



Amyotrophic Lateral Sclerosis (ALS)

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ALS: Epidemiology

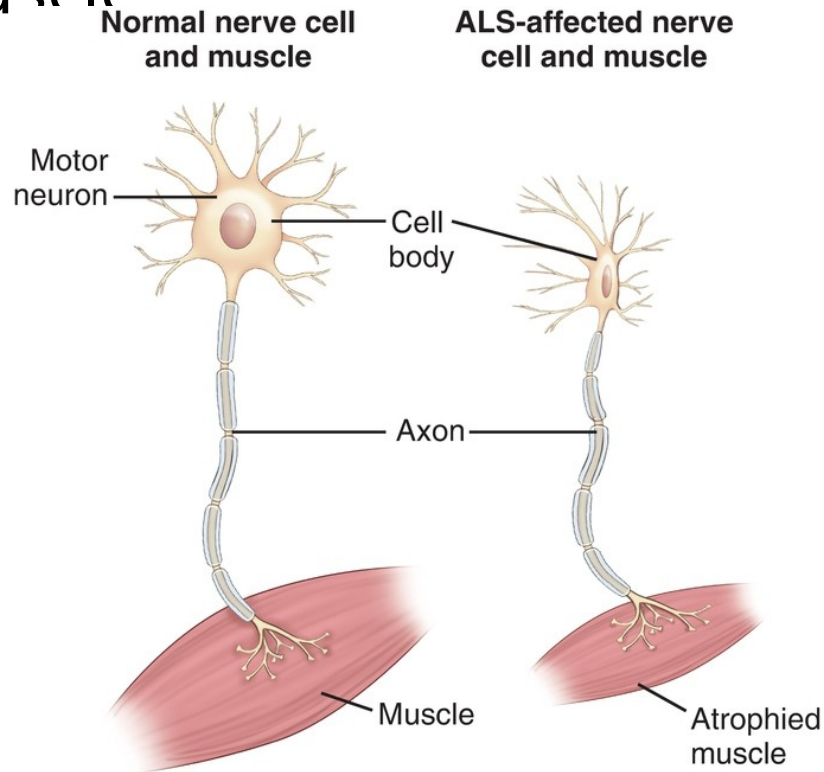
- AKA Lou Gehrig's disease
- Unknown cause
- Symptoms usually develop after age 50
- Prevalence 3.9 per 100,000 people
- More men than women are affected

ALS: Pathophysiology

- Rapidly progressing, fatal CNS disease
- Affects voluntary muscle control
 - Does not impair senses or ability to think
- Both upper and lower neurons degenerate and die
- Affects diaphragm and chest wall
 - Respiratory failure—ventilator support

ALS: Pathophysiology

- Comparison of normal and ALS affected cell and muscle



ALS: Clinical Manifestations

- Muscle cramps or stiffness, muscle weakness, slurred speech, difficulty swallowing
- Upper motor neuron damage
 - Associated with spasticity
- Lower motor neuron damage
 - Associated with flaccidity

ALS: Clinical Manifestations

- Fatigue while talking
- Tongue atrophy
- Dysphagia
- Dysarthria
- Nasal quality of speech
- Fasciculation of the face
- Weakness of arms and hands
- Spasticity
- Muscle atrophy
- Eventual muscle respiratory involvement

ALS: Assessment & Diagnostics

- *No single test can be used to diagnosed*
- Based on Signs & Symptoms
- EMG & nerve conduction studies
- CT scan and/or MRI of neck and head
- Lumbar puncture
- Genetic testing
- Swallow studies

ALS: Medical Management

- **Riluzole (Rilutek)**
 - First drug approved to slow progression
 - Delayed need for tracheostomy by 3-6 months
 - Well tolerated
- **MOA:** reduces damage to motor neurons by decreasing release of glutamate
- **Adverse effects:** asthenia, GI reactions, dizziness, vertigo, somnolence, decreased lung function, neutropenia, and liver injury

