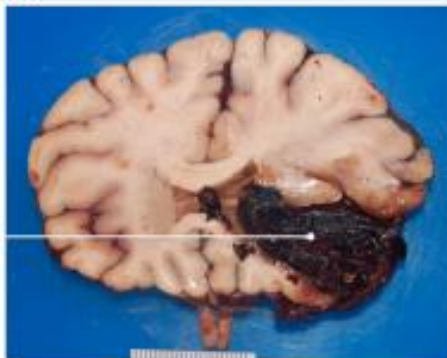


Station 5: Cerebrovascular Accident (Stroke)

Occurs when blood flow to a portion of the brain is halted

Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Certain types are hereditary • Blood vessel is clogged by plaque or blood clot • Blood vessel bursts • Diabetes • High cholesterol • Increasing age • Unhealthy lifestyle choices 	<ul style="list-style-type: none"> • Severe headache • Change in hearing, taste, touch, or vision • Change in alertness • Loss of coordination & balance • Confusion or memory loss • Muscle weakness or numbness (usually one-sided) 	<ul style="list-style-type: none"> • Hospitalization • Blood clot = clot busting drugs (thrombolytics) • Blood thinners • Surgery to open clogged vessel • Surgery to repair vessels • Stroke rehabilitation

A



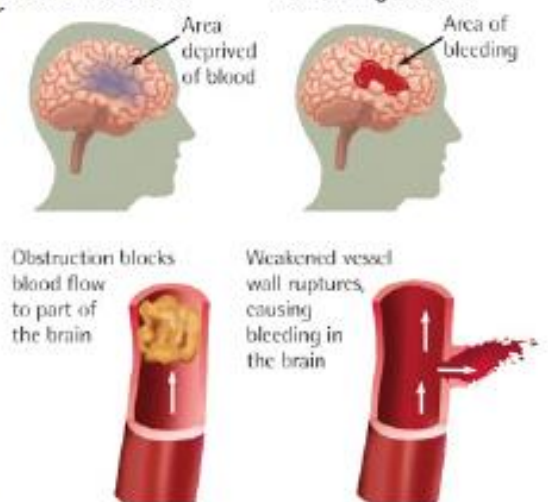
B



C

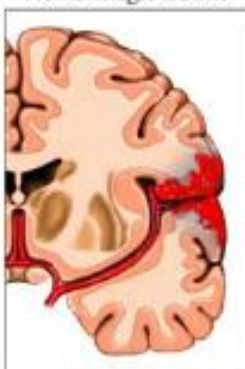
Ischemic Stroke

Hemorrhagic Stroke



D

Hemorrhagic Stroke



Hemorrhage/blood leaks into brain tissue

Ischemic Stroke



Clot stops blood supply to an area of the brain

Stroke Death Rates
2002-2007, Adults Ages 35+, by County



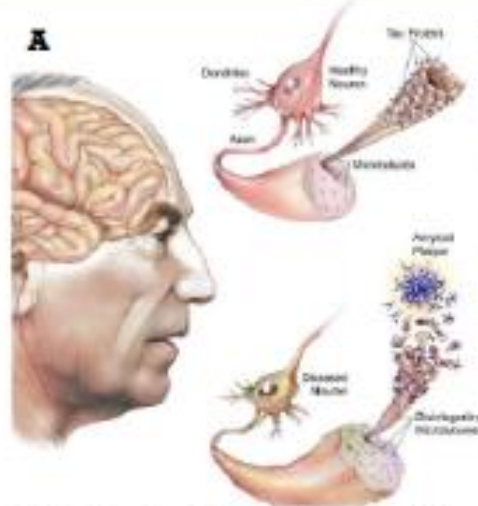
<http://apps.nccd.cdc.gov/GISWeb/>

E

Station 5: Alzheimer's Disease

A form of dementia associated with age

Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Hereditary • Family history • Age: over 60 • High insulin levels • Past head trauma 	<ul style="list-style-type: none"> • Memory loss • Confusion & disorientation • Mood & behavior changes • Difficulty performing everyday functions • Unfounded suspicions • Difficulty speaking, swallowing, and/or walking 	<ul style="list-style-type: none"> • Uncurable • Medication • Removing behavior triggers • Psychological coping skills • Herbal therapies • Stem cells

