



HOW TO GIVE A CHALK TALK

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BIAS MITIGATION

- We have used a bias checklist to review this lecture to mitigate bias
- We have reviewed this lecture for use of stereotypical or offensive terms, language, etc.
- We have, to the best of our ability, used inclusive language, pronouns, photos and images

Despite best efforts and intentions, if there is concerning content please feel free to contact us



AGENDA

- Discuss why Chalk Talks (mini lectures) are a valuable teaching tool in the clinical setting
- Review an approach to making a chalk talk
- Perform a chalk talk and receive feedback in your breakout group

WHAT IS A CHALK TALK / MINI LECTURE?



5-15 MINUTES



INTERACTIVE AND
ENGAGING



USES MULTIMEDIA

WHAT A CHALK TALK IS NOT-

- Full length lecture
- Reading information AT someone
- A venue to “pimp” or humiliate a learner



WHY NOT A LECTURE?

- Time!
- Adapted to the needs of the individual learner
- Adult Learning Theory supports this format
- When surveyed, learners state that "setting aside time to teach" is a highly rated behavior

HOW TO MAKE A CHALK TALK



Choose a topic



Create learning objectives



Identify your hook



Plan your whiteboard



Prepare the room

FINDING A TOPIC

Topic: Diabetes / Insulin

Can you do this in 10 minutes?



STEP I: FINDING A TOPIC



Start with something you
know well



Select a **portion** of a topic
to keep it focused and
meaningful



Consider asking the learner
for a topic

TOPIC COMPARISONS

- Diabetes -> Diabetes diagnosis
- Antibiotic selection -> Antibiotics that cover MRSA, pseudomonas
- Approach to CBC -> Thrombocytopenia
- Infections -> Bacteremia
- Pancreatitis -> Pancreatic pseudocyst
- Pain control -> Calculating oral morphine equivalents
- GI bleed -> Upper GI bleed, admission orders for GI bleed

