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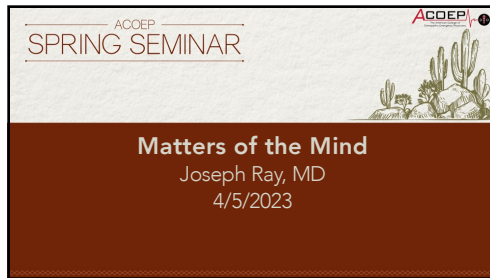
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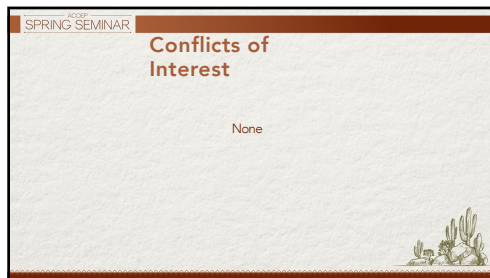
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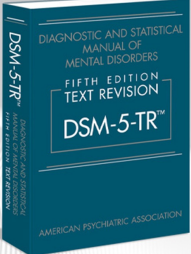
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**Agenda**

1. Review DSM V
2. Depressive Disorders
3. Anxiety Disorders
4. Bipolar and Related Disorders
5. Psychotic Disorders
6. Substance Use Disorders



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SPRING SEMINAR



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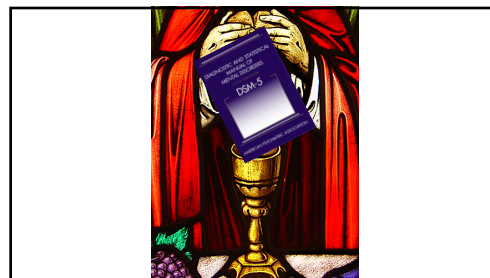
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### What changed?

- DSM V released in 2013
- No more axes
- Removal of GAF score
- Reclassifying diagnoses
- Improved cohesion with ICD coding

Understanding the Axes of DSM-IV

Axis I: Clinical disorders  
Axis II: Personality and intellectual traits  
Axis III: General medical conditions  
Axis IV: Psychosocial and environmental factors  
Axis V: Global Assessment of Functioning - GAF

<http://www.psychiatry.com/files/assets/downloads/03-08-12-01.pdf>

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DSM 5 Code	ICD-10	Description
309.0	F43.21	Adjustment Disorder, With depressed mood
309.21	F93.0	Separation Anxiety Disorder
309.24	F43.22	Adjustment Disorder, With anxiety
309.28	F43.23	Adjustment Disorder, With mixed anxiety and depressed mood
309.29	F43.29	Adjustment disorder with other symptoms
309.3	F43.24	Adjustment Disorder, With disturbance of conduct
309.4	F43.25	Adjustment Disorder, With mixed disturbance of emotions and conduct
309.81	F43.10	Post Traumatic Stress Disorder
309.81	F43.11	Post Traumatic Stress Disorder - Acute
309.81	F43.12	Post Traumatic Stress Disorder - Chronic

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"Since a complete description of the underlying pathological processes is not possible for most mental disorders, it is important to emphasize that the current diagnostic criteria are the best available description of how mental disorders are expressed and can be recognized by trained clinicians. DSM is intended to serve as a practical, functional, and flexible guide for organizing information that can aid in the accurate diagnosis and treatment of mental disorders."

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**Universal Qualifiers**

**Mild:** few to no excess symptoms with manageable intensity

**Moderate:** between mild and severe

**Severe:** Substantial excess symptoms and unmanageably intense, marked impairment

NOT due to other medical condition



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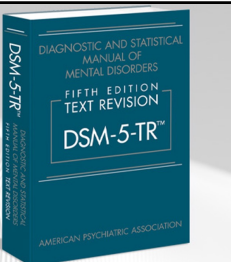
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**Agenda**

1. Review DSM V
- 2. Depressive Disorders**
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**List of Depressive Disorders**

- Disruptive mood dysregulation disorder
- Major Depressive Disorder, single and recurrent episodes
- Persistent depressive disorder (dysrhythmia)
- Premenstrual dysphoric disorder
- Substance/Medication-induced depressive disorder
- Depressive disorder due to another medical condition
- Other specified depressive disorder
- Unspecified depressive disorder



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## Major Depressive Disorder (MDD)

≥ 2 weeks of ≥ 5 D SIG E CAPS sx's, most of day, nearly every day (if applicable). 1 sx must be the "D" or "T"

- Depressed mood
- Sleep (↑/↓)
- ↓ Interest in activities
- Guilt
- ↓ Energy
- ↓ Concentration
- Appetite (↑/↓)
- Psychomotor retardation or agitation
- Suicidal ideations (active or passive)

<https://www.informationweek.com/online/health/education/2023/03/08/psychiatry/03-08-depression-dsmd/>

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## Major Depressive Disorder

Severity/course specifier	Single episode	Recurrent episode*
Major (p. 180)	296.21 (F32.0)	296.20 (F32.1)
Moderate (p. 180)	296.22 (F32.1)	296.32 (F32.1)
Severe (p. 180)	296.23 (F32.2)	296.33 (F32.2)
With psychotic features** (p. 180)	296.24 (F32.3)	296.34 (F32.3)
In partial remission (p. 180)	296.25 (F32.4)	296.35 (F32.4)
In full remission (p. 180)	296.26 (F32.5)	296.36 (F32.5)
Unspecified	296.20 (F32.9)	296.30 (F32.9)

In recording the name of a depression, terms should be listed in the following order: major depressive disorder, single or recurrent episode, severity/psychotic/remission specifier, followed by as many of the following specifiers without codes that apply to the current episode.

Specify:

- With anxious distress (p. 184)
- With mixed features (p. 184-185)
- With melancholic features (p. 185)
- With atypical features (p. 185-186)
- With mood-congruent psychotic features (p. 186)
- With mood-incongruent psychotic features (p. 186)
- With cataplexy (p. 185, Coding note: Use additional code 293.89 [506.1], With peripartum onset (pp. 186-187)
- With seasonal pattern (recurrent episode only) (pp. 187-188)

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## Agenda

1. Review DSM V
2. Depressive Disorders
- 3. Anxiety Disorders**
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## List of Anxiety Disorders

- Separation anxiety disorder
- Selective mutism
- Specific phobia
- Social anxiety disorder (social phobia)
- Panic Disorder
- Panic Attack (specifier)
- Agoraphobia
- Generalized anxiety disorder
- Substance/Medication-induced anxiety disorder
- Anxiety disorder due to another medical condition
- Other specified anxiety disorder
- Unspecified anxiety disorder



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## Panic Attack

"Panic attack is not a mental disorder and cannot be coded"

Abrupt surge that reaches peak within minutes. 4 of the following:

1. Sweating
2. Trembling or shaking
3. Sensations of shortness of breath or smothering
4. Feelings of choking
5. Chest pain or discomfort
6. Nausea or abdominal distress
7. Feeling dizzy, unsteady, light-headed, or faint
8. Chills or heat sensations
9. Paresthesias (numbness or tingling sensations)
10. Depersonalization (feelings of unreality) or derealization (being detached from oneself)
11. Fear of losing control or "going crazy"
12. Fear of dying



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## Panic Disorder


Panic Attacks

+

1 month of worrying about panic attacks  
Maladaptive behavior to avoid panic attacks

**DON'T PANIC !!**

Probably the most thing to say to someone having a panic attack.



