

# General Aging in Intellectual and Developmental Disabilities

## Aging with Down Syndrome

**Presented by Julie A. Moran, DO**

Geriatrician, Aging and Intellectual/Developmental Disabilities Specialist

Consultant, Tewksbury Hospital and Massachusetts Department of Developmental Services

Clinical Instructor of Medicine, Harvard Medical School



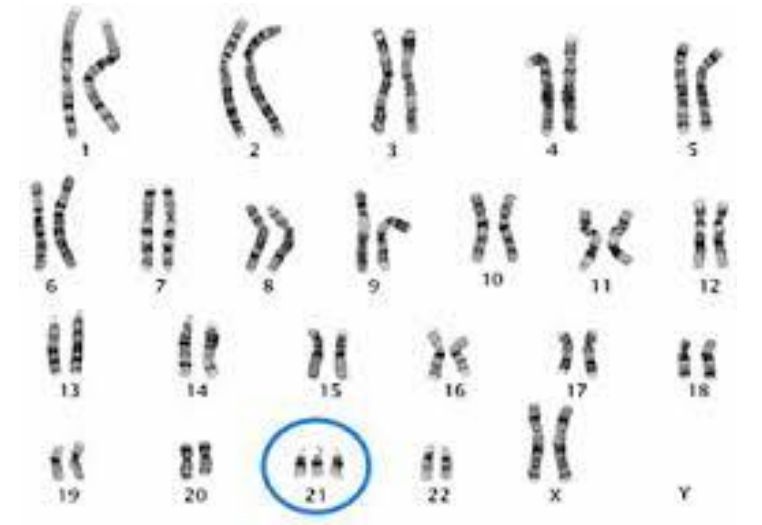
Massachusetts Dept.  
of Developmental  
Services (DDS)

Produced on behalf of DDS by the Center for Developmental Disabilities  
Evaluation and Research (CDDER)



# Accelerated Aging in Down Syndrome (DS)

- ❑ DS is the result of 3 copies of chromosome 21
- ❑ Multiple genes on chromosome 21 have also been linked to middle-aged and older adults showing changes of premature or “accelerated” aging



Source: [www.hhmi.org](http://www.hhmi.org)

# Common Conditions in Older Adults with DS

- ❑ Alzheimer's disease
- ❑ Hypothyroidism
- ❑ Sensory deficits
  - ❑ Early/aggressive cataracts
  - ❑ Hearing loss
- ❑ Early menopause
- ❑ Atlantoaxial instability
- ❑ Cervical spine disease
- ❑ Obstructive sleep apnea
- ❑ Osteoarthritis
- ❑ Decrease in functional ability
- ❑ Osteoporosis
- ❑ Celiac disease

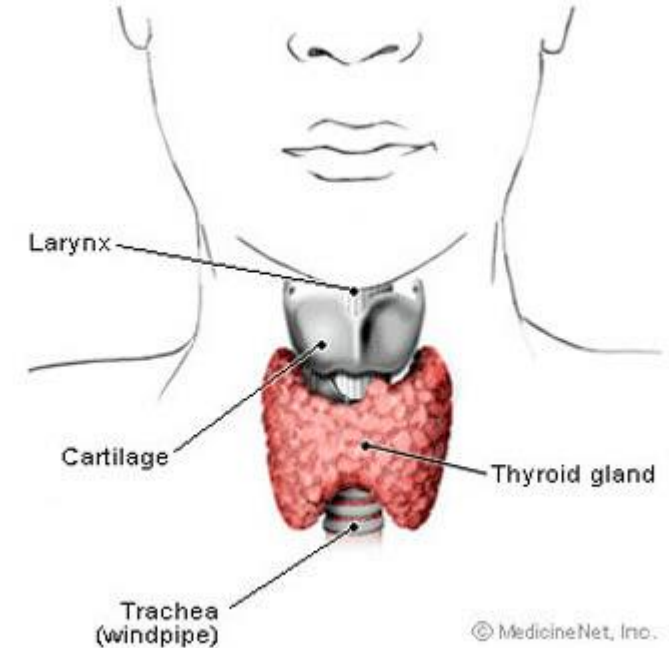


Used with permission from the National Down Syndrome Society, *Aging and Down Syndrome Guidebook*; copies available at no charge, [info@ndss.org](mailto:info@ndss.org).



