered home based program
  – Resident care group activity
  – Multi-sensory exercise, which includes exercise with imagery, cognitive activities and music
Thank you!

https://www.iaea.org/topics/nutrition