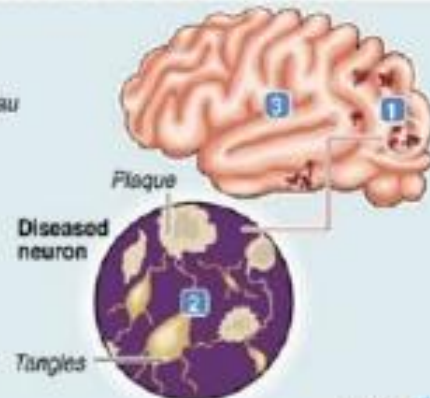


Alzheimer's disease

How it happens

- 1 Clumps of protein (amyloid plaques and tau tangles) grow in brain
- 2 Protein strands twist, damaging brain cells (neurons)
- 3 Brain cells die, certain areas of brain shrink

Age 65 and up at risk; could affect younger people



Sources: AFP/ADENA/ABC

070009 AFP

Alzheimer's affects aging population

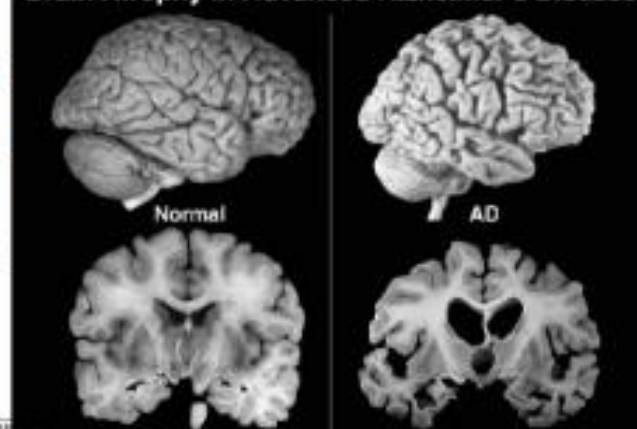
One in eight people age 65 and older have Alzheimer's disease, a recent study found

Alzheimer's death rate, per 100,000 in 2003



SCAP/20 Alzheimer's Association

Brain Atrophy in Advanced Alzheimer's Disease

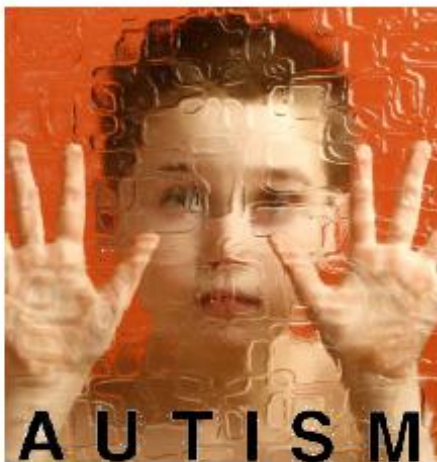


Station 5: Autism

Brain disorder that makes it difficult to communicate

Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Cause is not well understood • Family history • Hereditary • Mostly males • Environmental • Past medical issue 	<ul style="list-style-type: none"> • Delay in learning to talk/non-communicative • Repeated behaviors • Unusual attachment to object or routine • Anxiety • Depression 	<ul style="list-style-type: none"> • Medication • Coping skills • Specialized therapy • Behavioral management • Anxiety management

A



Persons with autism may possess the following characteristics in various combinations and in varying degrees of severity.

