# 2020 Pediatrics Review Course Syllabus

# Adolescent Medicine & Sexual Health:

Page 24, Contraception

Text currently reads:	Text should read:
<b>Oral Contraceptives</b> — Noncontraceptive	Oral Contraceptives — Noncontraceptive
Benefits	Benefits
Hypothalamic hypoestrogenism	Hypothalamic hypoestrogenism
<ul> <li>Eating disorders</li> </ul>	<ul> <li>Eating disorders</li> </ul>
<ul> <li>Excessive exercise</li> </ul>	<ul> <li>Excessive exercise</li> </ul>
<ul> <li>Female athletic triad</li> </ul>	<ul> <li>Female athlete triad</li> </ul>

# Page 33, Sexually Transmitted Infections (STIs) > Granuloma Inguinale > Genital Chlamydia Infections — Lymphogranuloma Venereum (LGV)

Text currently reads:	Text should read:
<u>Secondary stage</u>	<u>Secondary stage</u>
<ul> <li>Appears 2–6 weeks later</li> </ul>	<ul> <li>Appears 2–6 weeks later</li> </ul>
<ul> <li>Tender (usually unilateral) suppurative</li> </ul>	<ul> <li>Tender (usually unilateral or bilateral)</li> </ul>
matted inguinal nodes with inflamed	suppurative matted inguinal nodes with
overlying skin	inflamed overlying skin

#### Behavioral Medicine & Substance Abuse: Page 6, Attention Deficit Hyperactivity Disorder

Text currently reads:	Text should read:
ADHD — Treatment	ADHD — Treatment
<ul> <li>General considerations</li> <li>Time of day of target symptoms</li> <li>Desire to avoid administration of medicine at school</li> <li>Duration of desired coverage — <ul> <li>e.g., coverage into the evening for completion of homework or driving</li> </ul> </li> </ul>	<ul> <li>General considerations         <ul> <li>Time of day of target symptoms</li> <li>Desire to avoid administration of medicine at school</li> <li>Duration of desired coverage —                 e.g., coverage into the evening for completion of homework or driving</li> </ul> </li> </ul>
<ul> <li>to job</li> <li>Ability to swallow pills or capsules</li> <li>Expense</li> <li>Adverse effects</li> <li>General considerations</li> <li>Comorbidities <ul> <li>α<sub>2</sub>-adrenergic agonists (guanfacine, clonidine) may be warranted in:</li> <li>Tic disorders</li> <li>Children who are over-aroused, easily frustrated, highly active, or aggressive</li> </ul> </li> <li>Substance abuse</li> </ul>	<ul> <li>to job</li> <li>Ability to swallow pills or capsules</li> <li>Expense</li> <li>Adverse effects</li> <li>General considerations</li> <li>Comorbidities <ul> <li>α<sub>2</sub>-adrenergic agonists (guanfacine, clonidine) may be warranted in:</li> <li>Tic disorders</li> <li>Children who are over-aroused, easily frustrated, highly active, or aggressive</li> </ul> </li> </ul>
<ul> <li>Avoid stimulants or use stimulants with less potential for abuse (e.g., lisdexamfetamine or methylphenidate patch)</li> <li>Consider atomoxetine</li> <li>Preschool (4–5 years)</li> <li>Parent, teacher, and/or counselor-administered behavior therapy →         1<sup>st</sup> line of treatment</li> <li>If behavioral interventions unsuccessful with continued moderate-to-severe disturbance in daily function →         methylphenidate (short-acting forms)</li> <li>Preschool (4–5 years)</li> </ul>	<ul> <li>Substance abuse</li> <li>Avoid stimulants or use stimulants with less potential for abuse (e.g., lisdexamfetamine or methylphenidate patch)</li> <li>Consider atomoxetine</li> <li>Preschool (3–5 years)</li> <li>Parent, teacher, and/or counselor-administered behavior therapy → 1<sup>st</sup> line of treatment</li> <li>If behavioral interventions unsuccessful with continued moderate-to-severe disturbance in daily function → methylphenidate (short-acting forms)</li> </ul>

