

# Sex, Drugs, Rock 'n' Roll for a New Generation

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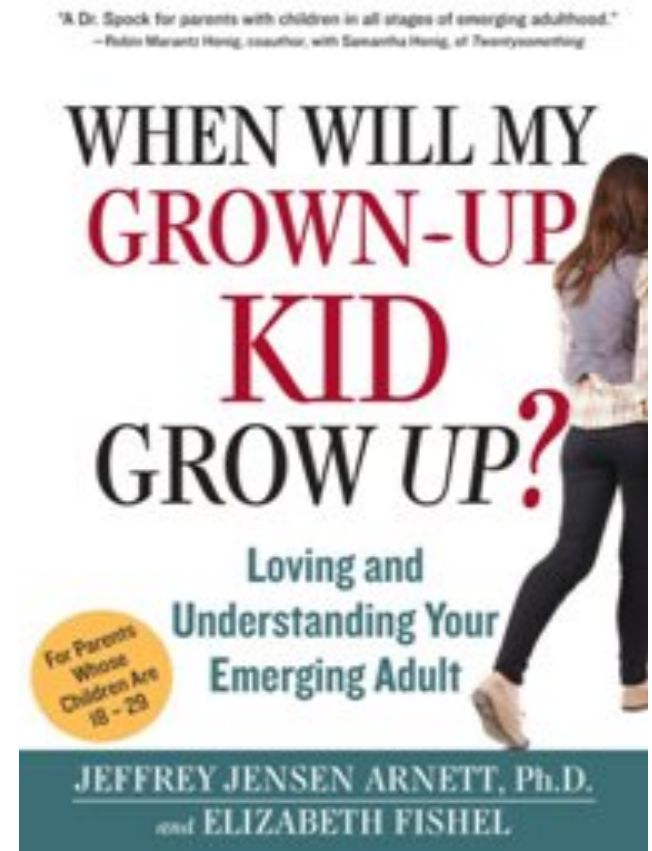
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# The Concept of Emerging Adulthood

- Emerging adulthood is a distinct phase

- First described by J.J. Arnett in 2000
- Period of transition between 18 and 25 years
- An age of
  - Identity exploration
  - Instability
  - Self-focus
  - Feeling in between
  - Possibilities





*"I'm not a girl ...  
... not yet a woman"*

# The transition period is becoming more prolonged

- Post WWII, social and economic forces
  - young adults needed to become financially independent at early age
- Now, much more protracted
  - Moving out of home later
  - More people pursuing post-secondary education
  - Delayed marriage and childbearing
  - More women working





- **HPI:**

- 23 y/o M, presents to establish care and STI testing. No concerns today.
- PMH: none
- PSH: none
- Meds: none
- Social history: sexually active with women, only smokes while drinking, occasional alcohol on the weekends. Law student.

- **Physical exam:**

- Vitals: T 98.6, BP: 118/72, RR: 16, P: 66, O2 sat 99% RA, BMI 24
- Physical exam unremarkable

# USPSTF Recommendations for 23 y/o M

## Grade A recommendations

- Blood pressure: All  $\geq 18$  y adults
- HIV: Adolescents and adults
- Syphilis: At increased risk



# USPSTF Recommendations for 23 y/o M

## Grade B recommendations

- Screening for alcohol abuse
- Screening for tobacco use
- Hepatitis B screening
- Depression screening\*
- Lipid screening: for men 20-34 yo with CV risk
- Diet and activity counseling for patients with CV risk
- Screen for obesity
- STD counseling
- Skin cancer evaluation

# Meeting the guidelines for this patient...

- **STD screening:** Urine GC, CT, HIV, RPR
- **Blood pressure:** Normal
- **Obesity:** Weight is normal, continue healthy diet and exercise
- **Alcohol:** Only drinks socially on weekends
- **Tobacco:** Rarely smokes, advised to stop
- **Depression screening:** Denies
- **Vaccinations:** Had all his childhood vaccinations including Hepatitis B





# 30 years later...

## 53 y/o male presents with severe chest pain

- Not seen for several years, as has had no medical issues
- Smokes 1 pack per day, is a partner for a law firm.
- He is obese, BMI 32
- Vitals significant for BP 176/82
- EKG c/w STEMI → cath lab → 2 stents placed
- Labs: LDL 172, HDL 20, HbA1C 9.2%

What happened?  
Could this have been prevented?