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## Generalized Anxiety Disorder (GAD)

6 months  
Inability to control worry  
3 of 6 to the right →

Difficulty concentrating   Restlessness   Being easily fatigued  
Muscle tension   Sleep disturbance   Irritability

Adapted from Psychology in PA  
https://www.psychoa.com/2018/04/04/psychology-in-pa-2018-04-04/

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## Manic Episode

A. 1 week of "elevated, expansive, or irritable mood"

B. 3 of the following:

- A. Inflated self esteem
- B. Decreased NEED for sleep
- C. Talkative
- D. Flight of ideas or thoughts
- E. Distractibility
- F. Increased goal directed activity
- G. Excessive dangerous activities

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### Hypomanic Episode

**A. 4 days** of "elevated, expansive, or irritable mood"

**B.** 3 of the following:  
 A. Inflated self esteem  
 B. Decreased NEED for sleep  
 C. Talkative  
 D. Flight of ideas or thoughts  
 E. Distractibility  
 F. Increased goal directed activity  
 G. Excessive dangerous activities

**C. NOT** severe enough to cause marked impairment in social/occupational function



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### Bipolar 1 Disorder

1 manic episode

May or may not be preceded by hypomanic or major depressive episodes


### Bipolar 2 Disorder

1 hypomanic episode

MUST have major depressive episode

NEVER manic episode

With anxious distress (p. 149)  
 With mixed features (pp. 149-150)  
 With rapid cycling (pp. 150-151)  
 With melancholic features (p. 151)  
 With atypical features (pp. 151-152)  
 With mood-congruent psychotic features (p. 152)  
 With mood-incongruent psychotic features (p. 152)  
 With catatonia (p. 152); Coding note: Use additional code 293.89 (F06.1).  
 With peripartum onset (pp. 152-153)  
 With seasonal pattern (pp. 152-154)



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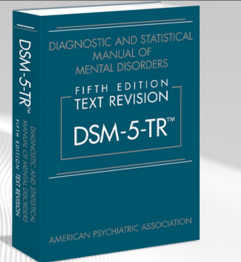
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### Agenda

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## Schizophrenia Spectrum and other Psychotic Disorders

- Schizotypal (personality) disorder
- Delusional disorder
- Brief Psychotic disorder
- Schizophreniform disorder
- Schizophrenia
- Schizoaffective
- Substance/Medication-induced psychotic disorder
- Psychotic disorder due to another medical condition



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## Psychotic Spectrum


Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated). At least one of these must be (1), (2), or (3):

1. Delusions.
2. Hallucinations.
3. Disorganized speech (e.g., frequent derailment or incoherence).
4. Grossly disorganized or catatonic behavior.
5. Negative symptoms (i.e., diminished emotional expression or avolition).



PSYCHOTIC DISORDERS

< 1m Brief psychotic      Delusional > 1m      Schizophreniform 1-6m      Schizoaffective > 6m      Schizophrenia



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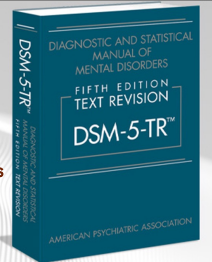
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## Agenda

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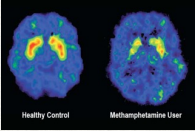
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### Substance-Related and Addictive Disorders

- Alcohol
- Caffeine\*
- Cannabis
- Hallucinogen
- Inhalant
- Opioid
- Sedative-, hypnotic-, or anxiolytic-related
- Stimulant
- Tobacco
- Other (or Unknown)



Wang, H.B., Cheng, Y., Wang, G., Qian, J., Li, S., Zhang, Y., et al. (2019). Brain activation patterns of methamphetamine users. *Journal of Psychiatry*, 264, 1-10.

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### Criteria for substance use disorder



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### Conditions for Further Study Caffeine Use Disorder

Must have:

- Persistent desire to cut back
- Continued use despite it causing or exacerbating problems
- Withdrawal (or using to prevent other withdrawal)

Other substance use criteria possibly included?



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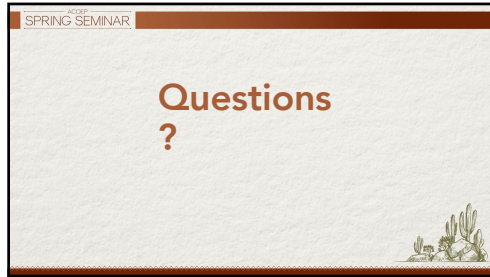
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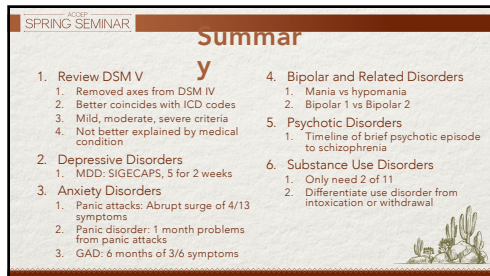
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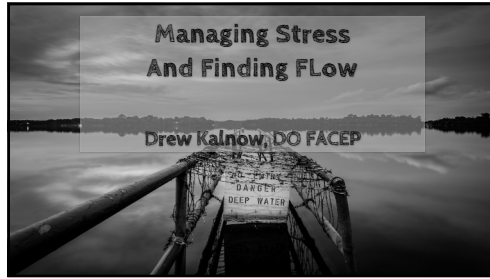
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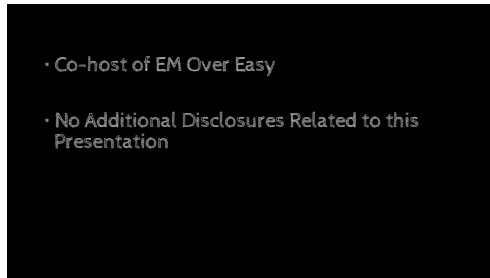
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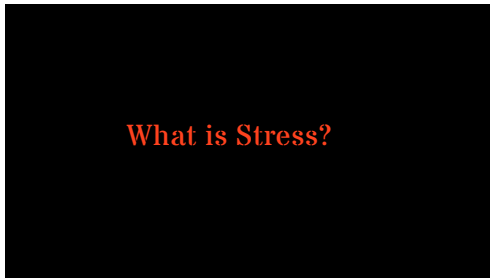
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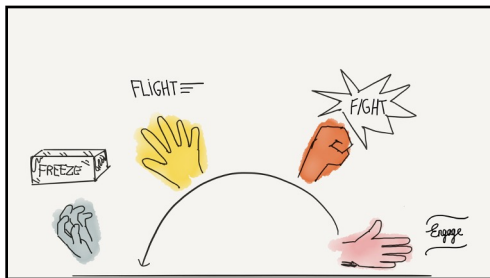
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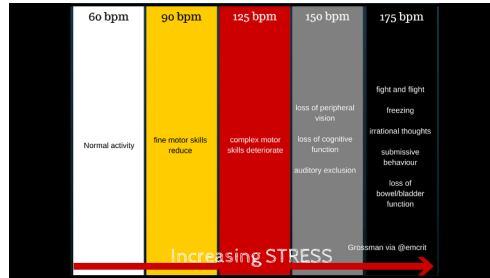
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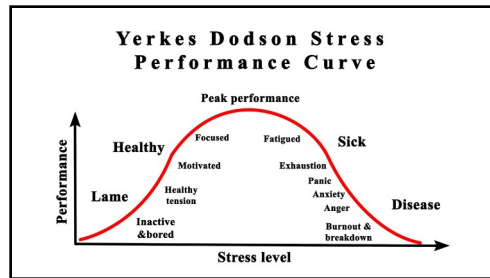
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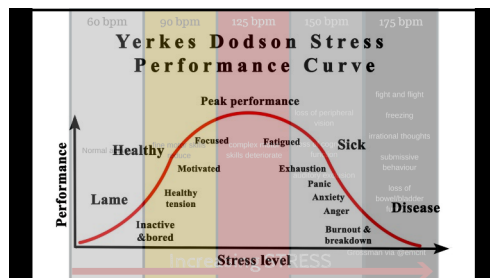
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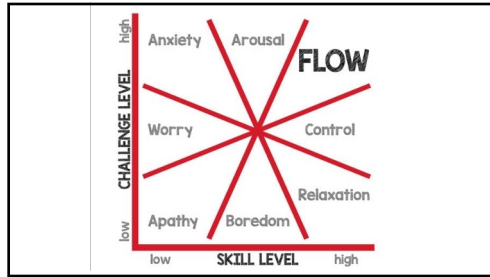
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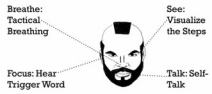
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**Beat the Stress Fool!**