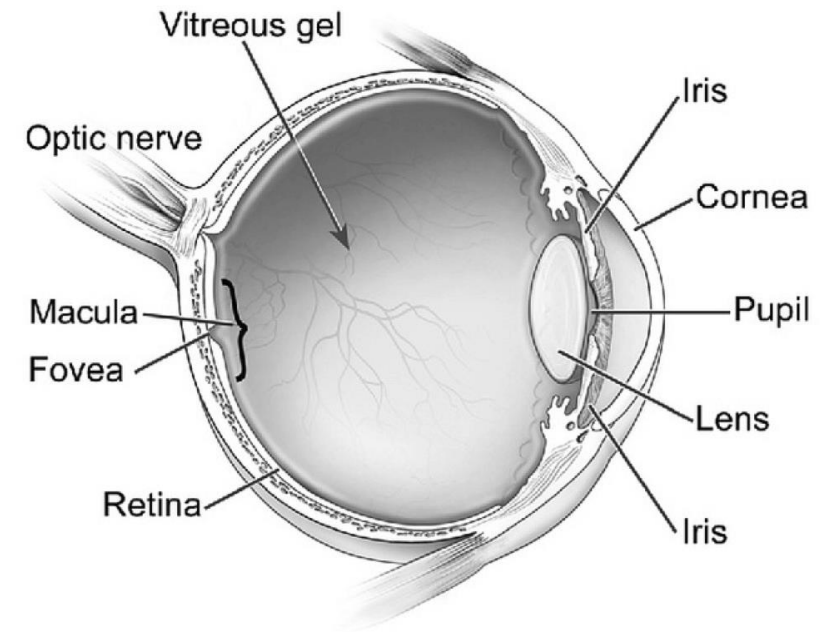
# Hypothyroidism

- ❑ Thyroid dysfunction is very common in with Down syndrome
- ❑ Can lead to symptoms of: fatigue, men sluggishness, weight fluctuations and irritability
- ❑ Detected via blood test
- ❑ Treated with oral replacement

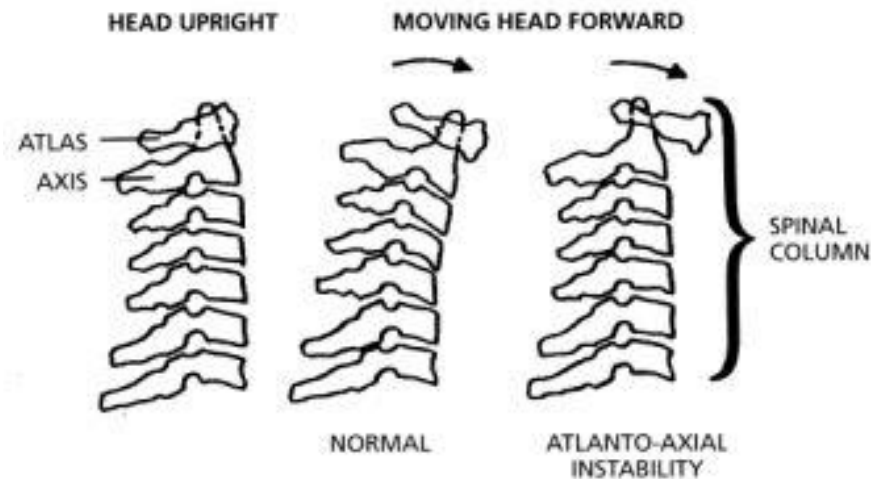
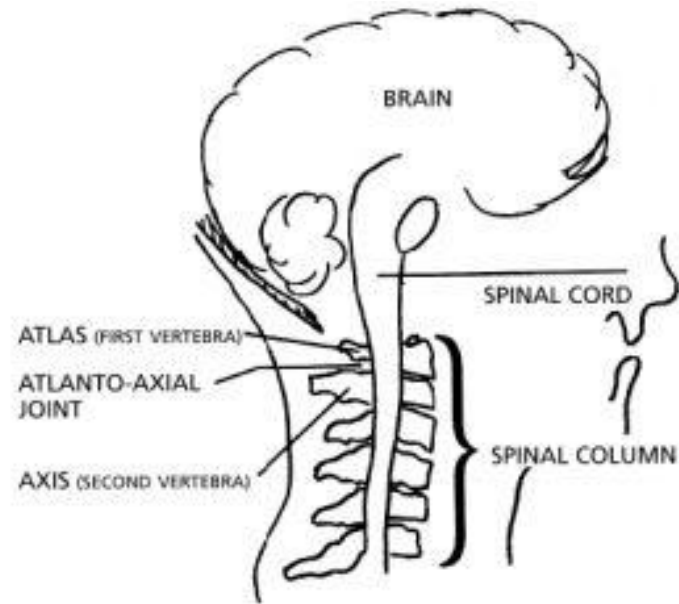


