



***Introduction to  
Trigger Points***

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# History

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- **1800's - Germans: "Muskel schmerzen"**
- **1843 - Froriep: "Musckelschwiele"**
- **1919 - Eversbusch "Muskelharten"**
- **1938 - 1957 Good: "Myalgic spots"**
- **1945 ? Travell: "Trigger points"**



# Characteristics

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- **May or may not be a palpable mass**
- **Hyperirritable locus within a muscle**
- **Pain on compression or irritation**
- **Tremor or fasciculation on compression or irritation**
- **Refers pain with or without autonomic phenomena**



# Terminology

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- ***Active TP*** - A focus of hyperirritability in a muscle or its fascia that is symptomatic with respect to pain; it refers a pattern of pain at rest and/or on motion that is specific for the muscle.

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# Terminology

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- ***Associated TP*** - A focus of hyperirritability in a muscle or its fascia that develops in response to compensatory overload, shortened range, or referred phenomena caused by trigger point activity in another muscle.  
***AKA: Satellite and Secondary TP's***



# Terminology

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- ***Latent TP*** - A focus of hyperirritability in muscle or its fascia that is clinically quiescent with respect to spontaneous pain; it is painful only when palpated.



## Potential Causes of Trigger Points

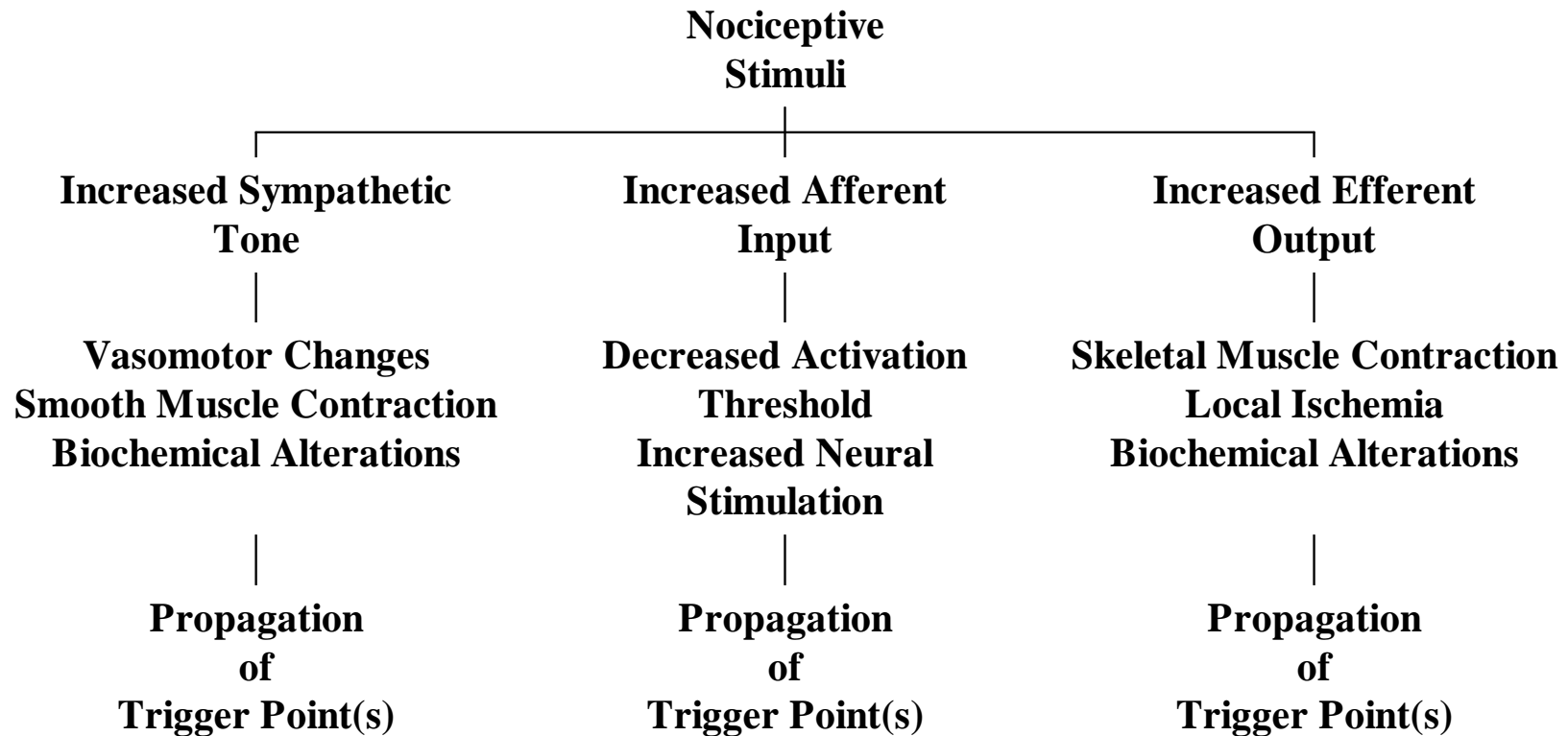
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- **Acute/chronic injury or illness**
- **Excessive repetitive movements**
- **Chilling of the muscle**
- **Nervous tension or stress**
- **Tender point of long duration**
- **Active primary point causing secondary TP**
- **Latent TP activated by any of the previous**



# Neurophysiological Model

## Facilitation







# Osteopathic Model

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## Contributing Factors

**Mental Fatigue & Anxiety**  
**Stress Management**  
**Personality**

**Genetics**

**Physiologic State**  
**Fitness Level**  
**Posture**



# Histological Changes

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- **Fatty infiltration**
- **Increased number of nuclei**
- **Serous exudates**
- **PG, GAG deposits**