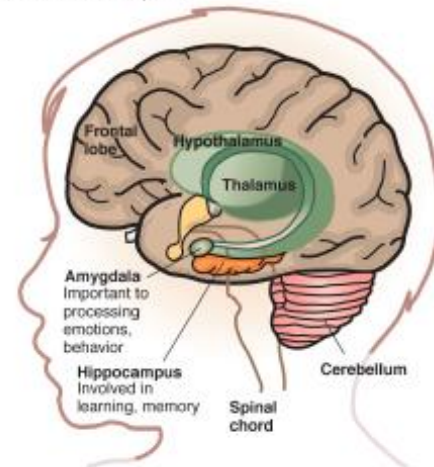
C



B

Autism and the brain

The areas of the brain affected by autism, which stems from abnormal brain development:



Affect on brain cells (neurons)

- Cells are smaller, more densely packed in certain areas
- Have shorter, less developed branches

Identified Prevalence of Autism Spectrum Disorders

ADDM Network 2000-2008

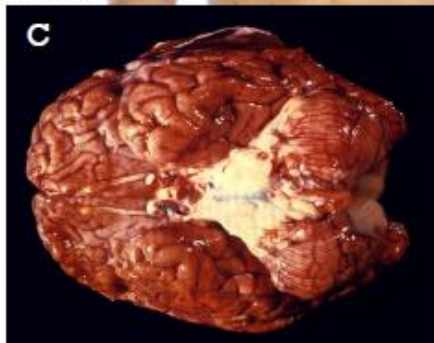
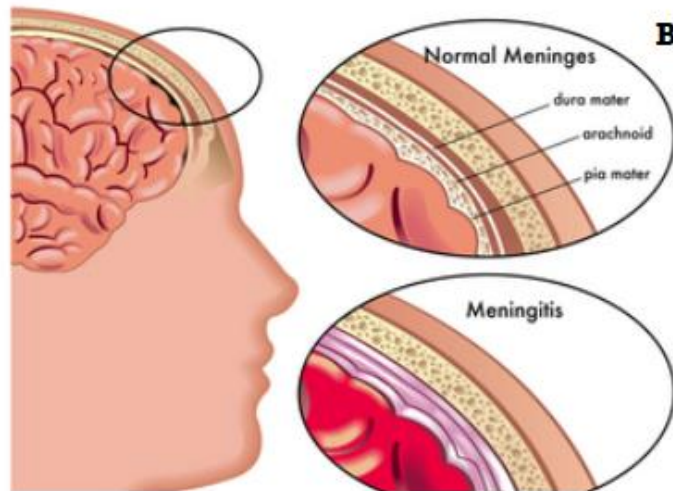
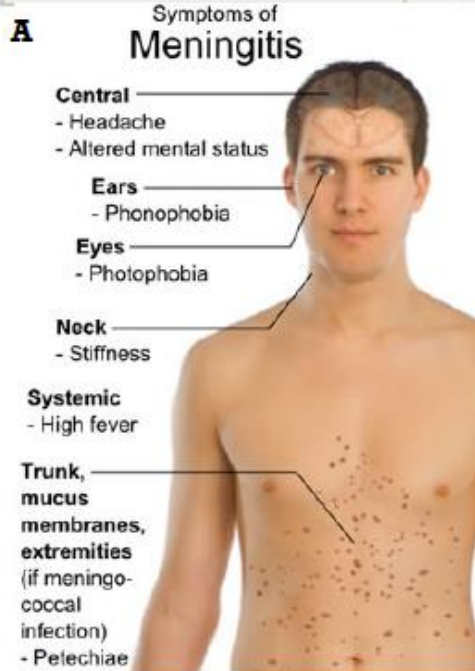
Combining Data from All Sites

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Prevalence per 1,000 Children (Range)	This is about 1 in X children...
2000	1992	6	6.7 (4.5-9.9)	1 in 150
2002	1994	14	6.6 (3.3-10.6)	1 in 150
2004	1996	8	8.0 (4.6-9.8)	1 in 125
2006	1998	11	9.0 (4.2-12.1)	1 in 110
2008	2000	14	11.3 (4.8-21.2)	1 in 88