**B** - Breathe  
**T** - Talk (Self)  
**S** - See (Mental Rehearsal)  
**F** - Focus with Trigger Word

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Drew Kalnow, DO  
Doctors Hospital Emergency Department  
akalnow@gmail.com  
@dkalnow  
EMOverEasy.com

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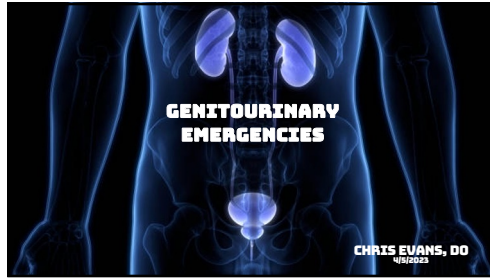
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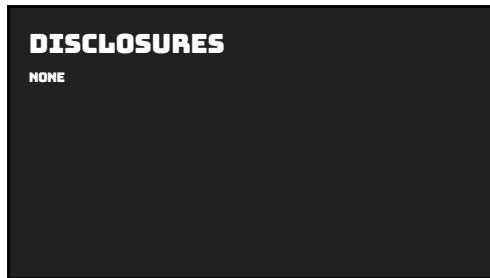
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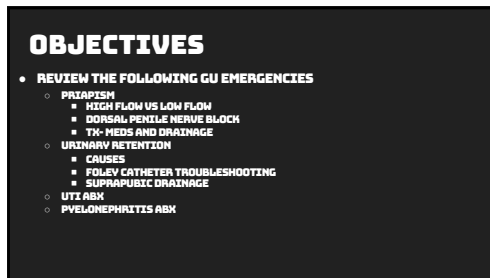
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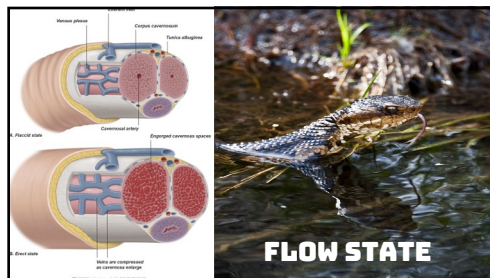
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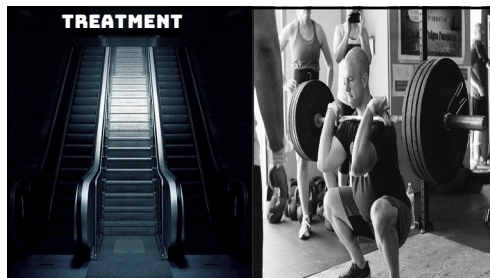
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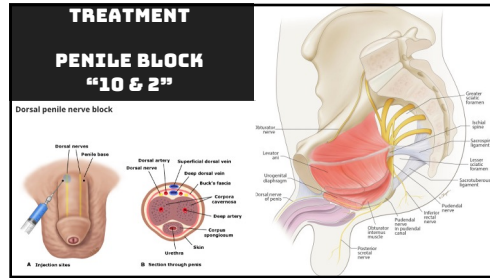
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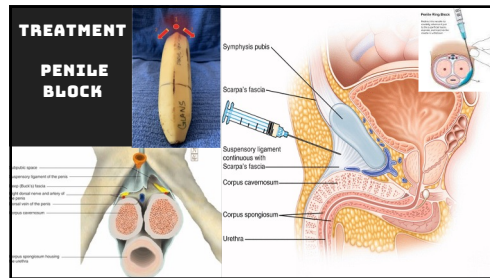
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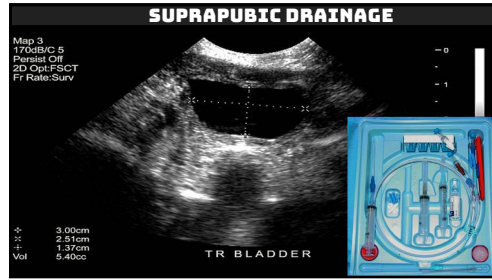
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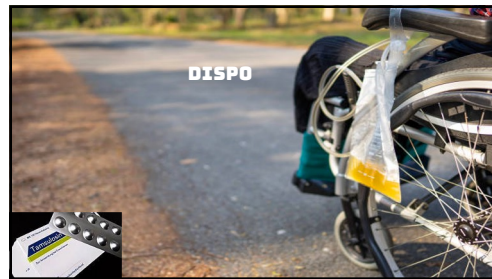
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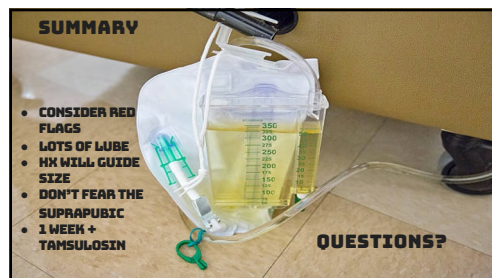
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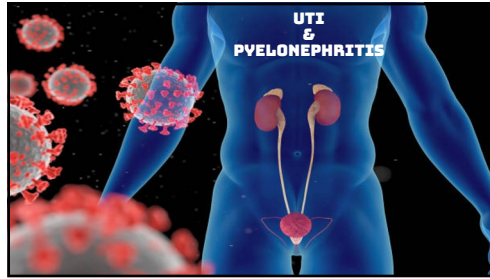
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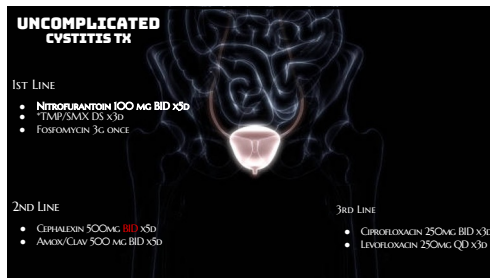
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### UNCOMPLICATED CVSTITIS IN PREGNANCY