Text currently reads:	Text should read:
Schizophreniform disorder	Schizophreniform disorder
<ul> <li>Schizophrenia-like disorder</li> </ul>	<ul> <li>Schizophrenia-like disorder</li> </ul>
<ul> <li>Symptoms last &lt; 1 month</li> </ul>	<ul> <li>Symptoms last 1–6 months</li> </ul>

### Page 9, Mental Health Disorders > Psychotic (Thought) Disorders

#### **Cardiology:**

#### Page 9, Cardiac Arrhythmias and Conduction Disturbances > Supraventricular Tachycardia (SVT)

Text currently reads:	Text should read:
Case 4	Case 4
A 2-month-old male infant presents to the	A 2-month-old male infant presents to the
emergency department with a 2-day history	emergency department with a 2-day history
of poor feeding and labored breathing. There	of poor feeding and labored breathing. There
is no history of fever. The baby had been well	is no history of fever. The baby had been well
previously. On examination, the <b>baby is</b>	previously. On examination, the <b>baby's skin is</b>
somewhat mottled and breathing at	somewhat mottled and breathing at
70 breaths per minute with retractions.	70 breaths per minute with retractions.
The liver is 4 cm below the right costal margin.	The liver is 4 cm below the right costal margin.
The HR is 280 beats per minute.	The HR is 280 beats per minute.
Your approach to this patient?	Your approach to this patient?

#### **Dermatology:**

#### Page 172, Skin Conditions in Infants > Langerhans Cell Histiocytosis (LCH)

Text currently reads:	Text should read:
AR 5	AR 5
A 10-month-old male presents to the office	A 10-month-old male presents to the office
with a several-month history of multiple orange-	with a several-month history of multiple orange-
brown patches and thin plaques. The lesions	brown patches and thin plaques. The lesions
resemble café au lait (CAL) macules, but the	resemble café au lait (CAL) macules, but the
borders are not well defined and some of the	borders are not well defined and some of the
lesions appear somewhat erythematous and	lesions appear somewhat erythematous and
edematous.	edematous.
The parents report that the lesions often hive	The parents report that the lesions often hive
up after bathing and occasionally blister.	up after bathing and occasionally blister.
What is the mostly likely diagnosis in this child?	What is the most likely diagnosis in this child?
A. Neurofibromatosis type 1	A. Neurofibromatosis type 1
B. Noonan syndrome	B. Noonan syndrome
C. Langerhans cell histiocytosis	C. Langerhans cell histiocytosis
D. Urticaria pigmentosa	D. Urticaria pigmentosa
Answer:	Answer:

# Emergency Medicine & Maltreatment Syndromes:

# Page 1, Table of Contents

Text currently reads:	Text should read:
TABLE OF CONTENTS	TABLE OF CONTENTS
Poisonings and Ingestions	Poisonings and Ingestions

# Page 8, Poisonings and Ingestions

Text currently reads:	Text should read:
<b>AR 5</b>	AR 5
A child presents with a 250 mg/kg ingestion of	A child presents with a 250 mg/kg ingestion
acetaminophen 3 hours prior to presentation.	of acetaminophen 3 hours prior to presentation.
Immediate management should include:	Immediate management should include:
A. Immediate acetaminophen level	A. Immediate acetaminophen level
B. Activated charcoal	B. Activated charcoal
C. <i>N</i> -acetylcysteine	C. <i>N</i> -acetylcysteine
D. Induction of emesis	D. Induction of emesis
<ul> <li>Answer:</li> <li>Previously a common ingestion — less frequent now <ul> <li>Aspirin, oil of wintergreen, antidiarrheal products</li> <li>Uncouples oxidative phosphorylation</li> <li>Activates respiratory center</li> <li>Dose-related symptoms</li> </ul> </li> </ul>	Answer: SALICYLATE INGESTIONS • Previously a common ingestion — less frequent now – Aspirin, oil of wintergreen, antidiarrheal products • Uncouples oxidative phosphorylation • Activates respiratory center • Dose-related symptoms