Station 5: Meningitis

Infection in the meninges surrounding the brain

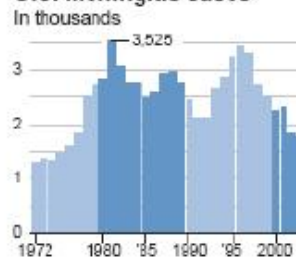
Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Bacteria or viral infection • Drug allergies • Fungi or parasites • Chemical irritations • Tumors 	<ul style="list-style-type: none"> • Nausea & vomiting • Sensitivity to light • Fever & chills • Mental status change • Stiff neck • Severe headache • Irritation 	<ul style="list-style-type: none"> • Bacterial - hospitalization • Antibiotics • Medication to treat symptoms • Prevention with vaccination



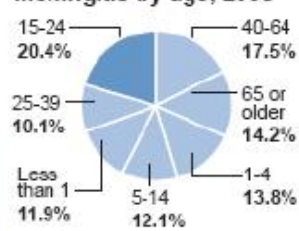
Meningitis cases

On average meningitis affects only thousands of people nationwide each year. People between the ages of 15-24 account for one fifth of all cases.

U.S. Meningitis cases



Meningitis by age, 2003



NOTE: 21 patients did not give their age

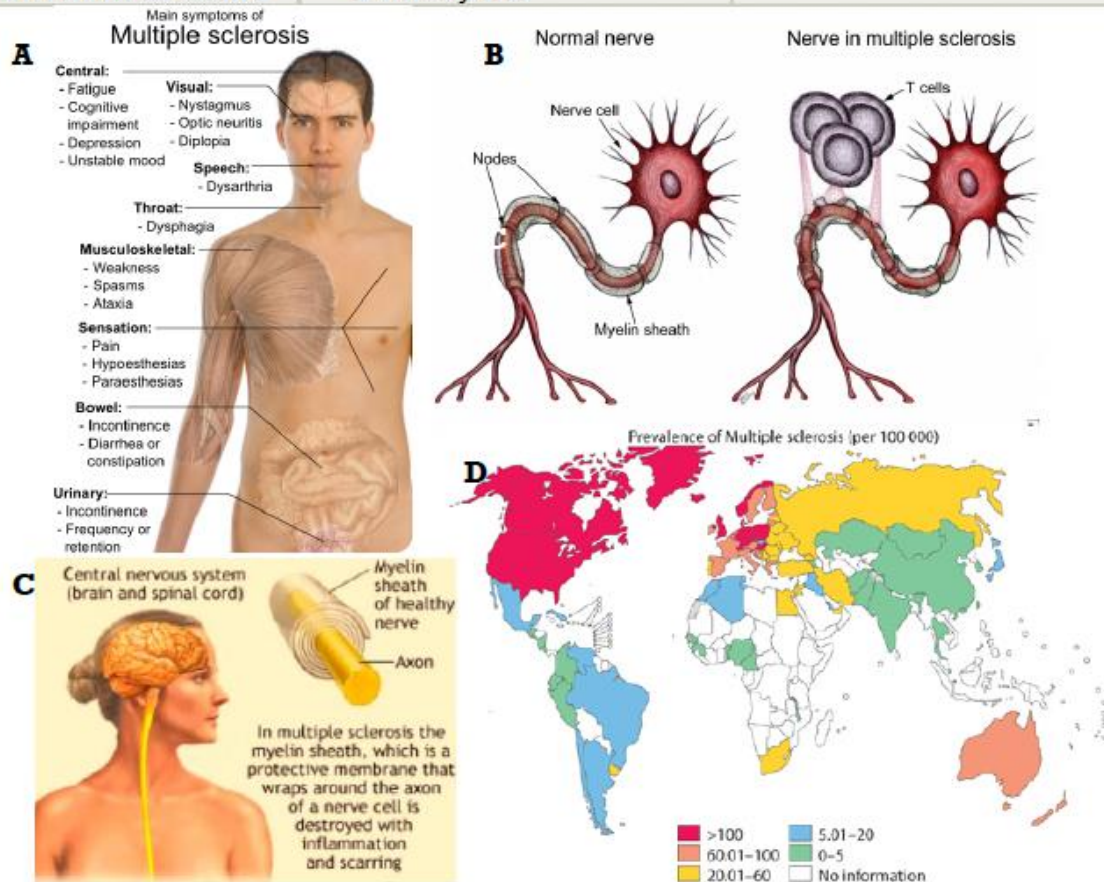
SOURCE: Centers for Disease Control and Prevention