ASYMPTOMATIC BACTERIURIA

- CEPHALEXIN 500MG TID x5d
- NITROFURANTOIN 100 MG BID x5d
  - Avoid 1st trimester
  - Avoid >36wks

SYMPTOMATIC

- CEPHALEXIN 500MG QID x7d
- NITROFURANTOIN 100 MG BID x5d



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### COMPLICATED CVSTITIS/PYELOK

1ST LINE

- CEFTRIAXONE 300MG BID x 10d
- CEFPROXIME 200MG BID x10d
- TMP/SMX DS x10d
- CIPROFLOXACIN 500MG BID x7d
- LEVOFLOXACIN 750MG QD x5d

CONSIDER

- SINGLE DOSE CEFTRIAXONE 1g OR
- SINGLE DOSE ERTAPENEM 1g



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### SUMMARY

- SIMPLE
  - NITROFURANTOIN
  - CEPHALEXIN BID
- PREG. 1ST TRIM
  - CEPHALEXIN TID
- PREG. 2ND-3RD TRIM
  - CEPHALEXIN QID
  - NITROFURANTOIN
- COMPLICATED
  - +/- CEFTRIAXONE ONCE PLUS
  - CEFTRIAXONE
  - FLUOROQUINOLONE



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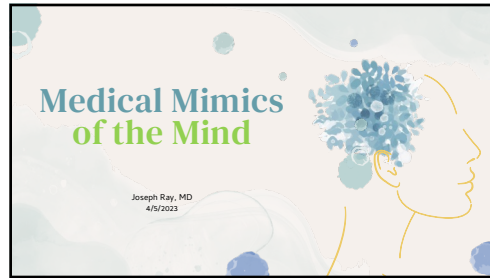
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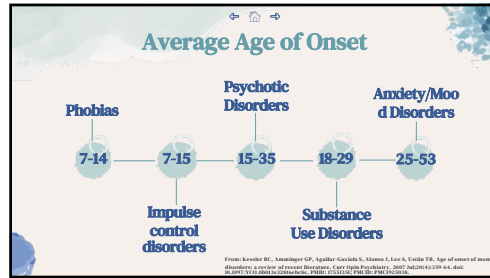
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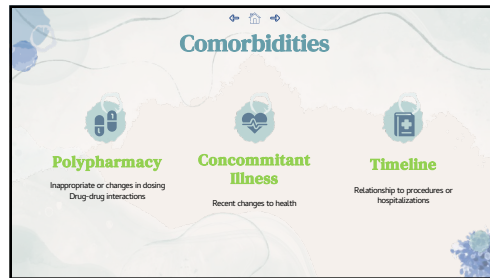
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**TABLE 3. Commonly associated psychiatric side effects\***

Medication	Commonly Associated Side Effects
Antiepileptic agents	Delirium, psychosis, irritability
Beta blockers	Delirium, psychosis, depression
Corticosteroids and anabolic steroids	Mood changes
Insulin	Depression
Benzodiazepine (with/without benzodiazepines)	Anxiety, agitation
Insulin	Restlessness, irritability
Insulin	Delirium
Sulfonamide antibiotics	Delirium
Acetylsalicylic acid	Hallucinations
Psychotropics, dopaminergic agents (eg, antiparkinson agents)	Psychosis, agitation, irritability
Over-the-counter cough and cold preparations	Delirium, confusion, hallucinations
Anticholinergics (eg, antihistamines, benzodiazepines, tricyclic antidepressants)	Delirium
Marijuana	Dissociation, apathy, amotivation
Opoids	Anxiety, irritability
Phenylethylamine, hallucinogens	Hallucinations, aggression, safety, mood swings
Stimulants (cocaine, amphetamine)	Paranoia, psychosis, depression, hallucinations

\*Adapted from Frawley's, Zuo, "Dabbling" Sahu and Baber, " and Copyright 2018."

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Delirium		Dementia
Rapid	Onset	Insidious
Fluctuating	Course	Progressive
Reversible	Duration	Irreversible
Altered	LOC	Mostly normal
Impaired	Attention	Mostly normal
Impaired	Short term memory	Mostly normal
Hyper- or hypo-active	Psychomotor	Mostly normal

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### Major Depressive Disorder

≥ 2 weeks of ≥ 5 D'SIG E CAPS sx's, most of day, nearly every day (if applicable). 1 sx must be the "D" or "I"

- Depressed mood
- Sleep (↑/↓)
- ↓ Interest in activities
- Guilt
- ↓ Energy
- ↓ Concentration
- Appetite (↑/↓)
- Psychomotor retardation or agitation
- Suicidal ideations (active or passive)

https://www.drawitknowit.com/course/pathology/glossary/pathophysiology-of-delirium-depression-6ander

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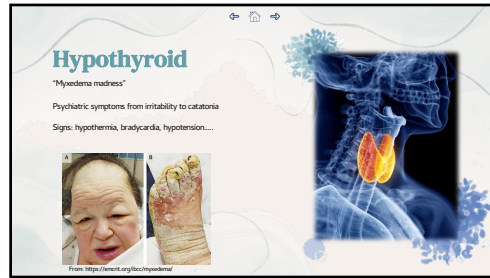
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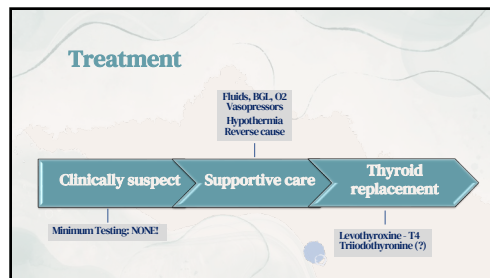
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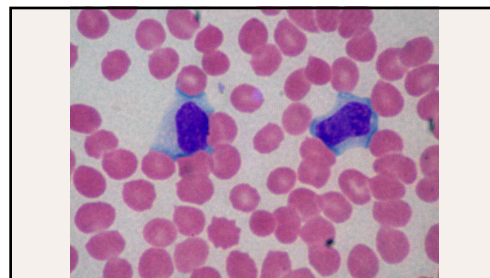
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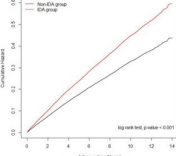
Psychiatric disorders risk in patients with **iron deficiency anemia** and association with iron supplementation medications: a nationwide database analysis

Heng-Sheng Lee, Hsin-Hao Chao, Wan-Ting Huang, Solomon Chi-Cheng Chen & Hsin-Yi Yang 

*BMC Psychiatry* 20 Article number: 216 (2020) | [Cite this article](#)

12-year Taiwanese study

19397 IDA vs 38794 non-IDA



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Table of contents

01 General Tips

02 Depression

03 Anxiety

04 Psychosis

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**DON'T PANIC!!**

Possibly the worst thing to say to someone having a panic attack.