# Sensory Losses

- ❑ Vision impairment:
  - ❑ Early/aggressive cataracts
  - ❑ Keratoconus
- ❑ Hearing impairment:
  - ❑ Conductive hearing loss
  - ❑ Small ear canals, wax impaction
- ❑ Frequently mistaken as stubbornness, confusion, disorientation
- ❑ Correctable! Treatable!



# Atlantoaxial Instability and C-spine Concerns



Source: [www.dsmig.org.uk](http://www.dsmig.org.uk)



# Atlantoaxial Instability and C-spine Concerns

- ❑ Gait disturbance
- ❑ Spasticity
- ❑ Change in bowel or bladder function
- ❑ Pain
- ❑ Screening x-rays recommended in adulthood
- ❑ More expert investigation if new/sudden change in symptoms



# Obstructive Sleep Apnea

- ❑ **Signs include:** snoring, gasping noises, daytime sleepiness, morning fatigue, difficulty getting out of bed, excessive napping and fragmented sleep
- ❑ **Undiagnosed or untreated apnea** leads to symptoms of irritability, poor concentration, behavior changes, impaired attention, as well as strain on heart/lungs
- ❑ **Diagnosis:** sleep study





# Osteoarthritis

- ❑ Hyperflexibility plus wear-and-tear
- ❑ Obesity
- ❑ Pain, limited mobility, decreased participation in activities
- ❑ Misinterpreted as confusion, behavioral changes
- ❑ Pain reporting can be variable



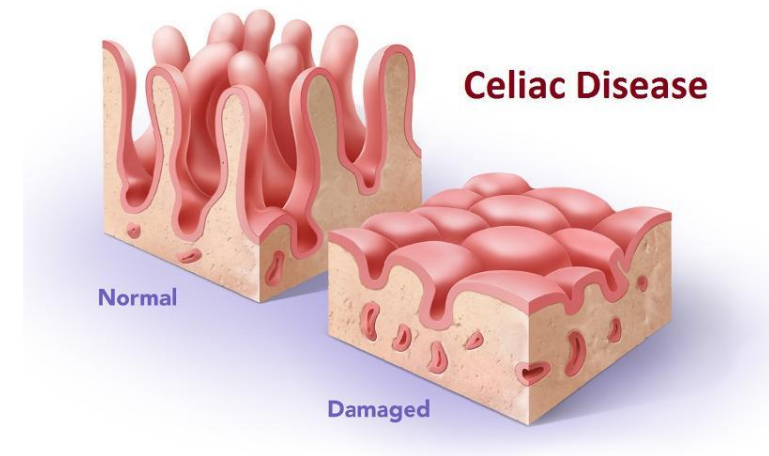
© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Source: [www.mayoclinic.org](http://www.mayoclinic.org)



# Celiac Disease

- ❑ Autoimmune disease due to reaction to wheat/gluten products
- ❑ Causes damage to lining of intestine, poor absorption of nutrients
- ❑ Higher prevalence in adults with DS
- ❑ Can be screened via blood test
- ❑ GI referral to confirm diagnosis

