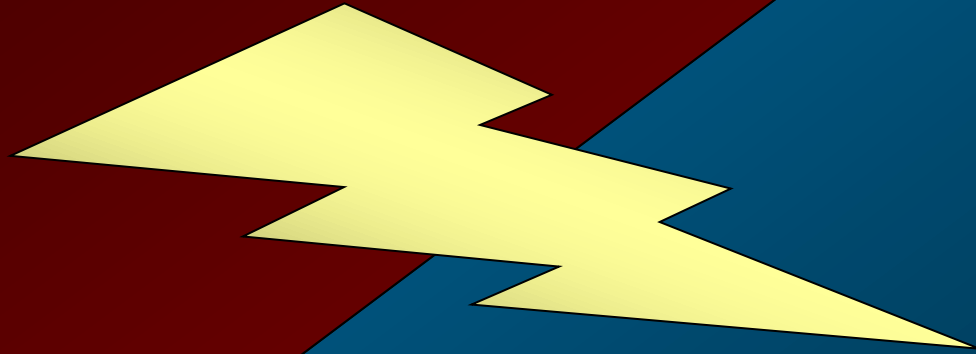
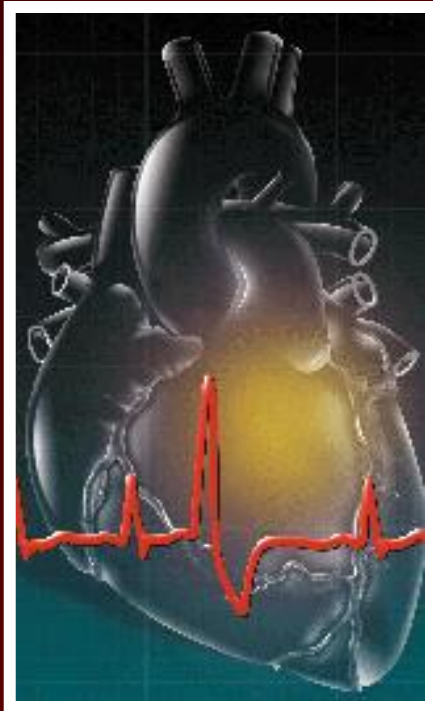


Back Pain in the Emergency Department



**Raul J. Garcia Rodriguez,
FACOEP,FACEP, C-NMMOMM**

Lecture Overview



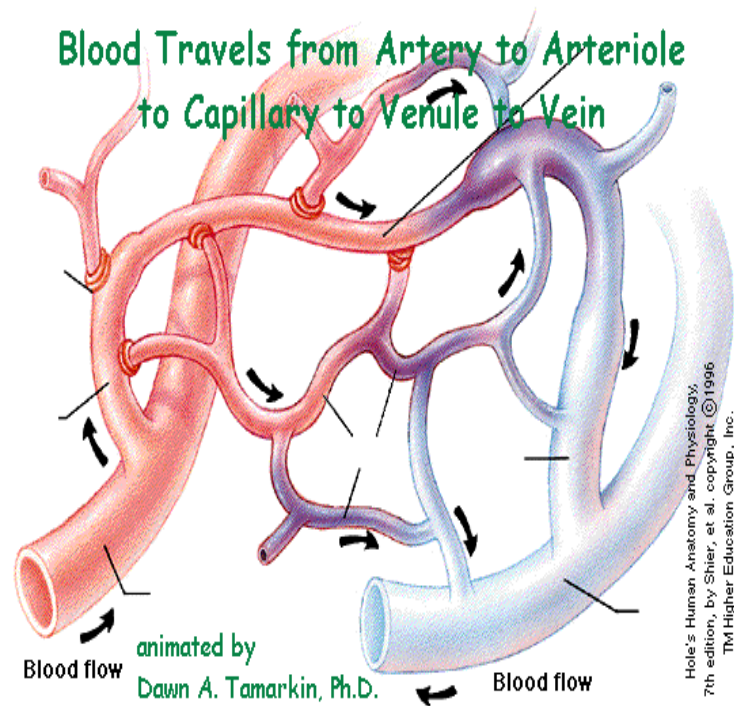
- Visits to the Emergency Department
- Acute vs Chronic Conditions
- Low Risk vs Intermediate vs High Risk
- Treatment of Back Pain and Referrals



Pain

- Expression of the body's Sensors
- Sensory nerves > motor nerves
- Stimulus-->Spino Thalamic Tract
 - →Cerebellum→Hook cells of Russell→
Giant Red Cell→Golgi Tendon Reflex→Spinal
Recurrent Meningeal Nerve→Source of
Stimulus