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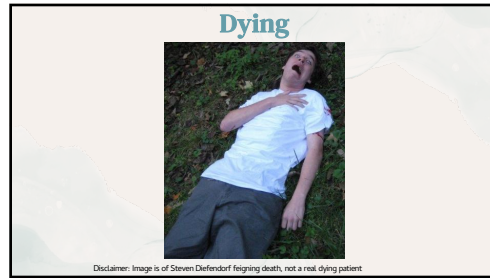
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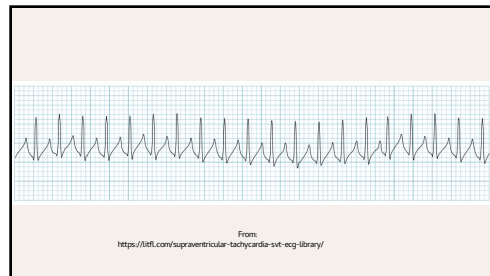
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**Generalized anxiety disorder**

6 months  
Inability to control worry  
3 of 6 to the right →

 Difficulty concentrating	 Restlessness	 Being easily fatigued
 Muscle tension	 Sleep disturbance	 Irritability

Adapted from Psycholops on FB:  
<https://www.facebook.com/psycholopsmagazine/photos/101588976704420216795068700486371>

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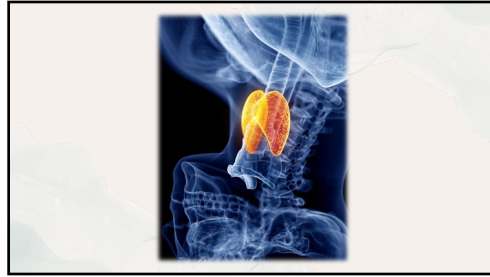
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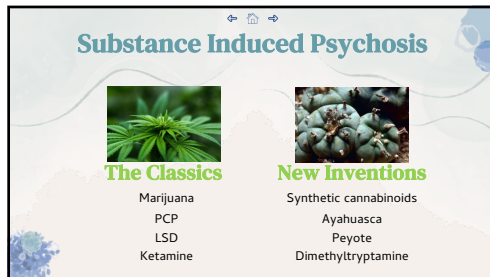
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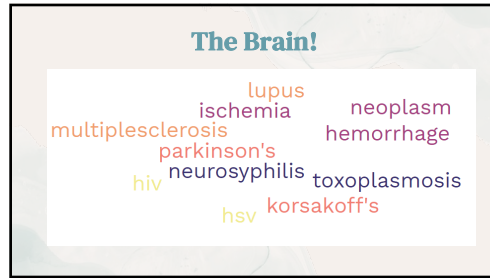
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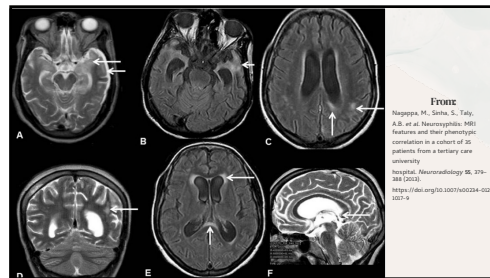
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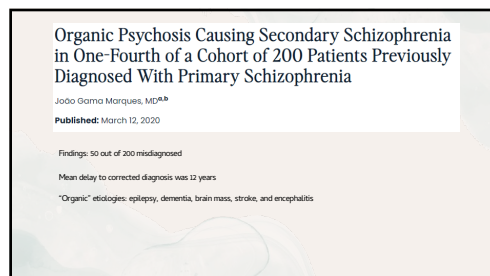
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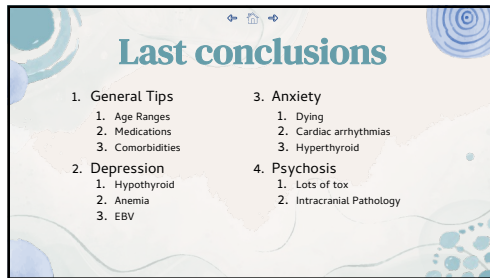
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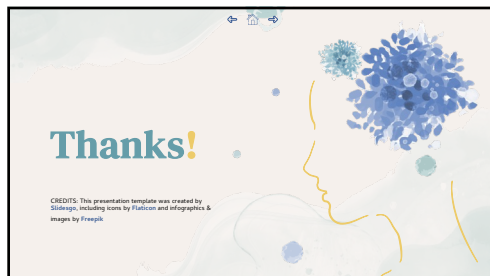
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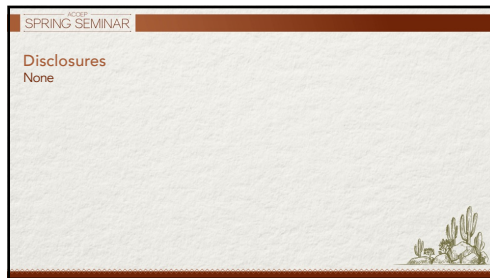
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### Objectives

- Discuss some of the challenges of practicing Emergency Medicine in a Community Setting.
- Review some of the chronic diseases you may be managing.
- Discuss maximizing your available resources.



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### Existential question?

- My love letter to community medicine



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Rewarding



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**TNKase for STEMI**  
- American College of Chest Physicians (ACCP)/Journal of American College of Cardiology recognizes TNKase as a Class 1A recommendation in the treatment of STEMI patients within 12 hours from the onset of symptoms.

Table 4  
Indications for Fibrinolytic Therapy When There Is a >120-Minute Delay From FMC to Primary PCI (Figure 2)

	COR	LOE	References
Ischemic symptoms <12 h	I	A	(81,306–311)
Evidence of ongoing ischemia 12 to 24 h after symptom onset and a large area of myocardium at risk or hemodynamic instability	IIIa	C	N/A
ST depression, except if true posterior (inferobasal) MI is suspected or when associated with ST elevation in lead aVL	III	B	(10,11,181,212,213)
	Harm		

COR indicates Class of Recommendation; FMC, first medical contact; LOE, Level of Evidence; MI, myocardial infarction; N/A, not available; and PCI, percutaneous coronary intervention.