- **HPI:**

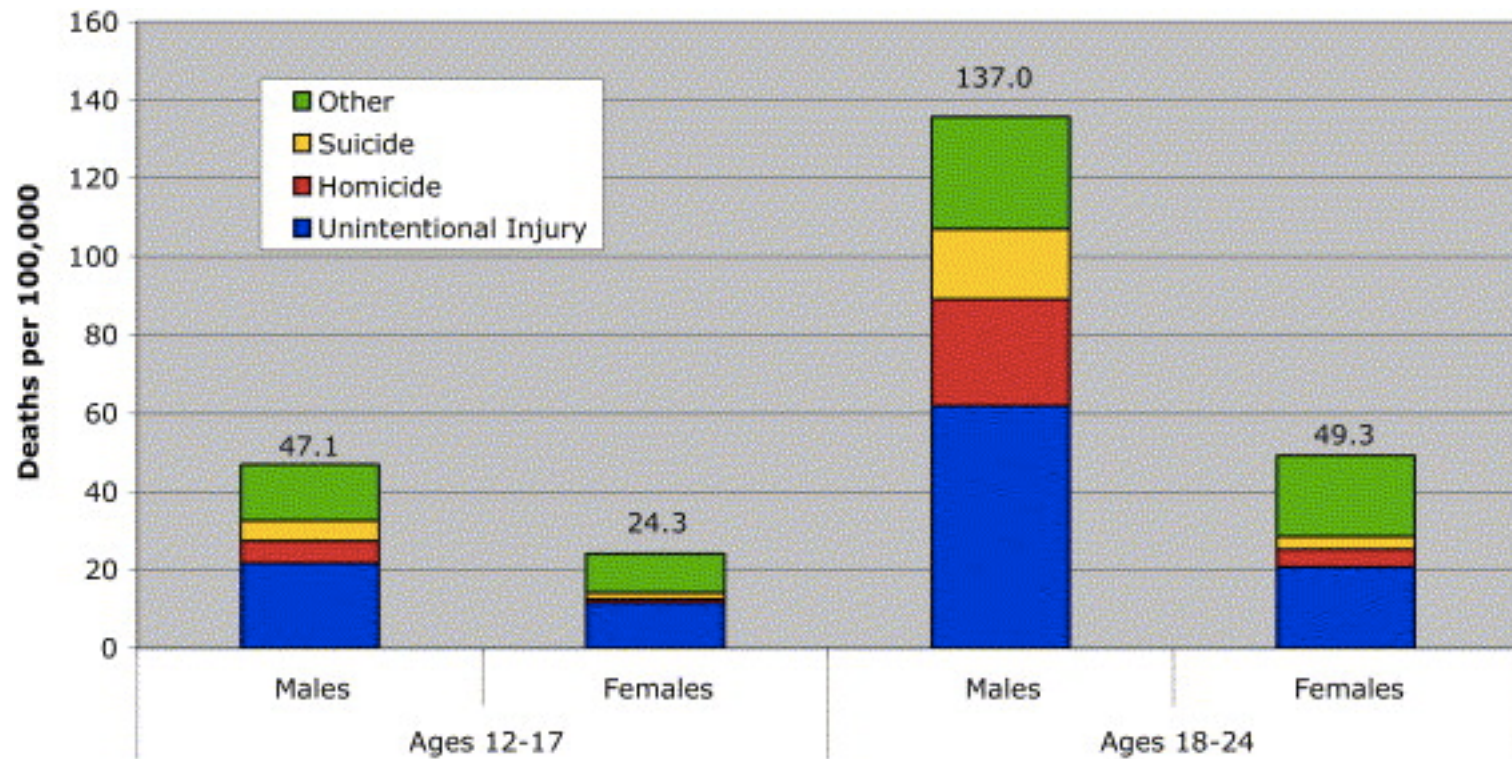
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# Emerging adults have worse health than adolescents