Autonomic Innervation of Blood & Lymph Vessels



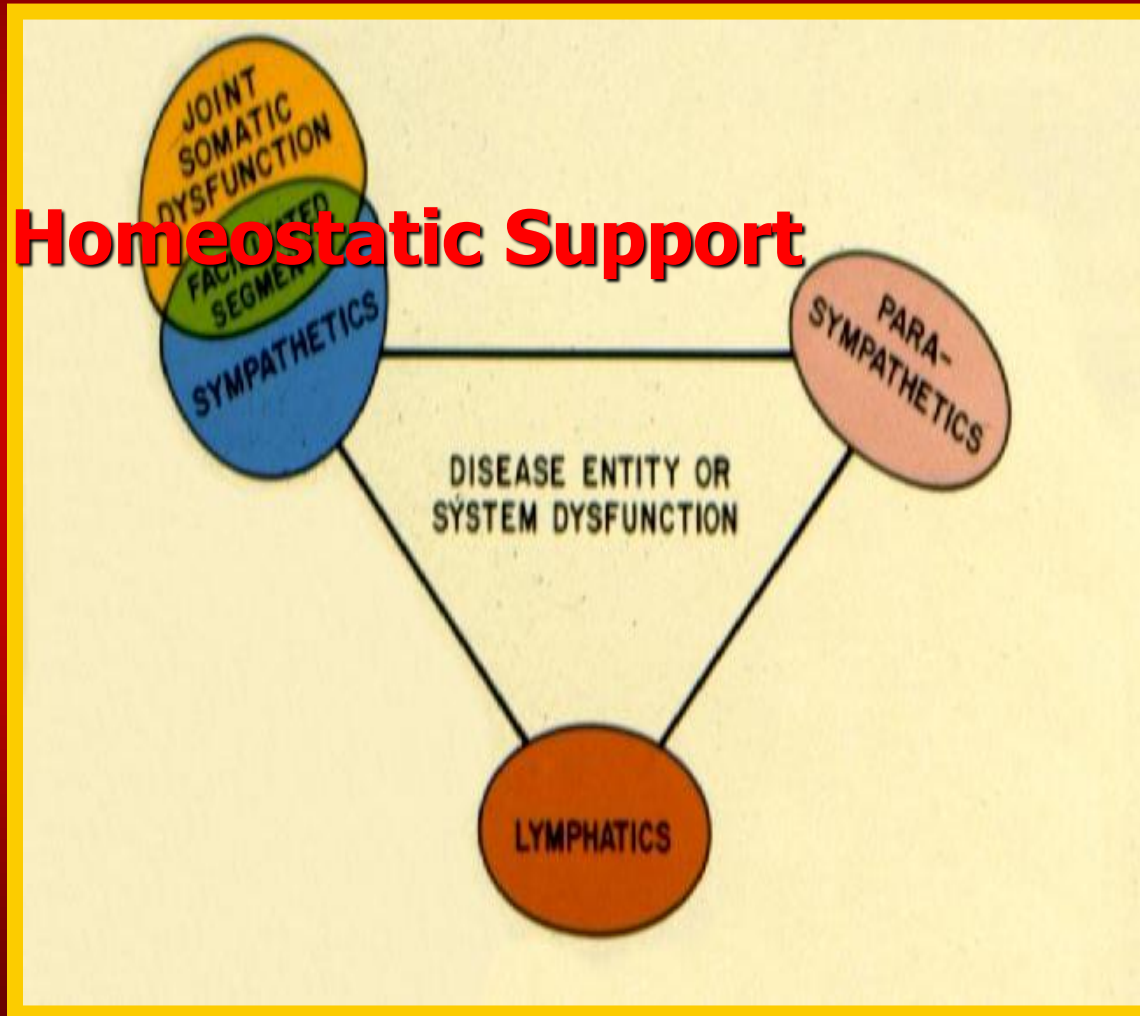
All vasculature innervated with sympathetics (T1-L2) - Constrict

- **Heart T1-6**
- **Upper Extremities T2-8**
- **Kidney/Adrenal T10-11**
- **Lower Extremities T11-L2**

Parasympathetic innervation (dilate) essentially limited to reproduction-related vessels

Large lymphatics (& junction thoracic duct to brachiocephalic vein) also have sympathetic innervation (constrict)