Text currently reads:	Text should read:
Management	Management
<ul> <li>Identifying the species of snake</li> </ul>	<ul> <li>Identifying the species of snake</li> </ul>
<ul> <li>Immobilize extremity and apply wound</li> </ul>	<ul> <li>Immobilize extremity and apply wound</li> </ul>
pressure	pressure
<ul> <li>No ice or "cut and suck"</li> </ul>	<ul> <li>No ice or "cut and suck"</li> </ul>
<ul> <li>Establish venous access line</li> </ul>	<ul> <li>Establish venous access line</li> </ul>
<ul> <li>CBC, PT/PTT (for crotalids)</li> </ul>	<ul> <li>CBC, PT/PTT (for crotalids)</li> </ul>
<ul> <li>Pain medication, tetanus</li> </ul>	<ul> <li>Pain medication, tetanus</li> </ul>
Antivenom based on severity of bite	<ul> <li>Antivenom based on severity of bite</li> </ul>
<ul> <li>No treatment</li> </ul>	No treatment
Puncture wounds but no other	<ul> <li>Puncture wounds but no other</li> </ul>
symptoms	symptoms
Normal labs	<ul> <li>Normal labs</li> </ul>
– Treat	Treat
<ul> <li>Swelling extending beyond a joint</li> </ul>	<ul> <li>Swelling extending beyond a joint</li> </ul>
Abnormal labs	<ul> <li>Abnormal labs</li> </ul>
Shock	– Shock

# Page 16, Bites and Stings > Snake Bites

#### Page 27, Child Abuse and Maltreatment, AR 18

Text currently reads:	Text should read:
AR 18	AR 18
EMS arrives with an intubated 4-month-old	EMS arrives with an intubated 4-month-old
infant. The father states that he found the infant	infant. The father states that he found the infant
unresponsive in the bed with him. On exam, he is	unresponsive in the bed with him. On exam, he is
tachycardic, unresponsive, and has a bulging	tachycardic, unresponsive, and has a bulging
<b>fontanel</b> . An emergent head CT reveals acute and	<b>fontanelle</b> . An emergent head CT reveals acute
chronic subdural hematomas.	and chronic subdural hematomas.
What is the most likely etiology of his	What is the most likely etiology of his
presentation?	presentation?
A. Birth trauma	A. Birth trauma
B. Sudden infant death syndrome (SIDS)	B. Sudden infant death syndrome (SIDS)
C. Abusive head trauma	C. Abusive head trauma
D. Short vertical fall	D. Short vertical fall
Answer:	Answer:

# Endocrinology:

### Page 11, Thyroid > Hypothyroidism

Text currently reads:	Text should read:
Subacute Thyroiditis	Subacute Thyroiditis
<ul> <li>Viral infection, post-URI</li> </ul>	Viral infection, post-URI
<ul> <li>Patient with fever and tender goiter</li> </ul>	• Patient with fever and <b>tender</b> goiter
Labs	Labs
<ul> <li>Elevated ESR</li> </ul>	<ul> <li>Elevated ESR</li> </ul>
<ul> <li>Cycle of abnormal TFTs</li> </ul>	<ul> <li>Cycle of abnormal TFTs</li> </ul>
<ul> <li>Hypothyroid → hyperthyroid ↔ or euthyroid</li> </ul>	<ul> <li>Hyperthyroid → hypothyroid ↔ or euthyroid</li> </ul>
• Tx with medications appropriate for thyroid	• Tx with medications appropriate for thyroid
state	state

#### Page 15, Adrenals > Adrenal Insufficiency

Text currently reads:	Text should read:
Adrenal Insufficiency 1° vs. 2° / 3°	Adrenal Insufficiency 1° vs. 2° / 3°
<ul> <li>Primary adrenal insufficiency (AI)</li> </ul>	<ul> <li>Primary adrenal insufficiency (AI)</li> </ul>
<ul> <li>Disorders of the adrenal gland</li> </ul>	<ul> <li>Disorders of the adrenal gland</li> </ul>
<ul> <li>All sections of the adrenal cortex affected</li> </ul>	<ul> <li>All sections of the adrenal cortex affected</li> </ul>
<ul> <li>Increased pigmentation (tan) due to</li> </ul>	<ul> <li>Increased pigmentation (tan) due to</li> </ul>
increased POMC $\rightarrow$ increased ACTH and	increased POMC $ ightarrow$ increased ACTH and
melanocyte-stimulating hormone (MSH)	melanocyte-stimulating hormone (MSH)
Secondary/Tertiary Al	Secondary/Tertiary AI
<ul> <li>Disorder of hypothalamus (2°) or</li> </ul>	<ul> <li>Disorder of pituitary (2°) or</li> </ul>
pituitary (3°)	hypothalamus (3°)
<ul> <li>Most common: idiopathic or tumor</li> </ul>	<ul> <li>Most common: idiopathic or tumor</li> </ul>
(craniopharyngioma)	(craniopharyngioma)
<ul> <li>Low ACTH and cortisol</li> </ul>	<ul> <li>Low ACTH and cortisol</li> </ul>
Mineralocorticoid pathway intact	<ul> <li>Mineralocorticoid pathway intact</li> </ul>
(RAAS)	(RAAS)
<ul> <li>No increased pigmentation due to</li> </ul>	No increased pigmentation due to
low ACTH	low ACTH