Source: National Center for Injury Prevention and Control [23]





# Emerging adults have low rates of preventive care

	<b>Cholesterol screening (2005) N=3670 Pop est.= 4,529,411</b>	<b>Diet counseling (2005) N=2955 Pop est. = 3,557,718</b>	<b>Exercise counseling (2005) N=2955 Pop est.= 3,557,718</b>
Overall	50.6%	18.1%	22.0%

	<b>Flu vaccination (2005) N= 3670 Pop est. = 4,529,411</b>	<b>STD screening (2005) N=2827 Pop est. =3,329,306</b>	<b>Emotional health screening (2007) N=3229 Pop est. = 4,143,427</b>
Overall	16.7%	42.2%	21.5%



# We can help alter the patient's life course

- Many adult health conditions originate in childhood and adolescence during critical periods of development



# Major issues for emerging adults affect future health

- Weight gain
- Substance use
- Sexual risk behavior
- Contraception
- Education/employment
- Mental health



Home/Family/Community Environment  
Education/Future plans/Employment goals  
Activities/Hobbies/Exercise  
Diet  
Drugs  
Sex/Contraception/Fertility  
Suicide/Mental Health  
Safety



## Case #1: James, 25 y/o M presents to urgent care

- **Chief complaint:** Palpitations
- **HPI:** Occasional episodes of flushing, nausea, palpitations, particularly when in public places
- No syncopal events
- **Exam:** VS WNL, cardiac exam normal, EKG NSR

- Assessment and Plan:
  - Diagnosis of panic disorder
  - Alprazolam 0.5 mg PRN

That's it?



**Home:** Living with parents, frequent fights with mother, describes feeling anxious

**Education/Employment:** Laid off from job 6 months ago

**Activities/Hobbies/Exercise:** None

**Diet:** Balanced diet

**Drugs:** Nightly marijuana use for anxiety

**Sex:** Not sexually active

**Suicide/Mental Health:** Endorses feeling anxious, depressed, no suicidal ideation, mother bipolar

**Safety:** No issues



# What did HEADDSSS uncover?

- Home situation may be causing stress
- Patient unemployed
- Having symptoms of anxiety and depression
- Patient habitually using marijuana to self-medicate
- ALL contributing to palpitations, not just anxiety!



# Depression is not always caught early

- Palpitations not atypical presentation for underlying psychiatric disorder
- 45-95% of depressed patients report only somatic complaints.
- Patients twice as likely to have somatic presentation when no ongoing relationship with PMD
- Average delay between onset of symptoms of mental illness and intervention is 8-10 years.



i hate  
myself



The signs are there to  
help us save a life before it's too late

# Emerging adults are using substances not just to get high

- Classic model of drug use:

- Recreation
- Lack of impulse control
- Means of escape

- Instrumental model:

- “Use for a desired effect”
- Self-medication
- Workplace usage
- Staying awake
- Sleep aids



# Emerging adults are using substances not just to get high

Drug	Shift in Usage pattern
Marijuana	Daily usage for anti-anxiety purposes
Heroin	Transition from abused prescription opioids to heroin as a cheaper alternative
LSD	"Microdosing" in workplace settings
ADHD medications	Usage in workplace and recreational environments





## Case #2: Lisa, 24 yo F presents to establish care

- **Chief complaint:** Establish care
- No PMH, no meds
- FH benign, no substances, grad student
- **Gyn:** G0, monogamous, occ irregular menses
- **Exam:** VS WNL, BMI 28, otherwise normal