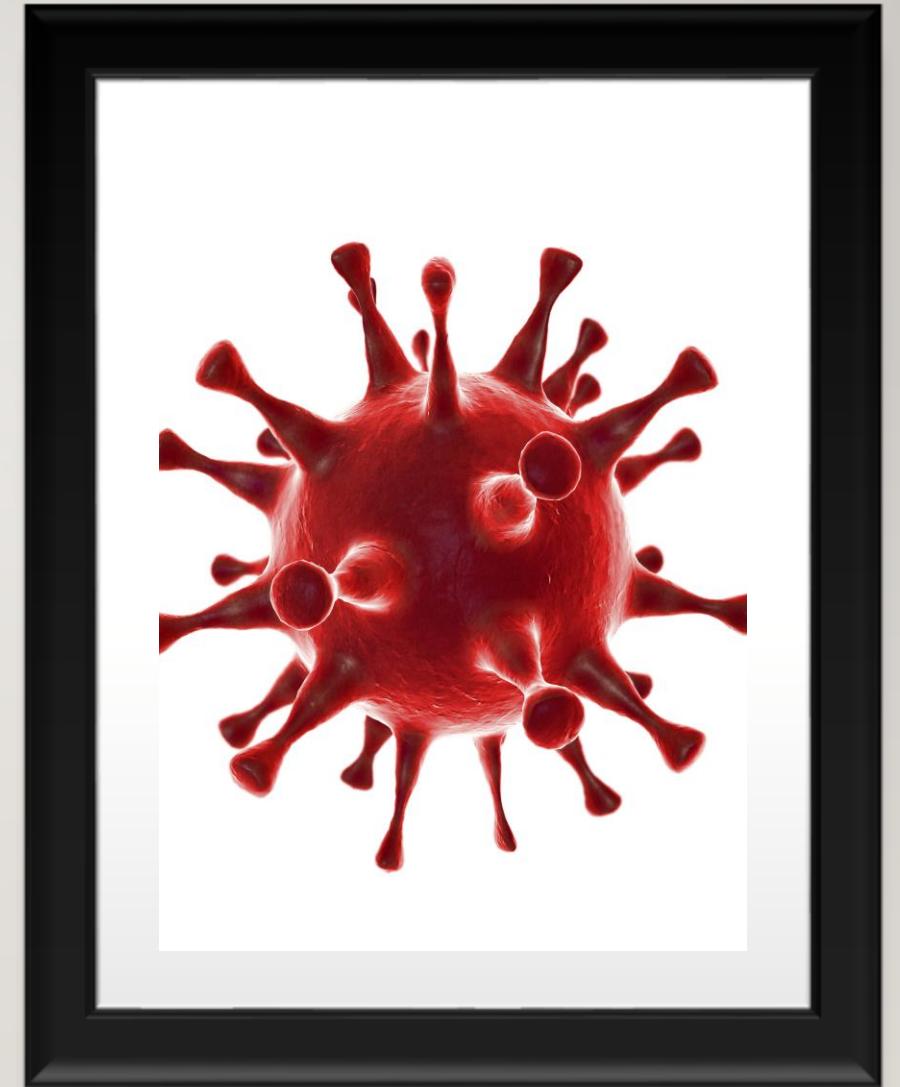
STEP 2: CREATE LEARNING OBJECTIVES

- **What the learner should be able to DO after the talk, not just an agenda!**
- When done right, they should be easily to assess / grade-
 - List the 3 main buckets of AKI
 - Review the basics of AKI



SOURCE CONTROL

- **Use 1-2 trusted sources**
 - Up to Date
 - Amboss
 - STAT Pearls
 - Core IM
 - Teach IM
 - Boards review books



STEP 3: FIND A HOOK



Highlight the relevance

"You will see a lot of patients with this"

"Remember that patient from this morning- this is going to apply to them directly"



Tell a story

"Pretend you are here all alone on night shift, and the nurse calls you to the bedside urgently"

"I'm going to tell you about a case I saw when I was a fellow"

STEP 4:

PLAN YOUR WHITEBOARD



Clump into sections based on learning objectives



Use graphs, charts, Venn diagrams, flow charts, algorithms, anatomic or pathophys drawings



Get creative:

Mnemonics

Alliteration

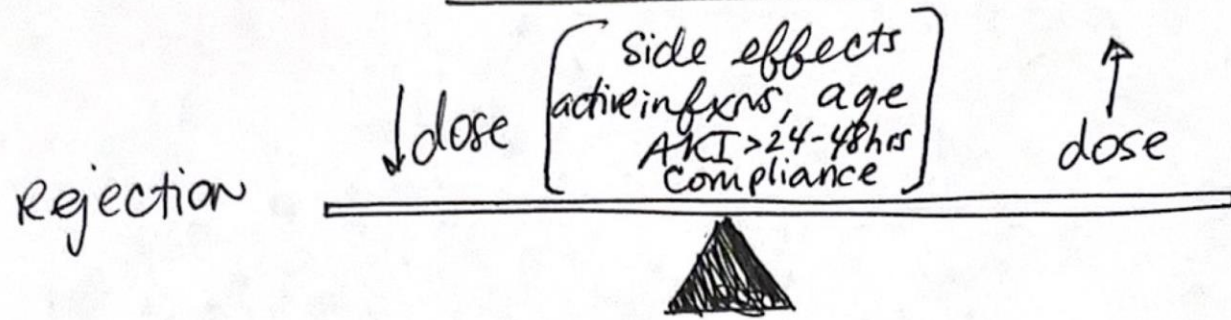
Games

Case presentation



Write a draft in different colors for different info

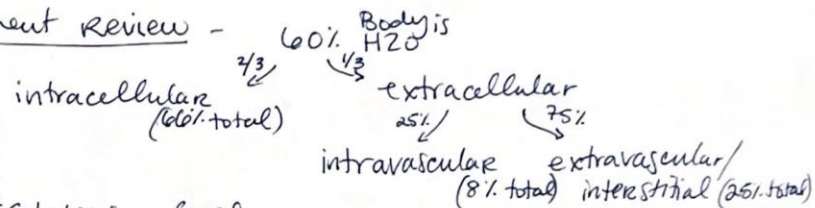
Transplant IS meds



toxicity: ① Cancer
② Infxn
③ Med Rxns

think of it like any other med/risk/benefits
 Fluids why? ↓ volume? Maintenance? electrolyte balance? (Na)
 what kind? how long? → objective measures? cont. vs. bolus

Fluid compartment Review -



* Osmolality = # solutes in a fluid (some effective osms, some not) (urea)

* Tonicity = effective osmolality → in how it will cause fluid to move
 ⇒ General Principles apply in healthy! (sepsis, ↓ albumin, etc.)