# **MedStudy**

#### Page 22, Type 2 Diabetes

Text currently reads:	Text should read:
Acute Complications of Type 2 DM	Acute Complications of Type 2 DM
Nonketotic hyperosmolar state	Nonketotic hyperosmolar state
<ul> <li>Glucose &gt; 600 mg/dL</li> </ul>	<ul> <li>Glucose &gt; 600 mg/dL</li> </ul>
<ul> <li>Serum carbon dioxide &gt; 15 mmol/L</li> </ul>	– Serum bicarbonate > 15 mmol/L
<ul> <li>Small ketonuria, absent-to-low ketonemia</li> </ul>	<ul> <li>Small ketonuria, absent-to-low ketonemia</li> </ul>
<ul> <li>Serum osmolality &gt; 320 mOsm/kg</li> </ul>	<ul> <li>Serum osmolality &gt; 320 mOsm/kg</li> </ul>
<ul> <li>Significant dehydration</li> </ul>	<ul> <li>Significant dehydration</li> </ul>
(assume 12–15% body weight)	(assume 12–15% body weight)
<ul> <li>Stupor or coma</li> </ul>	<ul> <li>Stupor or coma</li> </ul>

#### Genetics:

# Page 8, Types of Genetic Disease > Small Chromosome Abnormalities — Chromosomal Deletion Syndromes





#### Growth & Development: Page 7 & 8, Specific Growth Disorders

Page 8, Specific Growth Disorders



#### Infectious Disease: Page 3, β-Lactamase Antibiotics



# Page 10, TORCH > Rubella



# Page 21, Spirochetes, Case 30

Text currently reads:	Text should read:
Case 30 — History, Exam, Labs	Case 30 — History, Exam, Labs
A 13-year-old immunized male who just returned from	A 13-year-old immunized male who just returned from
"summering" in Martha's Vineyard (New England)	"summering" in Martha's Vineyard (New England)
presents with progressive fatigue and myalgias for just	presents with progressive fatigue and myalgias for just
over a week. He has had fever intermittently for the	over a week. He has had fever intermittently for the
past few days, along with chills. Exam notes enlarged	past few days, along with chills. Exam notes enlarged
spleen and 2 erythematous circular rashes. A thin	spleen and 2 erythematous circular patches. A thin
smear is performed:	smear is performed:

#### Neonatology: Page 20, Neonatal Resuscitation

Text currently reads:	Text should read:
Endotracheal Intubation — Tube Size	Endotracheal Intubation — Tube Size
• Weight in kg + 6 = lip-to-tip length	• Weight in kg + 6 = lip-to-tip length
– Size < 1.5 kg = 2.5-mm tube	– Size < 1.0 kg = 2.5-mm tube
• <b>1.5–2.5 kg</b> = 3.0-mm tube	• <b>1.0–2.0 kg</b> = 3.0-mm tube
• > <b>2.5 kg</b> = 3.5-mm tube	<ul> <li>&gt; 2.0 kg = 3.5-mm tube</li> </ul>
• NEW: 4.0 ETT no longer	• NEW: 4.0 ETT no longer
recommended	recommended