Daily Homeostatic Support





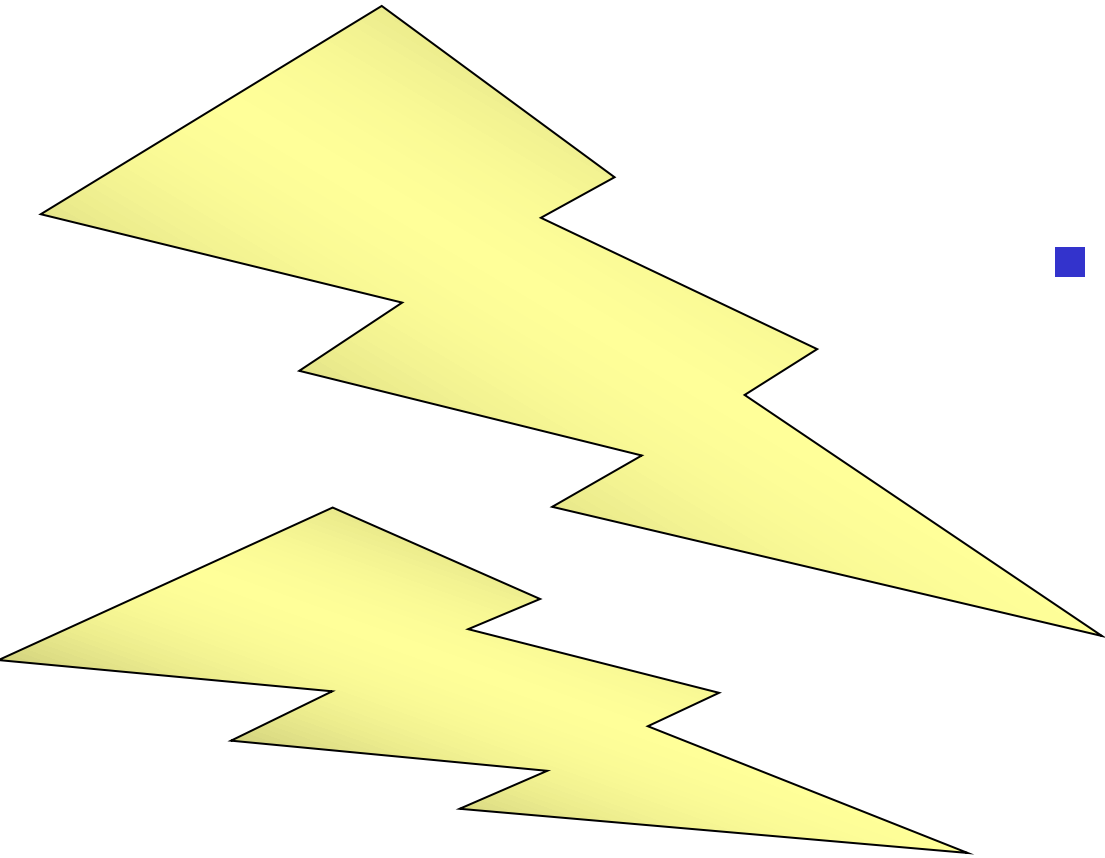
?ER?

Let's Go To the ER

- **How common is it?**
- **3 percent of ALL ED VISITS**
- **Mostly benign conditions**
- **H and P is vital in the ED**
- **Rapid Differentiation of Acute vs Chronic**



An Emergency is Emergent

- 
- As Emergency Physicians we must act immediately



Back Pain can kill you now

- AAA
- Ectopic Pregnancy
- Viscous Rupture
- Uterine Rupture
- Abruptio Placenta
- Traumatic back pain
- Ascending Cholangitis



Serious spinal conditions

- Cauda Equina
- Cancer related
 - Tumors
- Infectious
 - Abscess
 - Osteomyelitis



Everything can present with back pain

- ***Cardiovascular***
- ***Pulmonary***
- ***Gastrointestinal***
- ***Genitourinary***
- ***OB/GYN***



Cardiovascular causes

- AAA
- Aortic Dissection
- Aortic Aneurysm
- Endocarditis



Pulmonary

- Pneumothorax
- Hemothorax
- Pneumonia
- Congestive Heart Failure



Gastrointestinal

- Pancreatitis
- Pancreatic cancer
- Ruptured viscous/ hemorrhage
- Peptic Ulcer
- Cholelithiasis
- Cholecystitis
- Cholangitis



Genitourinary

- Obstructive Uropathy
- Ureterolithiasis
- Renal Colic
- Renal Tumor
- Renal Infarction



OB/GYN

- Ectopic Pregnancy
- Tubo-ovarian Abscess
- Ovarian Torsion
- Abruptio Placenta
- Uterine Rupture
- Dysmenorrhea
- Fibroids
- Endometriosis
- Mittelschmerz



Examining the Back pain Patient

- History
- History
- History
- Treatment is ready at every step



Examining the Back pain Patient

- Low Risk
- Intermediate Risk
- High Risk



Examining the Back pain Patient

- Things to look for
 - Cancer history
 - Trauma history
 - Anticoagulants
 - Fever
 - NEURO SYMPTOMS



High Risk Patients

- Treatment must be immediate
- Decision of imaging if it helps
- Decision of labs is they help
- Quick hook to call consultants



Intermediate patients

- Labs and Imaging may help
- CRP, ESR, CT vs MRI
- Narrow down diagnosis
- Consultants and usually admission



Low Risk Patients

- Rarely need imaging or labs
- Treat Symptoms
- The Emergency is Pain



Musculoskeletal Back Pain

- Acute vs Chronic
- Anchoring Bias
- Full H and P includes a rectal



Musculoskeletal Back Pain

- Inflammatory
- Healing
- Strengthening



Inflammatory

- Steroids
- Anti-inflammatory
- Analgesics
- Muscle Relaxants
- Cold and Heat
- Stretching



Healing Phase

- Osteopathic Manipulative Treatment
- Chiropractic Treatment
- Massage Therapy
- Passive Exercises



Strengthening Phase

- OMT, Chiropractic, Massage
- Physical Therapy
- Active Exercises

Best for MS Back Pain



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Anecdotes of Back Pain





Questions???????





Thank you very much