## Physical Findings on Examination

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- **Passive or active stretching of the affected muscle increases pain.**
- **Stretch ROM of the affected muscle is restricted.**
- **Pain is increased when the affected muscle is strongly contracted against a fixed resistance.**
- **Maximum contractile force of an affected muscle is weakened.**



## Physical Findings on Examination

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- **Deep tenderness and dysesthesia is referred to a zone away from the TP.**
- **Disturbances of non-sensory function are sometimes induced in the pain reference zone.**
- **Muscle in the immediate vicinity of a TP feels tense to palpation.**
- **There will be a point of maximum tenderness.**

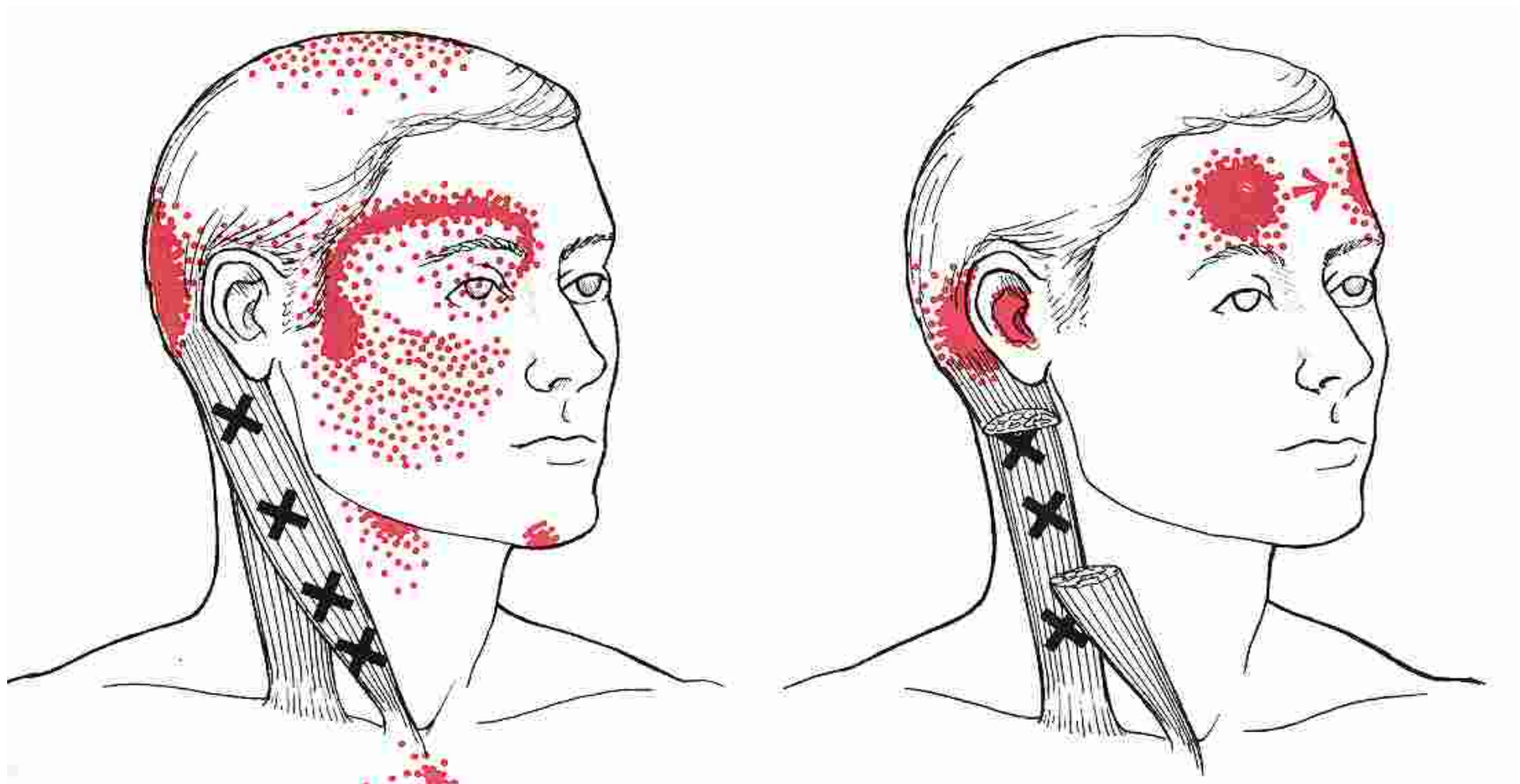


## Physical Findings on Examination

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- **Digital pressure to an active TP elicits a “jump sign”.**
- **Snapping palpation of the TP frequently evokes a local twitch response.**
- **Moderate, sustained pressure of a TP causes or intensifies pain in the TP reference zone.**
- **The skin of some patients may show dermatographia in the area overlying an active TP.**

# Sternocleidomastoid Trigger Point Referral Pattern





## Treatment Should Include the Following:

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- **Address contributing factors**
- **Identify & normalize all somatic dysfunctions**
- **Stress management**
- **Improve level of physical fitness**
- **Improve overall state of health**



# Common Techniques & Approaches

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- **Injection/Needling followed by Stretch**
- **Spray & Stretch or Ice application & Stretch**
- **Counterstrain followed by Stretch \*(Combined Technique)**
- **Functional/Positional Release**
- **Deep Digital Inhibition followed by Stretch**
- **Myofascial Release**
- **Muscle Energy**
- **HVLA (only effective if underlying osteoarticular dysfunction is driving the Trigger point)**