# USPSTF Recommendations for 24 y/o F

- Cervical cancer: 21-65 y (Pap)
- Chlamydia:  $\leq 24$  y, or  $\geq 25$  y with risk factors
- Folic acid: All women planning or capable of pregnancy
- Blood pressure: All  $\geq 18$  y adults
- HIV: Adolescents and adults
- Syphilis: At increased risk

## Assessment and Plan:

1. OCPs, condoms recommended
2. Pap with GC/CT done, HIV, RPR
3. Diet and exercise counseling

That's it?





# Applying HEADDDSSS

**H**ome - Lives alone, supportive parents

**E**ducation/goals - Grad student in Biology, plans research career

**A**ctivities - Yoga, walks 2x / week, has close friends

**D**iet - Varied, eats fairly healthy, doesn't restrict

**D**rugs - 1x/EtOH/week, no drugs

**S**uicide/Mental Health - No depression, no suicidality



# Applying HEADDSSS

## Sex/Relationships/Contraception:

- Met boyfriend on Tinder
- Uses condoms “most of the time”
- Interested in “the pill” only because of friends
- Not ready to be pregnant now
- Maybe wants to have a baby “in my mid-thirties,” after grad school and early career



# What did HEADDSSS uncover?





- Patient using online dating, which may be proxy for high-risk behaviors
- Poor contraception choices
- Considering having a baby in the future, should discuss fertility



# The Implications of Online Dating

- Many adults are now dating online
  - 1 in 5 of 25-34 y/o
  - 1 in 10 all adults 18+ y/o
- People meeting online have higher risk sexual behaviors
  - More lifetime partners (15 vs 6)
  - More same sex partners (31% vs 6%)
  - MSM have more unprotected anal intercourse ("barebacking")
- Knowing basics can target screening, conversation



Application	Source	Basic Premise
Tinder 	Cell phone app	Initially “hook-up” app, now mainstream for longer-term dating
Grindr 	Cell phone app	Targeted to gay or bisexual men, “Hook ups” as main goal
Meetup 	Online, Cell phone app	Connects people with similar interests, not specifically dating
Bumble 	Cell phone app	Women initiate contact, “Sadie Hawkins” of dating apps

# Condoms and OCPs are not ideal

- Failure rates
  - OCP annual failure rate: 9%
  - Condom annual failure rate: 18%
- 61% of women use condoms inconsistently
  - 2.6x more consistent if avoiding pregnancy “very important”
- Women 18-29 y/o, each point on contraceptive knowledge scale:
  - Odds of unprotected sex decreased by 9%
  - Using hormone or long-acting method increased 17%
  - Using no method decreased 17%



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## METHOD EXPLORER /

☐ most effective

☐ party ready

☐ STI prevention

☐ hormone free

☐ easy to hide

☐ do me now

BEDSIDER RECOMMENDS / X

WELCOME / X

Click these filters to find a method (or methods) that fit your life.