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### Pediatric Resuscitation Meds: Handtevy Method

Weight in kg

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### Pediatric resuscitation - Handtevy Method

<b>15 kg</b>	<b>20 kg</b>	<b>25 kg</b>
Epi 1:1,000 IM 0.15 mL Epi 1:10,000 IV 1.5 mL Amiodarone 1.5 mL Bicarb 8.4% 15 mL D <sub>5</sub> W 20 mL Normal Saline 500 mL Lorazepam 0.75 mL Chicagom (MNI) 15 mL ETT (mg/LMA) 4/0/2/2	Epi 1:1,000 IM 0.2 mL Amiodarone 2 mL Bicarb 8.4% 20 mL D <sub>5</sub> W 40 mL Normal Saline 600 mL Lorazepam 1 mL Chicagom (MNI) 8.8 mL ETT (mg/LMA) 16/0/2/2.8	Epi 1:1,000 IM 0.25 mL Epi 1:10,000 IV 2.5 mL Amiodarone 2.5 mL Bicarb 8.4% 25 mL D <sub>5</sub> W 50 mL Normal Saline 500 mL Lorazepam 1.25 mL Chicagom (MNI) 1 mL ETT (mg/LMA) 16/2/2/2.8
<b>10 kg</b>	<b>5 kg</b>	<b>30 kg</b>
Epi 1:1,000 IM 0.1 mL Epi 1:10,000 IV 1 mL Amiodarone 1 mL Bicarb 8.4% 10 mL D <sub>5</sub> W 20 mL Normal Saline 200 mL Lorazepam 0.5 mL Chicagom (MNI) 6.4 mL ETT (mg/LMA) 4/0/1/2	3- 5- 7- 9- The Handtevy™ Pediatric Code	Epi 1:1,000 IM 0.3 mL Epi 1:10,000 IV 3 mL Amiodarone 3 mL Bicarb 8.4% 30 mL D <sub>5</sub> W 30 mL Normal Saline 500 mL Lorazepam 1.5 mL Chicagom (MNI) 1.2 mL ETT (mg/LMA) 16/2/2/3

\*NOTE: The Chestnut Cr. dose is ONLY 1/10 the amount of the Handtevy™ MNI. See Handtevy™ MNI for details.

• Epi 1:1,000 IM 1 mg/mL  
• Amiodarone 1 mg/mL  
• Bicarb 8.4% 100 mg/mL  
• D<sub>5</sub>W 100 mg/mL  
• Normal Saline 0.9%  
• Lorazepam 1 mg/mL  
• Chicagom 100 mg/mL

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### Consultants

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**Manual Exchange Transfusion:**

- GOAL: % Hemoglobin S decreased to target <30%, Total hemoglobin concentration is usually targeted to ~10 mg/dL.
- A typical adult may require ~5-8 units of red blood cells during an exchange transfusion



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**Manual Exchange Transfusion:**

[Step #1] Two-unit exchange:

- #1A) Bleed the patient
  - Volume varies depending on baseline hemoglobin.
  - Withdrawal of blood – Gravity to an empty bag, or a 50-ml syringe with a 3-way stopcock.
    - If baseline hemoglobin is 6-8 g/dL, bleed 250 ml.
    - If baseline hemoglobin is 8-10 g/dL, bleed 500 ml.
    - If baseline hemoglobin is 10-12 g/dL, bleed 750 ml total (in two divided phlebotomies; see #1B).
    - If baseline hemoglobin is >12 g/dL, bleed 1,000 ml total (in two divided phlebotomies; see #1B).
- #1B) Infuse a volume of crystalloid equal to the volume of blood removed in #1A.
  - For patients being phlebotomized 750-1000 ml, this may be performed in two stages to prevent hypovolemia (First remove 375 or 500 ml blood; replace with 375 or 500 ml crystalloid, then remove an additional 375 or 500 ml blood and replace again with crystalloid).
- #1C) Infuse two units of packed red blood cells.
- #1D) Infuse crystalloid in equal volume to the amount of packed cells administered (this will be roughly ~500 ml).

•[Step #2] Reassess:

- [Step #3] If the post-exchange hemoglobin is >12 mg/dL, remove 500 ml blood to avoid hyperviscosity.
- [Step #4] Perform repeated exchanges (steps #1-3) as needed to achieve target number of exchanged units (e.g., 4-8 units total).



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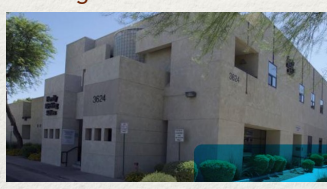

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**All the things...**

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### Panda v Giraffe

What's the difference?

- Giraffe Warmer
- NICU use
- Mattress that can be rotated for access
- General observation light and procedure light
- Panda Warmer
- Intended for Labor and Delivery Unit
- General observation light
- No procedure light
- No rotating Mattress



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### Sources:

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THANK YOU!!!!



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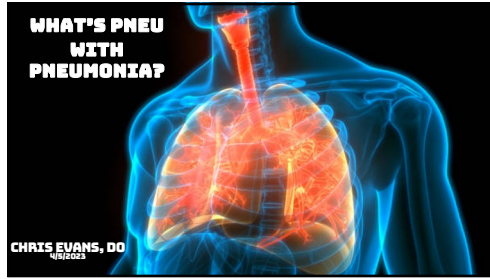
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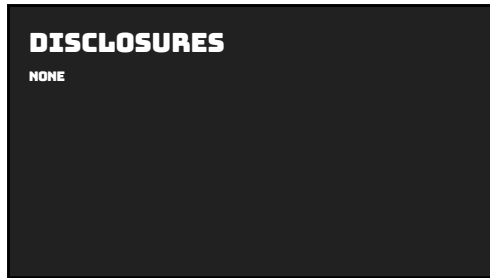
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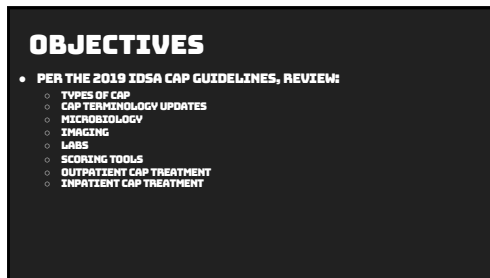
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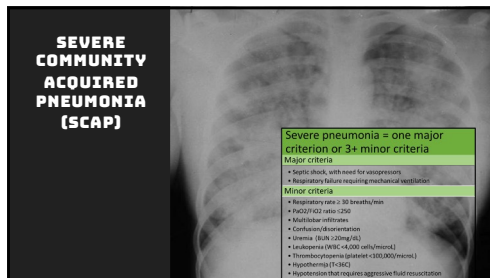
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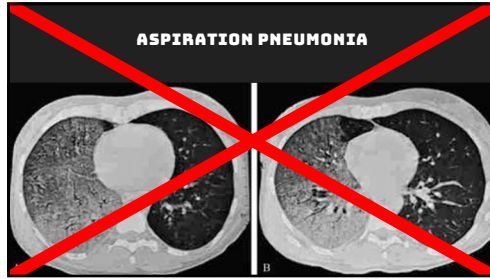
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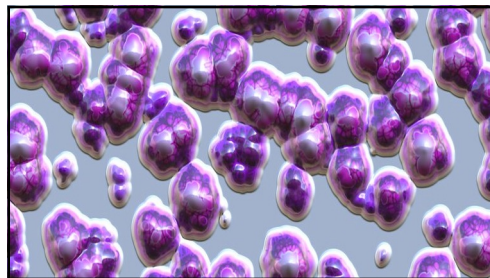
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**INPATIENT CAP**