AP

Station 5: Multiple Sclerosis

Autoimmune disease that damages the myelin sheath

Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Cause not well understood • Hereditary • Family history • Diagnosed between 20-40 • Nerve damage caused by inflammation • Possibly viral infection • Environmental factors 	<ul style="list-style-type: none"> • Vary depending on location & severity • Muscle weakness, spasms, tremors, & numbness • Incontinence & frequent urination • Constipation & stool leakage • Vision & hearing loss • Depression, dizziness, fatigue, & memory loss 	<ul style="list-style-type: none"> • No known cure • Medications to slow disease progress • Steroid treatments • Physical therapy • Assistive devices • Healthy lifestyle choices



Station 5: Spinal Cord Trauma

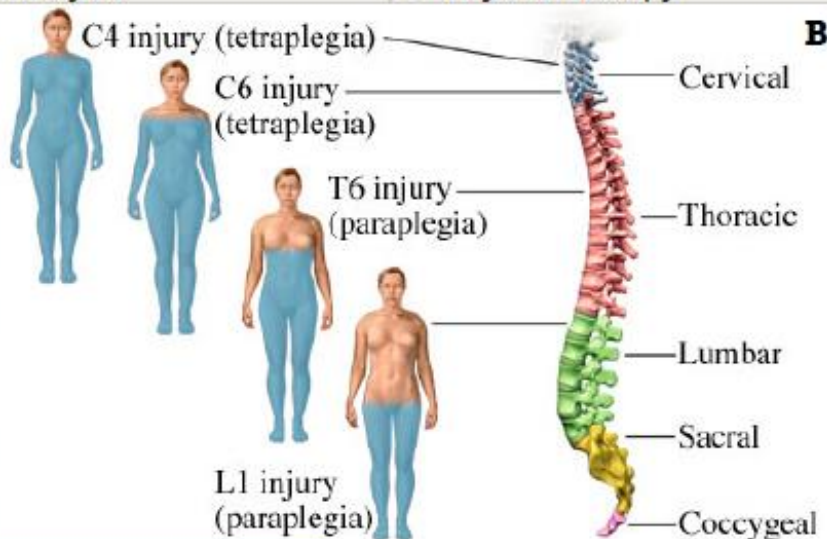
Damage to the spinal cord

Causes & Risk Factors	Symptoms	Treatment Options
<ul style="list-style-type: none"> • Direct injury or disease • Assault, fall, accident • Weakened vertebral column • Fluid build-up around spinal cord • Most common in men ages 15-35 	<ul style="list-style-type: none"> • Weakness • Loss of feeling below damaged site • Spastic muscles • Loss of bladder & bowel control • Pain and/or numbness • Paralysis 	<ul style="list-style-type: none"> • Completely severed spinal cord cannot be cured • Medication to reduce swelling • Surgery • Bed rest • Spinal traction • Physical therapy

A



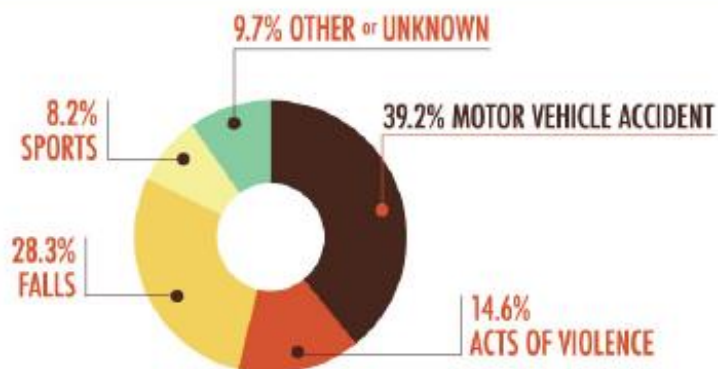
B



C

CAUSES OF SPINAL CORD INJURY

APPROXIMATELY 11,000 NEW INJURIES OCCUR EACH YEAR



D

