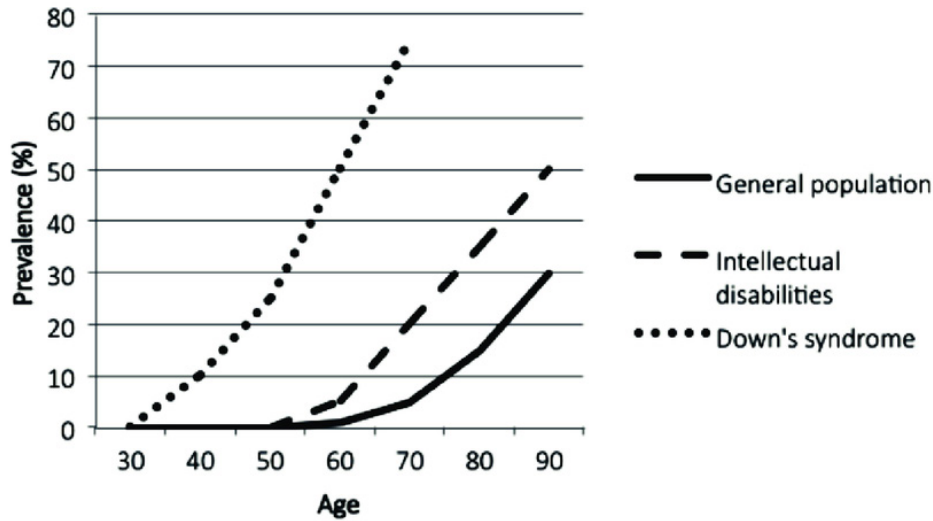


# HEALTHY BRAIN AGEING IN DOWN'S SYNDROME

## THE LINK BETWEEN DOWN'S SYNDROME AND DEMENTIA



Down's syndrome (DS) is a genetic condition caused by an extra copy of chromosome 21, which contains the APP gene, coding for amyloid. Excess amyloid is thought to cause of Alzheimer's disease (AD).



Ageing increases Alzheimer's disease risk for everyone, but in people with DS, this risk starts 20-30 years earlier. We study genetic, biological, health, and lifestyle factors that may explain variabilities.

Table reference: <https://www.bps.org.uk/guideline/dementia-and-people-intellectual-disabilities>

## STRATEGIES FOR IMPROVING HEALTHY BRAIN AGEING

**1. Regular Physical Activity.** Exercise is crucial for overall health and brain function. Tailor physical activities to the individual's abilities and interests, such as walking, swimming, or dancing.



**2. Nutritious Diet.** A balanced diet rich in fruits, vegetables, whole grains, lean proteins, and healthy fats supports brain health.



**3. Mental Stimulation.** Encourage activities that challenge the brain, like puzzles, reading, arts and crafts, and music.

**4. Social Engagement.** Promote participation in community activities, group events, and regular family interactions to stay socially active and connected.



**5. Quality Sleep.** Good sleep is essential for brain health. Establish a consistent sleep routine and create a comfortable sleep environment.

**6. Stress Management.** A calm and supportive environment can significantly reduce stress levels. Help manage stress through relaxation techniques such as deep breathing, meditation, or gentle yoga.



## TIPS AND CONSIDERATIONS TO SUPPORT BRAIN HEALTH:

- **Regular Medical Check-ups:** Ensure frequent health checks that include assessments of cognitive function
- **Structured Environment:** Create a predictable and supportive environment. Consistent routines and familiar surroundings can help reduce anxiety and confusion.
- **Tailored activities:** Engage in activities that boosts self-esteem and enjoyment. Tasks like memory games, puzzle-solving can help keep the brain active.
- **Healthy lifestyle:** Promote a lifestyle that includes balanced nutrition, regular exercise and good sleep.

## BRAIN HEALTH HABITS

### THE SUPER SIX



- 1 Keep Learning
- 2 Get Moving
- 3 Stay Connected
- 4 Manage Stress
- 5 Eat Well
- 6 Sleep Tight

Reference: University of Kansas Alzheimer's Disease Research Center

## EARLY INTERVENTION IS IMPORTANT

Recognising and addressing issues early can lead to better outcomes. Here are some key signs to watch out for that may indicate a need for medical help:

- **Changes in Memory.** Early signs often include forgetting recent events, misplacing items like keys or glasses, or struggling to recall what they did recently.
- **Behaviour and Mood Shifts.** Personality changes are common, such as losing interest in hobbies, increased irritability, stubbornness, anxiety, or appearing withdrawn.
- **Difficulty with Daily Tasks.** Everyday activities like dressing or personal hygiene may take longer. People might forget steps, like leaving shampoo in their hair or putting on clothes incorrectly.
- **Language Problems.** Look for new difficulties in speaking, understanding, or following conversations. Hearing issues can also affect communication, so address these promptly.
- **Physical Changes.** Unexplained weight loss, appetite changes, sleep issues, or balance problems can signal cognitive decline.

## Get Involved in Our Research

We're conducting research on dementia in people with Down's syndrome through the ABC-DS study. This long-term study tracks brain health, memory, and other health markers over time to identify early signs of Alzheimer's. By taking part, you'll be contributing to research that aims to improve early diagnosis and treatments. Many participants find the experience rewarding and stimulating.

If you're interesting in participating or learning more email:  
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