CEFTRIAXONE 1G DAILY  
+  
MACROLIDE 500MG DAILY

**MONOTHERAPY**  
LEVOFLOX 750MG DAILY  
MOXIFLOX 400MG DAILY



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**INPATIENT SEVERE CAP**

CEFTRIAXONE 1G DAILY  
+  
MACROLIDE 500MG DAILY  
+



CEFTRIAXONE 1G DAILY  
+  
LEVOFLOX 750MG DAILY  
MOXIFLOX 400MG DAILY



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**PRIOR MRSA/PSEUDOMONAS**

**MRSA**  
ADD  
VANCOMYCIN 15mg/kg BID



**PSEUDOMONAS**  
Ceftazidime 3g q8h  
+  
MACROLIDE  
AZITHROMYcin 2g q8h



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**IV ABX IN PAST 90 DAYS**


**CAP**

CEFTRIAXONE 1G DAILY  
+  
MACROLIDE 500MG DAILY



**SCAP**

Cefepime 2g q8h  
+  
Vancomycin 15mg/kg BID  
+  
Macrolide



Aztreonam 2g q8h

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**SUMMARY:  
INPATIENT  
CAP VS SCAP**

	STANDARD TX	NON-SEVERE CAP	SEVERE CAP	IV ABX IN PAST 90 DAYS
Non-Severe CAP	Beta-lactam + Macrolide OR Fluoroquinolone	Penicillins, Cephalosporins, Macrolides	Vancomycin, Aztreonam, Spirillum CX	Standard TX, Cefepime, Vancomycin, Aztreonam, Spirillum CX
Severe CAP	Same	Same	Same	Vancomycin + Cefepime, Cefepime, Vancomycin, Aztreonam, Spirillum CX

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**CAP + FLU**

**OUTPT OR INPT**

ABX  
+  
OSELTAMAVIR

\*\*REGARDLESS OF DURATION OF SX\*\*

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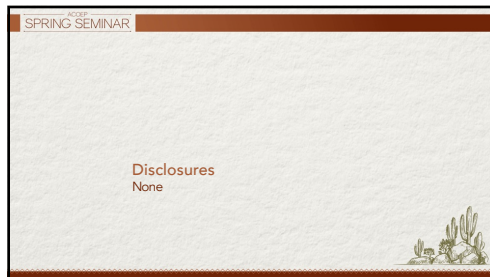
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- Discuss some of the challenges we may face managing the pregnant patient in the community Emergency Department.
- Review tips for managing the pregnant in the emergency department.
- Discuss ways to optimize your support network in managing the pregnant patient in the community Emergency Department.



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So I might be pregnant....



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**POCUS**

- PoCUS was found to be 99.3% sensitive in ruling out ectopic pregnancy by detecting an Intrauterine pregnancy (IUP)
- Specificity of 92-100% for confirming intrauterine pregnancy (IUP) when gestational sac and yolk sac or fetal pole seen.



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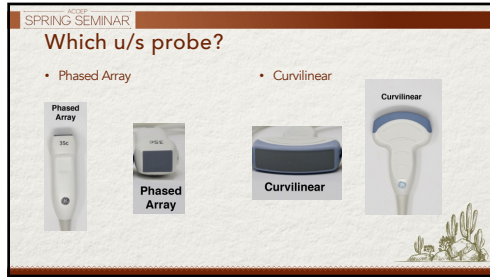
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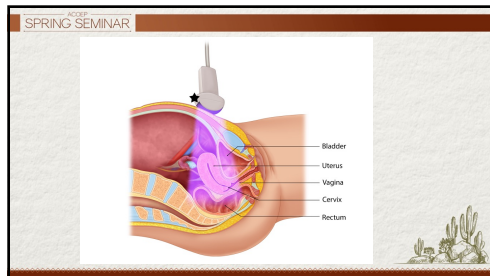
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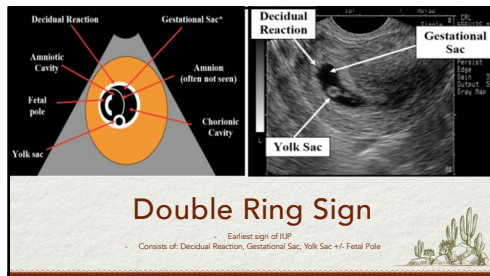
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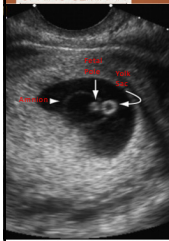
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SPRING SEMINAR



### Double Ring Sign

- Decidual Reaction: 14 days POST-fertilization
- Gestational Sac: 4-5 weeks TVUS and 6 weeks TAUS POST-fertilization
- Yolk Sac +/- Fetal Pole
- Yolk Sac: 5-6 wks TVUS or 6-7 wks TAUS
- Fetal Pole: 6 wks TVUS, 7 wks TAUS

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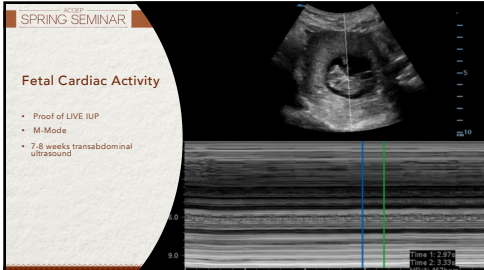
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SPRING SEMINAR

### Fetal Cardiac Activity

- Proof of LIVE IUP
- M-Mode
- 7-8 weeks transabdominal ultrasound



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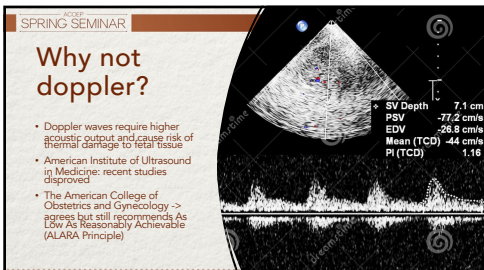
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SPRING SEMINAR

### Why not doppler?

- Doppler waves require higher acoustic output and cause risk of thermal damage to fetal tissue
- American Institute of Ultrasound in Medicine: recent studies disproved
- The American College of Obstetrics and Gynecology -> agrees but still recommends As Low As Reasonably Achievable (ALARA Principle)



SV Depth	7.1 cm
PSV	-77.2 cm/s
EDV	-26.8 cm/s
Mean (TCD)	-44 cm/s
PI (TCD)	1.16

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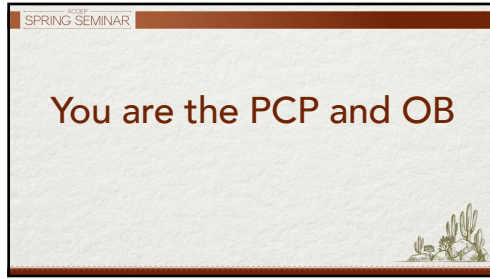
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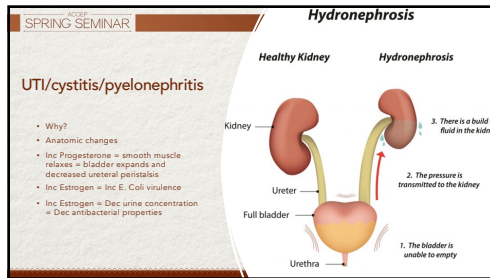
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### Treatment