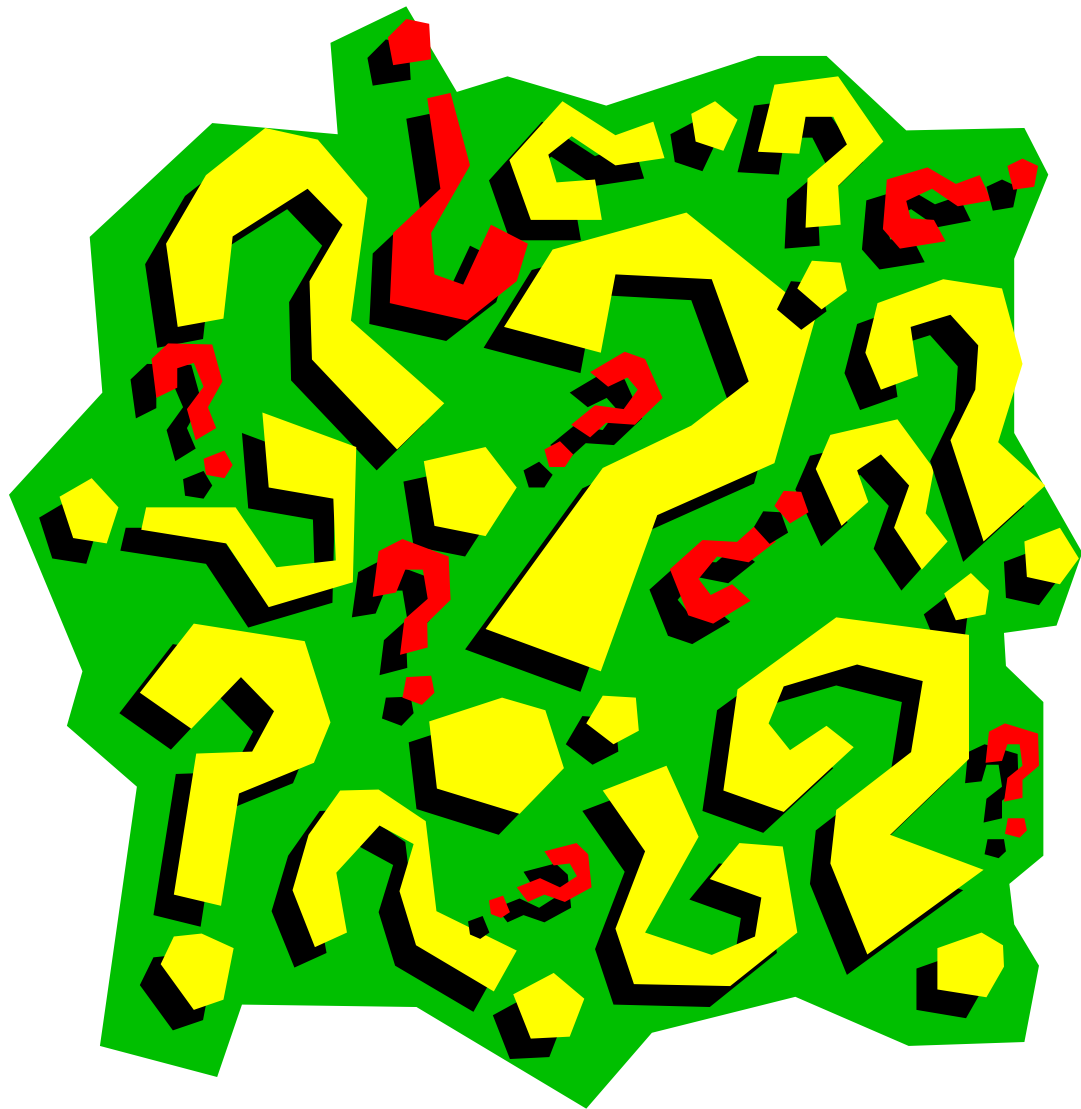
ALS: Complications

- Aspiration
- Respiratory failure
- Pneumonia
- Pressure ulcers
- Deep vein thrombosis (DVT)
- Pulmonary embolism (PE)
- Constipation, contractures
- Depression, weight loss
- Loss of ability for self care

ALS: Nursing

Diagnoses

- **Ineffective airway clearance**
 - *r/t weak cough secondary to motor neuron death and muscle weakness*
- **Ineffective breathing pattern**
 - *r/t weakness of respiratory muscles*
- **Potential for injury**
 - *r/t impaired physical mobility*
- **Impaired oral communication**
 - *r/t dysarthria and tongue atrophy*
- **Ineffective coping**
 - *r/t diagnosis of progressive disease that results in motor paralysis*





However **difficult** life may seem,
there is always something you can do,
and succeed at. It matters that you
don't just give up.

- *Stephen Hawking*

Goalcast