Hypotonic Fluids

- ① "Free Water" = D5 → why? prevents RSC lysis
- 50g glucose in 1L (20g = 500kcal)
 - does not provide nutrition
 - usually T₀ Na

- ② 1/2 NS = 1/2 NS + 1/2 free water
- more tonic than D5
 - used if ↑ Na + ↓ volume

Goes into cells, interstitium + vessels equally so 8% intravascular (80cc in 1L)

Isotonic

- ① NS - normal saline 154 mEq Na/Cl

- can cause AGMA

- SMART + SALTED

↓ death, AKI, HD Bld

② LR (vs. plasma)

135 Na 100 Cl

+ 4 K + Calcium

= balanced soln

Myths -

- K (so little) + Ca

- lactate & lactic acid

Goes into extra cellular compartment

so, 25% stays intravascular (250cc in 1L bolus)

Hypertonic

- ① Hypertonic Saline

also, JGA senses renal flow as Cl⁻ so it ↑, thinks good + shuts off mechs + GFR with contractions + arterioles, causing AKI risk... "tubuloglomerular feedback"

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Colloid

- ① Albumin

- some specific indications (SBP, post LV fail, hepatorenal)

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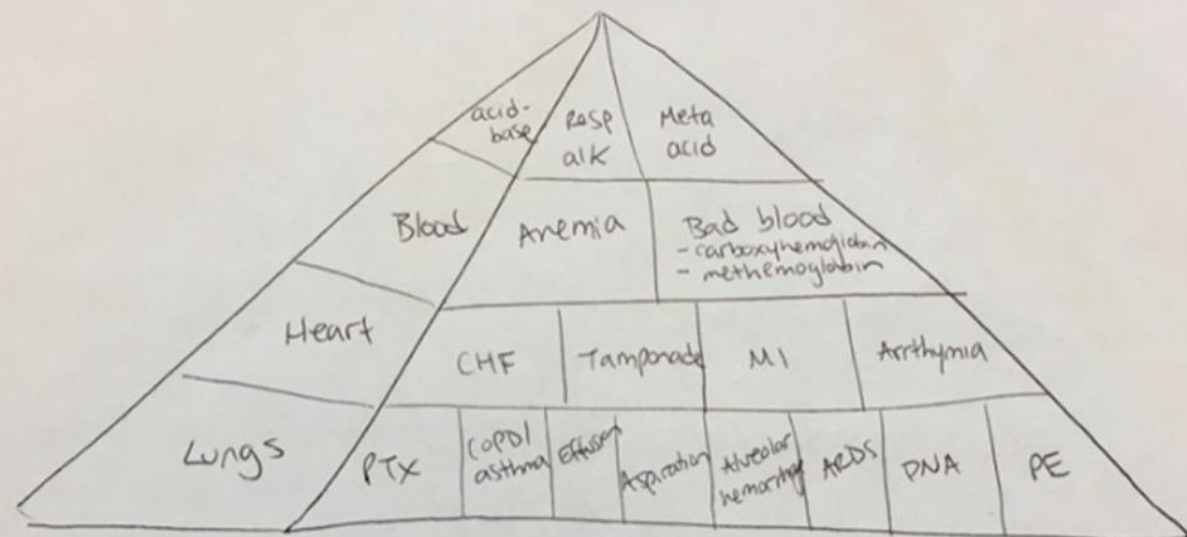
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Dyspnea Pyramid



Maintenance - need ~140 Na 20K 160 Cl + 1L free water/24 hrs if no losses
 - so res for 2L of 1/2 NS + 1-2 D5 (no changes in output) for maint.

- ★ PRBCs - about 300cc volume in each
- mostly RBCs, so stuff almost fully in vessels ~300cc
 - not protein, so no colloid/oncotic effect

stays intravascular d/z large sized proteins + pulls w/ oncotic pressure - no risk for pulm. edema

however, effects last shortly so may be why doesn't work 25g (theoretically should ↑ volume by 1L double Na or 2L)

DELIVERING THE TALK



Meet in a dedicated teaching place



Draw an outline of your board first



Explicitly state the learning objectives



Focus on approach rather than listing facts



Make eye contact and use learner names

ENGAGE LEARNERS BY ASKING QUESTIONS

Broad	Targeted	Probing
Assess general knowledge	Recall specific information or facts	Reveal thought processes and reasoning
Tell me what you know about diagnosing DKA	What is the differential for elevated anion gap metabolic acidosis	What data might help you decide if someone has HHS instead of DKA?