- Asymptomatic bacteriuria and cystitis:
  - Cephalexin 250mg to 500mg four times a day for 3-7 days
  - Nitrofurantoin 100mg four times a day
- Pyelonephritis:
  - ADMIT, IV ABX - Rocephin - IV FLUIDS!!!
- Suppressive therapy:
  - Nitrofurantoin 100mg x 1 each night



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### Asthma

- Why?
  - Inc Estrogen = hyperemia, hypersecretion and mucosal edema of respiratory tract
  - Gravid Uterus = elevated diaphragm
  - Asthma exacerbations peak around 4<sup>th</sup> month gestation, worse 24<sup>th</sup>-36<sup>th</sup> weeks

Changes in asthma severity during pregnancy



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### Why We Care



Perinatal Mortality



Complications:  
hyperemesis,  
preeclampsia,  
hemorrhage



Neonatal  
Mortality &  
Premature  
Birth

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### Treatment

- Short-acting inhaled bronchodilators - Albuterol
- Anti-leukotriene agents - montelukast
- Inhaled corticosteroids - budesonide
- Asthma is very severe - oral steroids - prednisone



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### Hypertension

**Chronic Hypertension**

- (BP > 140/90) before pregnancy or diagnosed BEFORE the 20<sup>th</sup> week of gestation. Or hypertension diagnosed for the first time during pregnancy and persists beyond the 42<sup>nd</sup> day postpartum

**Gestational/Transient Hypertension**

- The development of elevated blood pressure during pregnancy or in the first 24 hours postpartum without other signs of preeclampsia or preexisting hypertension.

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### CHAP Trial Treatment for Mild Chronic Hypertension During Pregnancy

**2,408**  
Active Management  
Group

**Standard Management  
Group**

**Primary Outcome:**  
Composite of preeclampsia with severe features, medically indicated preterm birth < 35 weeks, placental abruption, and/or fetal or neonatal death.  
38% risk reduction of a primary outcome event in the active management group (95% CI 21.0% to 55.0%, IRR 0.62; 95% CI 0.34 to 1.13)

**Number needed to treat to prevent a single primary outcome event: 14.2**

**Safety Outcome:**  
Small for gestation (at 35w, 35w weight < 40%): No significant difference in rates of SGA (33.2% vs 33.0%, IRR 1.01; 95% CI 0.82 to 1.23)

**Conclusions:** Treatment to blood pressure < 140/90 mmHg for patients with chronic hypertension in pregnancy is associated with lower risk for death and death with less morbidity. Standard management increased risk for death.

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ACOG  
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### Why We Care

**Fetal Complications**

- Intrauterine growth retardation, fetal death in utero, premature deliver

**Maternal Complications**

- Stroke, heart disease, renal failure.
- 15-20% of chronic hypertensives develop superimposed preeclampsia.
- Three fold risk for placental abruption and maternal hemorrhage.



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ACOG  
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### Treatment

- Labetalol 100 or 200mg BID
- Nifedipine 30mg XL daily

**Should we treat mild chronic hypertension during pregnancy?**

Group	Pre-eclampsia	Stroke	Heart Failure	Renal Failure	Maternal Mortality	Fetal Mortality
Control Group (n=1208)	37%	10.4%				
Active Rx Group (n=1208)	30.2%	11.2%	0.8%	0.4%	0.04%	0.04%

Diagnosis: compared between mild chronic hypertension (systolic blood pressure >160 mmHg or diastolic blood pressure >110 mmHg) and no hypertension during pregnancy (systolic blood pressure <160 mmHg and diastolic blood pressure <110 mmHg). Data are n (%).



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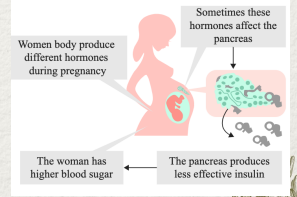
ACOG  
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### Diabetes

**Causes of gestational diabetes mellitus**

**Why?**

- Secretion human placental lactogen & placental growth hormones = Inc insulin resistance.
- Inc estrogen, progesterone, prolactin = Dec peripheral sensitivity to insulin.



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## Why We Care

- Fetal Effects
  - Macrosomia
  - Increased need for c-section.
  - 30-50% of neonates born to diabetic mothers develop neonatal hypoglycemia (glucose < 40).
  - Congenital malformations occur 2-4 times more frequently.
  - ASSOCIATION between first trimester spontaneous absorption and diabetic pregnancy.

• Maternal Effects

- Preterm labor in 30% of diabetic pregnancies.
- Preeclampsia and eclampsia more common.
- Higher risk for DKA

**Short Term Complications:**

- Preeclampsia
- Macrosomia
- Large for gestational age
- Placental abruption
- Cesarean birth.

**Long Term Complications:**

- Type 2 Diabetes Mellitus
- Obesity
- Cardiovascular disease
- Metabolic syndrome

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## Treatment

- Medical nutrition therapy, exercise, weight loss.
- Insulin.
- Patients who were already T1DM or T2DM BEFORE pregnancy may need to double regular insulin usage while pregnant.
- ADMIT: Any pregnant patient who cannot clear ketosis with IVF in ED!!!

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## Special Case of DKA in Pregnancy

- A few PEARLS

- Fetal mortality 50-90% in DKA.
- Hyperemesis gravidarum can trigger DKA → Patients WITHOUT diabetes often become ketotic early in pregnancy.
- T1DM: Euglycemic DKA
- Normal pregnancy serum pH mildly alkalotic → pregnant DKA patient may have a pH near 7.40 but STILL be in DKA.

↑ Buffering Capacity

↑ Ketogenesis

↑ Serum Glucose

Physiologic Stress for ketogenesis

Euglycemic DKA

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### Case

- Early 20s Female presents for abdominal pain
- Her boyfriend threw her against the wall and punched her in the face multiple times PTA.
- She is 36 weeks pregnant



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### Domestic Violence

More than 300,000 pregnant women in the U.S. experience intimate partner violence every year.

25% of women are abused for the first time during pregnancy.

77% of pregnant homicide victims are killed in early (first trimester) in their pregnancy.



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### It's up to us

18% of pregnant women seen in the UC have been asked by their physician about intimate partner violence.

Less than half of health care providers routinely screen for domestic violence or sexual assault...

47% of intimate partner homicide and attempted homicide victims were seen by health care professionals in the year before their DEATH or ATTACK



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**Resources**

National Domestic Violence Hotline  
at (800) 799-7233 or TTY for the  
hearing-impaired at (800) 787-3224.

National Domestic Hotline Website:  
<https://www.thehotline.org/>

The Safety Zone:  
<http://thesafetyzone.org/>



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**THANK YOU!**



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