# Nephrology:

#### Page 11, Acid-Base Disorders

Text cur	rently red	ıds:				Text sho	ould read.				
AR 6				AR 6							
A 5-year-old boy with FTT and diarrhea × 2 days			A 5-yea	A 5-year-old boy with FTT and diarrhea × 2 days							
has the f	following	labs:				has the	following	labs:			
ABG:	рН	7.34	Chem:	Na⁺	135	ABG:	рН	7.34	Chem:	Na⁺	135
	pCO <sub>2</sub>	34		$K^+$	3.1		pCO <sub>2</sub>	34		$K^+$	3.1
	HCO <sub>3</sub> <sup>−</sup>	18		Cl⁻	110		HCO <sub>3</sub> ⁻	18		Cl⁻	110
				HCO₃	- 16					HCO <sub>3</sub>	- 16
Urine p⊦	1 5.5, <b>UA</b>	<b>g †10</b> , A	G 9			Urine p	H 5.5 <i>,</i> <mark>UA</mark>	<mark>G –10</mark> , /	AG 9		

#### Page 12, Glomerulonephritis

Text currently reads:	Text should read:		
Infectious-Related Glomerulonephritis (IRGN)	Infection-Related Glomerulonephritis (IRGN)		
Formerly known as postinfectious	Formerly known as postinfectious		
glomerulonephritis (PIGN)	glomerulonephritis (PIGN)		
Most common acute GN in children	Most common acute GN in children		
• 5- to 15-year-olds; Males > females	<ul> <li>5- to 15-year-olds; Males &gt; females</li> </ul>		
Inflammation due to glomerular deposition	Inflammation due to glomerular deposition		
of Ab-Ag complexes	of Ab-Ag complexes		
Occurs 7–14 days after:	Occurs 7–14 days after:		
<ul> <li>Strep infections (certain nephritogenic</li> </ul>	<ul> <li>Strep infections (certain nephritogenic</li> </ul>		
strains)	strains)		
<ul> <li>Bacterial, viral, parasitic infections</li> </ul>	<ul> <li>Bacterial, viral, parasitic infections</li> </ul>		
• Abrupt onset of symptoms Hematuria, often	• Abrupt onset of symptoms Hematuria, often		
macroscopic (cola- or tea-colored)	macroscopic (cola- or tea-colored)		
– Edema	– Edema		
<ul> <li>Hypertension</li> </ul>	<ul> <li>Hypertension</li> </ul>		
– Malaise	– Malaise		

#### Neurology:

# Page 8, Brain Malformations > Migrational Anomalies

Text currently reads:	Text should read:			
Differentiation of the Neural Tube	Differentiation of the Neural Tube			
• The anterior portion of the neural tube segments	• The anterior portion of the neural tube segments			
into 3 main sections:	into 3 main sections:			
1) Forebrain/Prosencephalon	1) Forebrain/Prosencephalon			
<ul> <li>Telencephalon-cerebral hemispheres, some of the basal ganglia</li> <li>Diencephalon-thalamus, hypothalamus, optic nerves, pineal gland</li> <li>Mesencephalon/Midbrain</li> <li>Rhombencephalon/Hindbrain</li> </ul>	<ul> <li>Telencephalon — cerebral hemispheres, some of the basal ganglia</li> <li>Diencephalon — thalamus, hypothalamus, optic nerves, pineal gland         <ol> <li>Mesencephalon/Midbrain</li> <li>Rhombencephalon/Hindbrain</li> </ol> </li> </ul>			
<ul> <li>Metencephalon-pons and granule cells of cerebellum</li> <li>Myelencephalon-medulla</li> </ul>	<ul> <li>Metencephalon — pons and granule cells of cerebellum</li> <li>Myelencephalon — medulla</li> </ul>			

#### **Rheumatology:**

#### Page 3

Text currently reads:	Text should read:
Assessing the child with Musculoskeletal	Assessing the child with Musculoskeletal
Complains	Complaints