FINISHING UP

- Summarize what was learned
- Leave time for questions
- Allow learners to take a pic of the completed visual or leave with a completed handout

PRACTICE MAKES PERFECT



Repetition illuminates weak spots and common questions



Make note of the **actual** amount of time it takes to do it



Less active mental energy to perform with repetition



Adjust in real-time to your learner's needs

REVIEW: HOW TO MAKE A CHALK TALK



Choose a topic



Create learning objectives



Identify your hook



Plan your whiteboard



Prepare the room

QUESTIONS?

Next, we'll show you a quick example of a chalk talk

DKA DX DDX

Learning objectives:

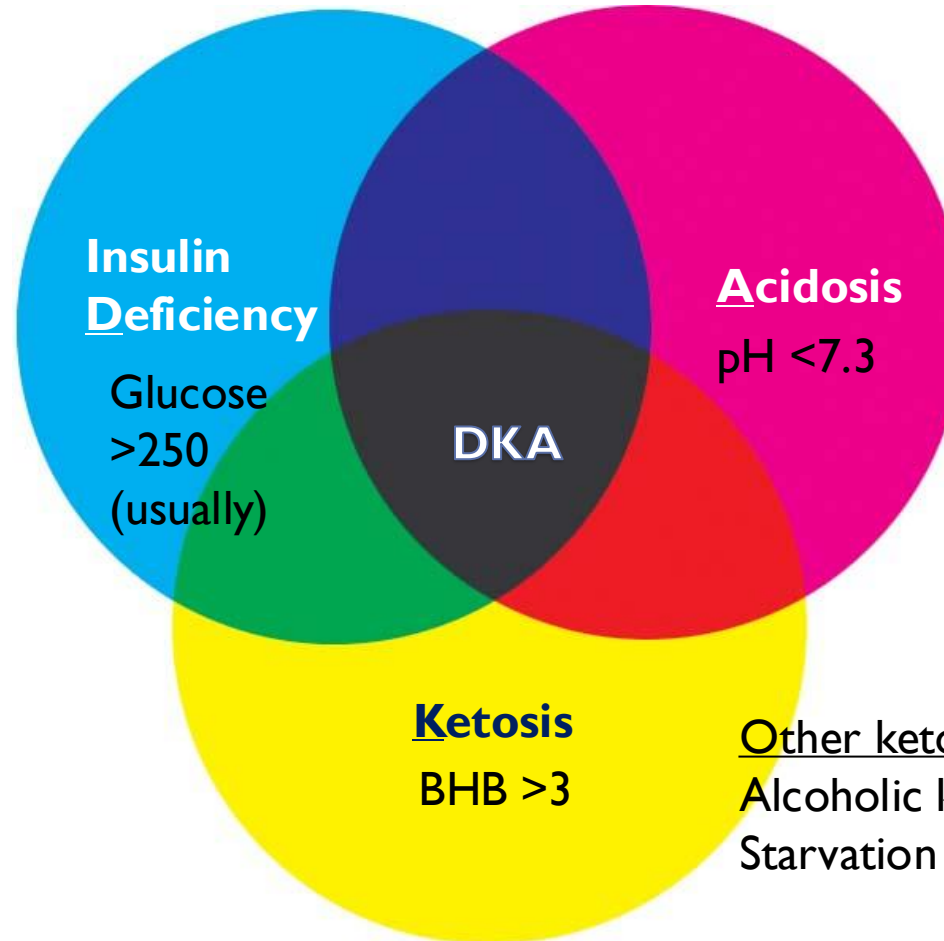
1. Define DKA using lab parameters
2. List common ddx that may overlap

Other insulin deficient states

Diabetes without DKA
HHS

Other hyperglycemic states

Stress induced
Steroid induced



Other metabolic acidosis-

Lactic acidosis
Salicylates
Uremia
Methanol poisoning

Other ketotic states:

Alcoholic ketosis
Starvation ketosis

QUESTIONS?