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# Bend and Not Break: Controlling spasticity before it controls your loved ones



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# Outline



- ❧ What is spasticity?
- ❧ Why does spasticity matter?
- ❧ What triggers spasticity?
- ❧ Treatments for spasticity
- ❧ Caregiver's role in managing spasticity

# What is spasticity?



Carl, a fiercely independent 65-year old gentleman with MS for 40 years. Lives alone in a duplex with his caregiver next door

- ☞ Independent with transfers and mobility from a manual wheelchair
- ☞ Recently started having difficulty with transfers due to his legs shaking when he gets up to stand and pivot

# What is spasticity?



Georgia, a 35- year old female with MS for 10 years. She lives with her sister, who acts as her caregiver.

- ☞ Functionally quadriplegic in a power chair
- ☞ Caregiver notices increasing difficulty performing catheterizations, cleaning her perineal/groin region due to tightness in the thighs

# What is spasticity?



Frank, a 55-year old gentleman with MS x 30 years. He lives with his wife on a farm and is very active.

- ☞ Able to walk, but with L-sided body weakness
- ☞ New difficulty lifting his left arm away from his body to clean the underarm region
- ☞ Increasing pain when he attempts to put his splint on

# What is spasticity?



Nick, a 50- year old former musician with MS. He is functionally quadriplegic and lives alone with intermittent paid and family caregiver support.

☞ Recently began having severe leg spasms causing him to slide out of his power chair

# Spasticity, defined



- ❧ Dynamic stiffness in the muscles following an injury to the brain or spinal cord
  - ❧ More quickly the limb is moved, the more stiffness/difficulty is encountered
  - ❧ Exaggerated reflex response
  - ❧ Brain normally inhibits this response, but the disconnect from MS/injury interferes with the control
  - ❧ Not a fixed joint (contracture) from immobility

# Good spasticity



- ☞ Stiffness can sometimes help with transfers/walking
- ☞ Provides exercise for weak muscles, can maintain muscle bulk
- ☞ Sense of connection with an individuals body
- ☞ Might be a nuisance, but not painful or interfering with function

# Bad spasticity



- ❧ Causes pain
- ❧ Immobility or contracture
- ❧ Skin breakdown
- ❧ Interferes with hygiene
- ❧ Interferes with function

Uninhibited  
contraction of  
muscles

Contractures

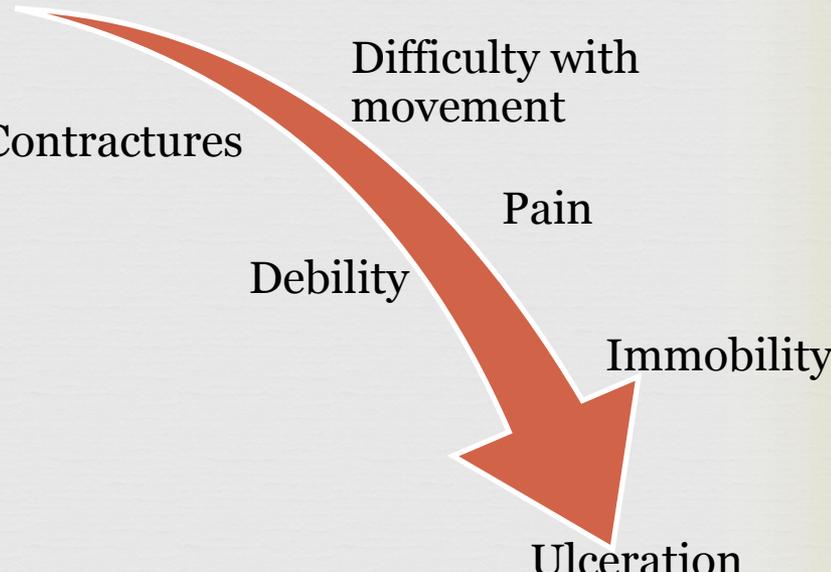
Difficulty with  
movement

Debility

Pain

Immobility

Ulceration



# Spasticity in MS



- ❧ Up to 80% of individuals with MS experience spasticity
- ❧ 1/3 of persons with MS have spasticity that interferes with daily function
- ❧ Some conditions can provoke spasticity:
  - ❧ Bladder infections
  - ❧ Kidney/bladder stones

# Treatments for spasticity



- ❧ Physical treatments (modalities)
- ❧ Complementary/alternative medicine
- ❧ Therapy
  - ❧ Stretching
  - ❧ Splinting
- ❧ Medications
- ❧ Injections
- ❧ “The Pump”



