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Master Class for Neuroscience Professional Development

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Non-Surgical Management of Upper Limb Spasticity

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Learning Objective 1

Evaluate treatment strategies in the management of upper limb spasticity.

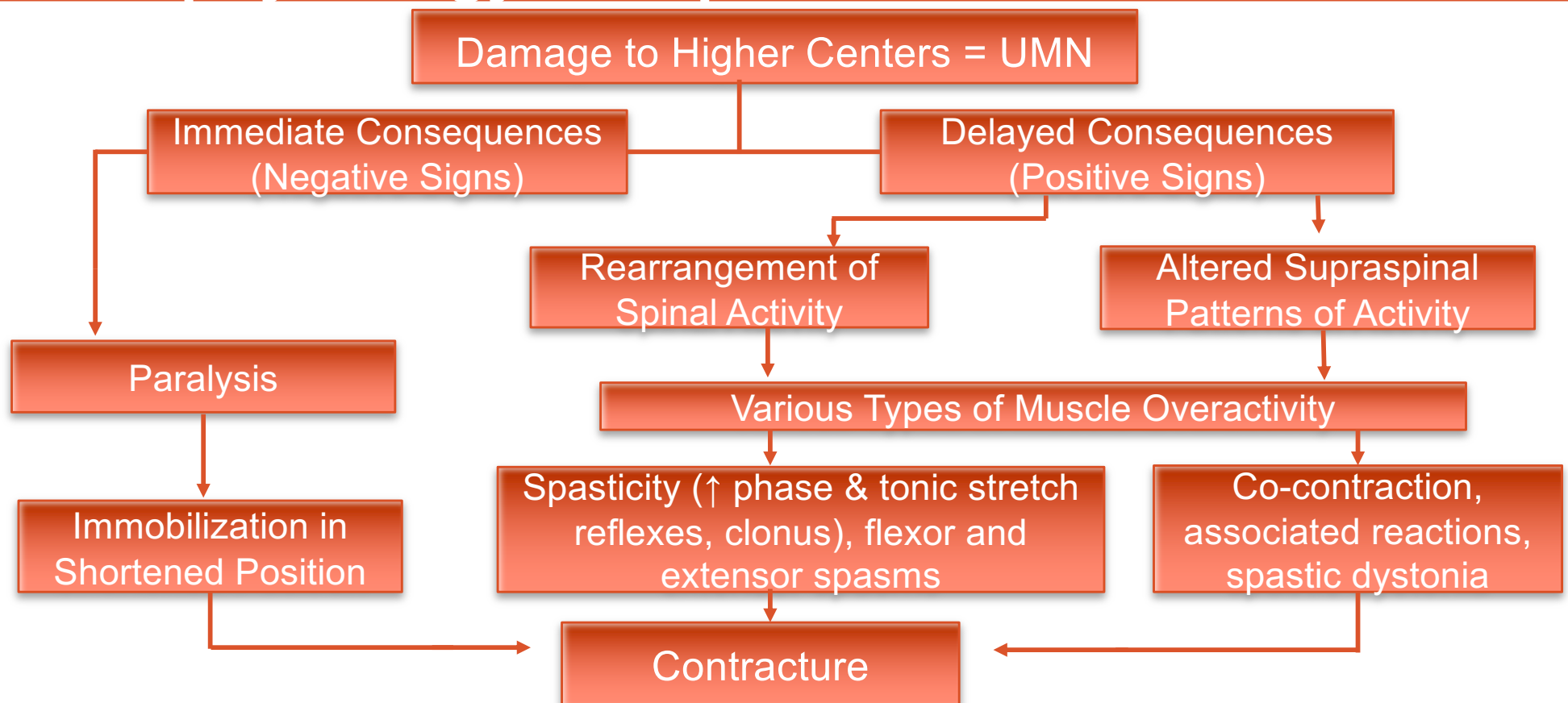


What is Spasticity?



- Spasticity is a neuromuscular phenomenon manifested in patients with upper motor neuron syndrome characterized by velocity dependent muscular resistance to passive joint range of motion
- Caused by injury and or pathology in the CNS and or descending pathways