#### Page 13, Pediatric Vasculitis > Multisystem Inflammatory Syndrome in Children (MIS-C)

Text currently reads:	Text should read:
Potentially associated with COVID19	Potentially associated with COVID19
• Reported in <b>19 states</b> and Washington DV	• Reported in 42 states and Washington DV
• Symptoms similar to toxic shock or Kawasaki	Symptoms similar to toxic shock or Kawasaki
in patients < 21 years of age	in patients < 21 years of age
Males > females	Males > females
• Sx (start weeks after initial exposure) include	• Sx (start weeks after initial exposure) include
fever, rash, LAD, abdominal pain/GI	fever, rash, LAD, abdominal pain/GI
symptoms, conjunctivitis, cardiac	symptoms, conjunctivitis, cardiac
involvement (coronary aneurysms). Less	involvement (coronary aneurysms). <u>Less</u>
pulmonary symptoms	pulmonary symptoms
<ul> <li>Higher risk of MAS and shock</li> </ul>	<ul> <li>Higher risk of MAS and shock</li> </ul>
• Rx: IVIG ± ASA, methylprednisolone	Rx: IVIG ± ASA, methylprednisolone

Text currently reads:	Text should read:
Granulomatosis with Polyangiitis	Granulomatosis with Polyangiitis
• <u>c-ANCA positive (targets PR-3 antigen) 67%</u>	• <u>c-ANCA</u> positive (targets <u>PR-3</u> antigen) 67%
Diagnosis: biopsy (lung: necrotizing	• Diagnosis: biopsy (lung — necrotizing
granulomas; renal (pauci-immune segmental	granulomas; renal — pauci-immune
necrotizing glomerulonephritis)	segmental necrotizing glomerulonephritis)
• Rx: steroids, rituximab, cyclophosphamide,	• Rx: steroids, rituximab, cyclophosphamide,
methotrexate, azathioprine	methotrexate, azathioprine
Use PJP prophylaxis!	Use PJP prophylaxis!
• TMP/SMX shown useful to prevent relapses	• TMP/SMX shown useful to prevent relapses
• Relapses common (30–50% of patients)	• Relapses common (30–50% of patients)
• CYP side effects: infertility, lymphoma,	• CYP side effects: infertility, lymphoma,
hemorrhagic cystitis, and secondary cancers	hemorrhagic cystitis, and secondary cancers

#### Page 14, Pediatric Vasculitis > Granulomatosis with Polyangiitis

#### Page 17, Pediatric Systemic Lupus Erythematosus (SLE)

Text currently reads:	Text should read:		
2019 ACR/EULAR-Criteria	2019 ACR/EULAR-Criteria		
<ul> <li>+ANA &gt; 1:80 (entry criteria)</li> </ul>	<ul> <li>+ANA ≥ 1:80 (entry criteria)</li> </ul>		
• Fever > 100.9°F (38.3°C)	• Fever > 100.9°F (38.3°C)		

#### Page 17, Pediatric Systemic Lupus Erythematosus (SLE)

Text currently reads:	Text should read:
<ul> <li>Proteinuria &gt; 0.5 g/24 hours</li> </ul>	<ul> <li>Proteinuria &gt; 0.5 g/24 hours</li> </ul>
• Renal biopsy with lupus nephritis class 2 to 5	• Renal biopsy with lupus nephritis class 2 to 5
Positive antiphospholipid antibodies	Positive antiphospholipid antibodies
(anticardiolipin IgG/A/M at medium or high	(anticardiolipin IgG/A/M at medium or high
titers or antiB2GP1 or lupus anticoagulant)	titers or anti-β <sub>2</sub> GP-1 or lupus anticoagulant)
Low C3 or C4	Low C3 or C4
<ul> <li>+dsDNA or +anti-Sm antibodies</li> </ul>	<ul> <li>+dsDNA or +anti-Sm antibodies</li> </ul>

### Page 19, Pediatric Systemic Lupus Erythematosus (SLE)

Text currently reads:	Text should read:
When tapering prednisone is not possible, use a DMARD	<ul> <li>When tapering prednisone is not possible, use a DMARD</li> </ul>
Only 4 drugs are FDA approved for SLE: • ASA	<ul> <li>Only 4 drugs are FDA approved for SLE:</li> <li>ASA</li> </ul>
<ul> <li>Prednisone</li> <li>Hydroxychloroquine</li> <li>Belimumab (approved in children 12/2019)</li> <li>Antimalarial drugs</li> </ul>	<ul> <li>Prednisone</li> <li>Hydroxychloroquine</li> <li>Belimumab (approved in children 12/2019)</li> </ul>
	Antimalarial drugs

#### Page 22, Joint Hypermobility Syndrome