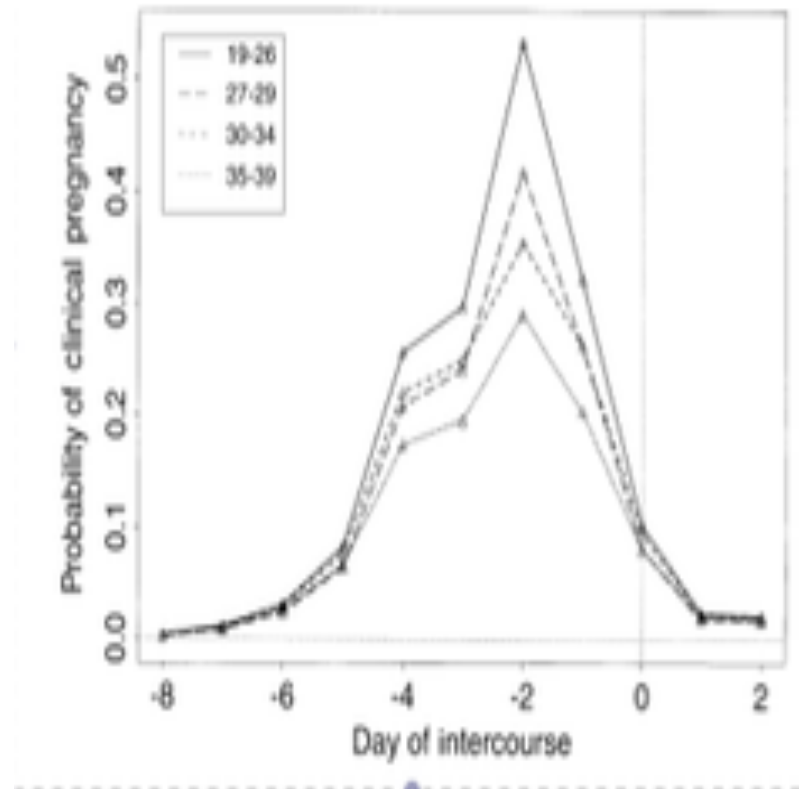


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# Young adults should be counseled on fertility

- ~ 50% drop in fertility from early 20's to late 30's<sup>1</sup>
- ART cycles → live birth<sup>2</sup>
  - Age 25: 31%
  - Age 30: 40%
  - Age 36: 30%
  - Age 41: 12%





# Birth defect risk increases with advanced maternal age

- Women 25-29 y/o vs 40+ y/o, aOR of baby<sup>1</sup>
  - Esophageal atresia: 2.9 (95% CI 1.7-4.9)
  - Hypospadias: 2.0 (1.4-3.0)
  - Craniosynostosis: 1.6 (1.1-2.4)
- Risk of 16-week old fetus with Down syndrome<sup>2</sup>
  - 1:733 for a 30 y/o
  - 1:265 for a 35 y/o
  - 1:60 for a 40 y/o

1. Gill et al., 2012.

2. Rodeck et al., 2009.



# Weight Impacts Future Pregnancies

- 3x ovulatory infertility for BMI > 27
- Pregnant women with BMI  $\geq 30$  have higher risk
  - Gestational hypertension, diabetes
  - Pre- and post-term birth
  - Fetal growth and congenital anomalies
  - Cesarean section
  - Postpartum hemorrhage
- For each +5 units of maternal BMI
  - Fetal death RR 1.21 (95% CI 1.09-1.35)
  - Stillbirth RR 1.24 (1.18-1.30)
  - Perinatal death RR 1.16 (1.00-1.35)



# Missed opportunities at PMD visits

- 18% of 18-44 y/o F delivering live infants received preconception counseling
- 66% of 18-44 y/o F had annual routine check-ups<sup>1</sup>
- Preconception counseling associated with:<sup>2</sup>
  - Daily pre-pregnancy MVI use (aOR 4.4)
  - First-trimester entry to prenatal care (aOR 2.1)
  - Drinking cessation before pregnancy (AOR 1.3)

1. Robbins et al., 2014.

2. Williams et al., 2012.



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# Conclusions...



Old Paradigm	New Paradigm
Prescribe birth control, do Pap	Explore healthy relationships and reproductive planning
Think medically (e.g. order Holter on someone with palpitations)	Think biopsychosocially (e.g. explore anxiety sources for palpitations)
Ask about substance use to document them	Actively engage in motivational interviewing and other resources to decrease substance use



# Take-away points

- Emerging adulthood is a distinct developmental stage shaped by recent demographic shifts
- Emerging adults have specific health needs and challenges that are under-addressed
- USPSTF guidelines insufficient to address these needs → Use the HEADDSSS assessment to uncover issues that impact current/future health
- Counseling patients can change life course health development

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# Questions?



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