Upper Motor Neuron: Pathophysiology of Impairment

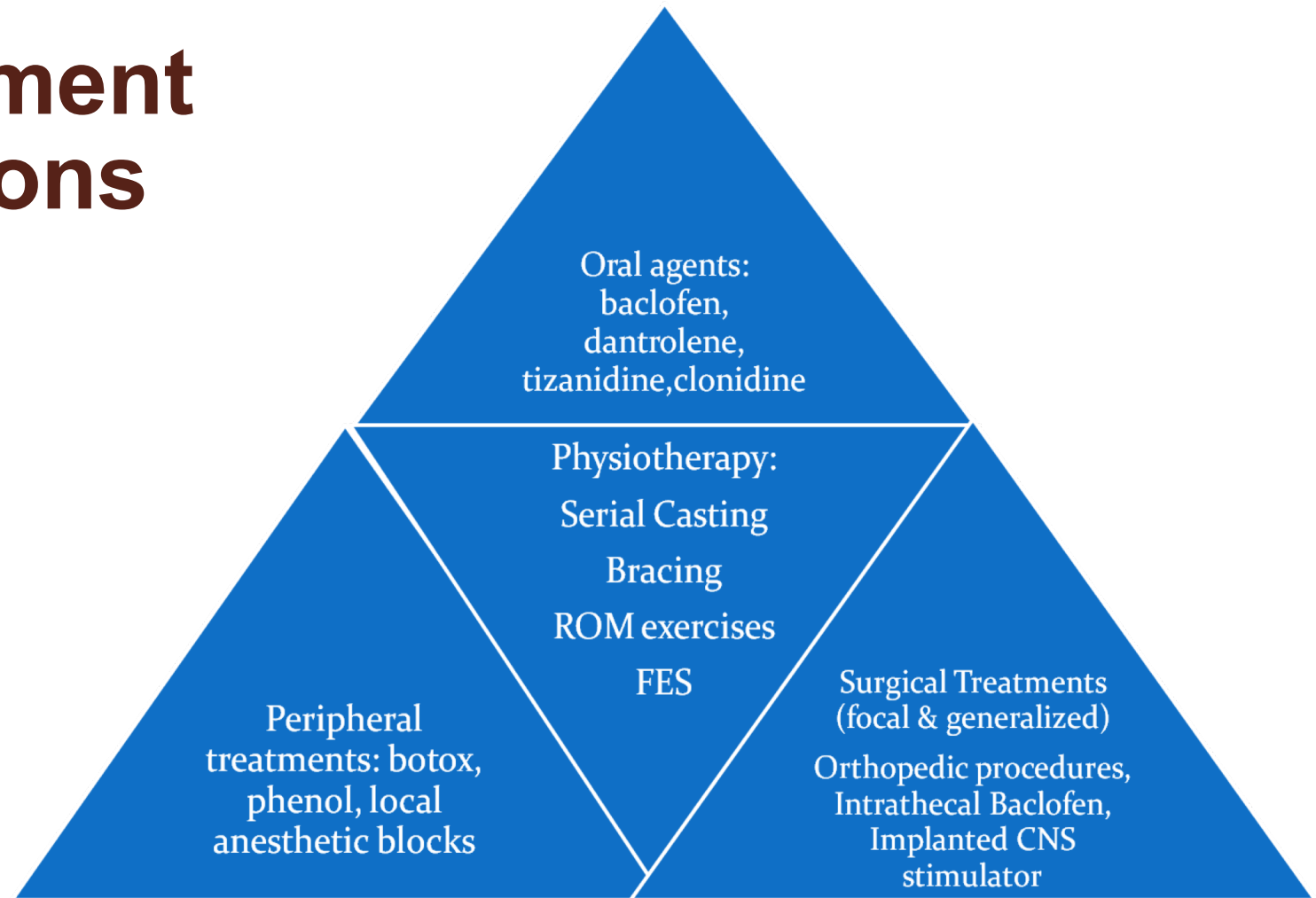


Assessment Tools

Symptom	Assessment Tool
Pain	Global pain scale
Stiffness/Tone	Modified Ashworth Scale and Ashworth Scale Ordinal scale for measuring muscle intensity
Spasticity	Tardieu Scale Ordinal scale measuring muscle intensity of muscle reaction
Clonus	Sustained, unsustained, or absent
Flexor and extensor spasm	Spasm Frequency score Ordinal scale: measures spasm frequency rates
Skin Integrity and hygiene	Presence/number of pressure sores, malodor, time required to achieve hygiene

Esquenazi A, et al. *Toxicon*. 2009;54(5):634-638; Mayer NH, et al. *Arch Phys Med Rehab*. 2008;89(5):982-987.

Treatment Options



Bamidele A, et al. Spasticity in traumatic brain injury. In: *Manual of Traumatic Brain Injury Management*. 2nd ed. 2011.

Goals of Treatment



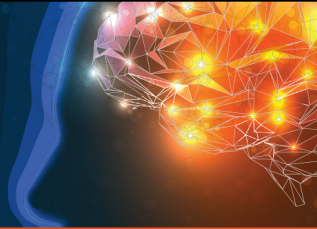
- Decrease pain
- Improve range of motion
- Improve sleep
- Improve positioning
- Prevent and limit deformity
- Quality of life
 - Improve activities of daily living; e.g. putting deodorant on

Quality of Life and Psychiatric Considerations



- May have a focal or wide ranging impact on function and quality of life
- Stroke survivors with spasticity were associated with lower Health related QoL compared with stroke survivors without spasticity

Recommendations/Summary



- Several different treatment options are available, including therapies, oral medications and injections
- Treatment must be individualized for each patient

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely



- Identify candidates for referral to specialists
- Select appropriate treatment for individual patient

Questions & Answers

Don't forget to fill out your evaluations to collect your credit.