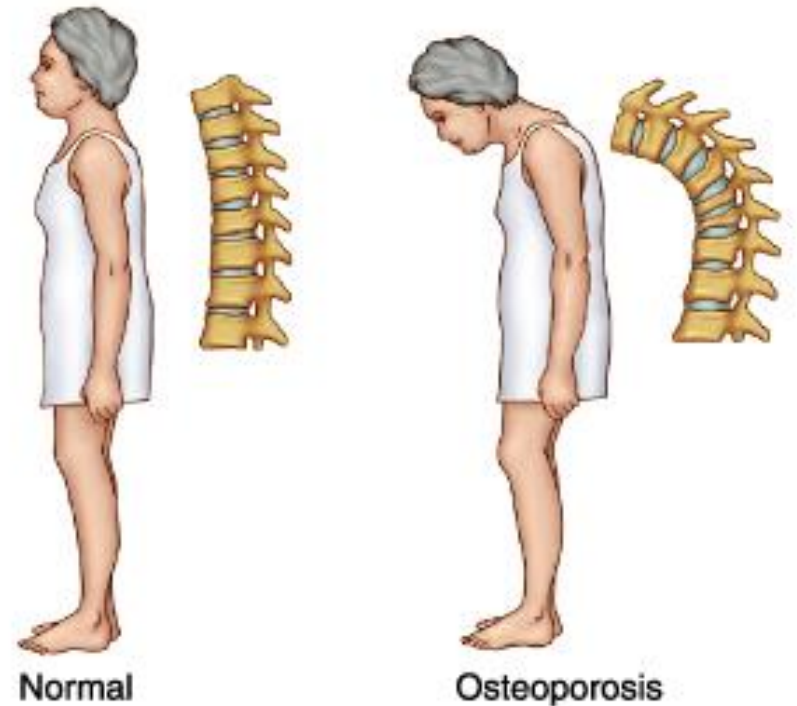


Source: [www.ei-resource.org](http://www.ei-resource.org)



# Osteoporosis

- ❑ Bone thinning – leads to fracture
- ❑ Risk factors
  - ❑ Immobility
  - ❑ Low body mass
  - ❑ Family history of osteoporosis
  - ❑ Early menopause
  - ❑ Longtime exposure to certain anti-seizure medications
- ❑ Screened via bone density test



Source: [www.mdguidelines.com](http://www.mdguidelines.com)

# Obesity and Functional Decline

- ❑ Decreased metabolism in adults
- ❑ Inconsistent access to exercise
- ❑ Variability in dietary options and choices
- ❑ Changing culture to change behaviors
- ❑ Role modeling healthy habits is good for everyone involved (caregivers too!)



# Additional Webinars on Aging with IDD

## General Aging in Intellectual and Developmental Disabilities

- ❑ Understanding Age Related Changes
- ❑ The Role of Polypharmacy
- ❑ Identifying and Assessing Pain
- ❑ Behavior Related Changes and Aging in Adults with IDD
- ❑ Health Promotion and Aging in Adults with IDD
- ❑ Mobility and Aging in Adults with IDD
- ❑ Aging with Down Syndrome
- ❑ Aging and Cerebral Palsy

## Dementia and Intellectual and Developmental Disabilities

- ❑ Introduction to Dementia and Aging with IDD
- ❑ Early Evaluation of Dementia and Alzheimer's Disease
- ❑ Stages of Alzheimer's Disease
- ❑ Applying the Knowledge to Dementia Caregiving and Caregiver Support
- ❑ Caregiving in Action: Case Studies and Practical Tips



# Additional Aging with IDD Resources

*Massachusetts Department of Developmental Services (DDS)*  
*[www.mass.gov/eohhs/gov/departments/dds/aging-with-id.html](http://www.mass.gov/eohhs/gov/departments/dds/aging-with-id.html)*

*Center for Developmental Disabilities Evaluation & Research*  
*[http://shriver.umassmed.edu/cdder/aging\\_idd\\_education](http://shriver.umassmed.edu/cdder/aging_idd_education)*



***Training produced by the  
Center for Developmental Disabilities  
Evaluation & Research (CDDER) on behalf of the  
Massachusetts Department of Developmental Services  
(DDS)***

***cdder@umassmed.edu***