# Physical Agents / Modalities

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∞ Ice

∞ Vibration

∞ Electrical Stimulation



# Complementary / Alternative Medicine



☞ Acupuncture

☞ Yoga

☞ Massage

☞ Chiropractic

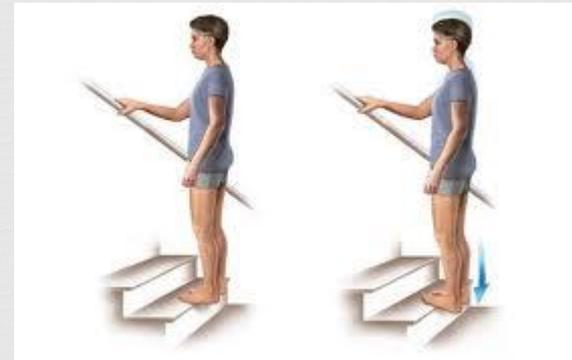


# Therapy



∞ Stretching

∞ Splinting



# Medications for spasticity

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- ❧ Baclofen
- ❧ Tizanidine
- ❧ Dantrolene
- ❧ Valium
- ❧ Gabapentin
- ❧ Cannabanoid (FDA trials)

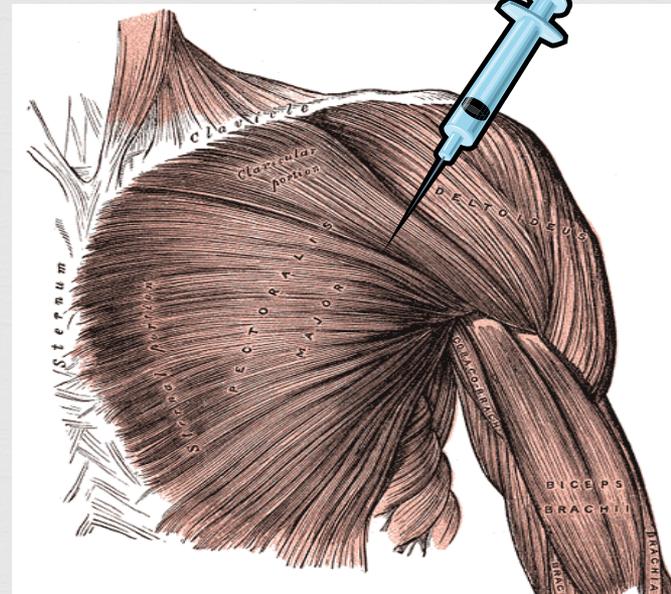


# Injections for spasticity



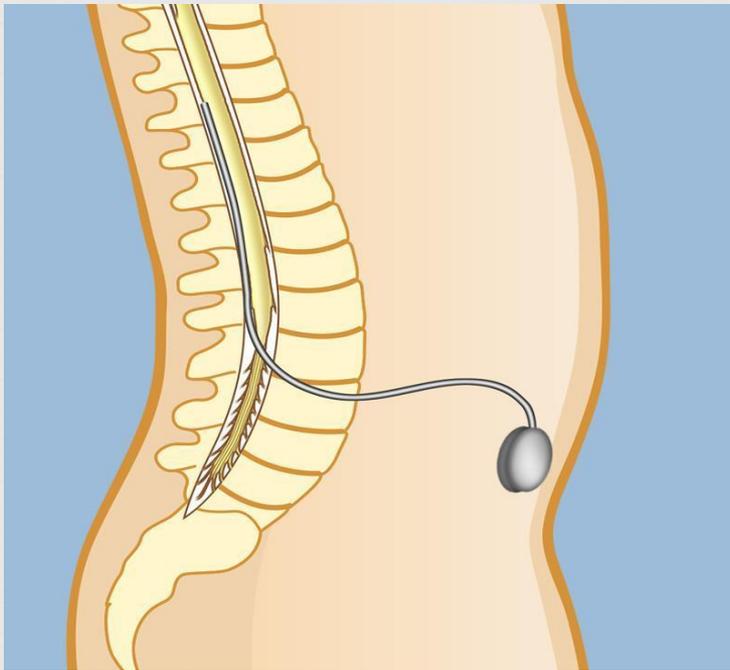
∞ Botulinum toxin (Botox®)

∞ Phenol/alcohol blocks



# Intrathecal baclofen pump

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- ∞ Delivers baclofen directly to spine
- ∞ Dosing regimens highly personalized to meet patient symptoms
- ∞ Refills generally occur every six months

# Pitfalls in spasticity management

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- ❧ Failure to recognize spasticity symptoms
  - ❧ “tightness,” “jumpiness”
- ❧ Failure to discuss with medical provider
  - ❧ Thought to be inevitable part of the disease process
- ❧ Failure to follow up results of treatment with medical provider
  - ❧ Need to report when treatment not working

# Questions?



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