Update ACT-HIV 2023

Phoenix, AZ

May 4-6, 2023

Largest clinical conference in the U.S.

John Steinmetz, patient and advocate

Joe Caperna, MD



MISSION STATEMENT

To facilitate a Provider-Patient forum for community-based HIV providers and patients in San Diego and Tijuana/Northern Baja (SD/TJ),

to discuss the most recent HIV research findings, and open research protocols in San Diego and TJ/Northern Baja.



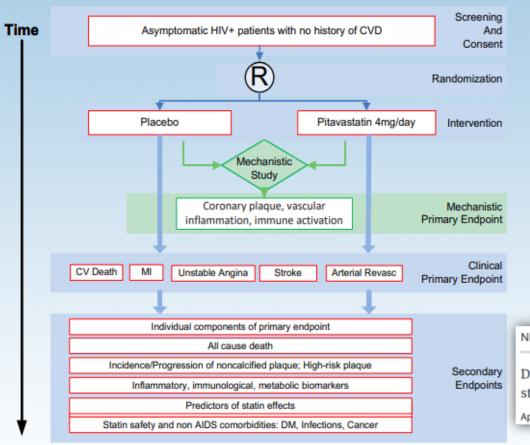
- Recent publications
- Heart Disease
- Liver disease, hep b and c
- PrEP
- 2 drug therapy
- Patient voices
- Sex and aging
- New, potent drugs, infrequent use thus far Lenacapavir Sunleca, doravorine (Pilfeltro), fostemsavir(Rukobia) TROGARZO® (ibalizumab-uiyk)

- Diabetes
- Weight gain, and loss
- Mental Health
- Memory and aging
- Gender-affirming care
- Syphilis
- STI's
- Substance abuse and harm reduction
- Patient-provider relationship in the tech era--

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REPRIEVE

Randomized Trial to Prevent Vascular Events in HIV



- Study started 2015
- 40-75 yrs, on ARVs, CD4 >100 cells/uL
- Low-to-moderate CVD risk
- n=7769

NHLBI NEWS | News Release

Daily statin reduces the risk of cardiovascular disease in people living with HIV, large NIH study finds

April 11, 2023, 2:00 PM EDT

35% lower risk of major adverse CV events



Cell. 2023 Mar 16

- Woman potentially cured of HIV using transplant with cord blood stem cells
- A woman with leukemia is likely cured of HIV after receiving a transplant including stem cells from banked umbilical cord blood.
- The result suggests a way to expand the pool of available stem cells for curing HIV in people who require transplants for other medical conditions.

• https://www.nih.gov/news-events/nih-research-matters/mixed-race-woman-potentially-cured-hiv-using-stem-cell-transplant

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HIV + Heart attack=

- 2 or more risk of sudden death NEJM Aug 2021
- 4-5 x increased risk JACC 2012
- 2 studies highlighted
- Known risk factors
- Risk calculators underestimate in HIV
- Statins
- Hypertension, obesity, smoking tobacco, diabetes, family history
- Statin are Underutilized in HIV
- Meds contraindicated with statins—ask your medical provider
- Many studies presented for non-statin medical therapy, in non-HIV

HIV Lancet June 2022

- Doubling of CV disease events in first 6 months after starting INSTI with
- tapering of incidence rate back to baseline after 2 years of exposure Findings persist after adjusting for CVD risk factors What's the mechanism? Is this like the abacavir story? New drugs new side effects



Swiss HIV Cohort, >5000 patients

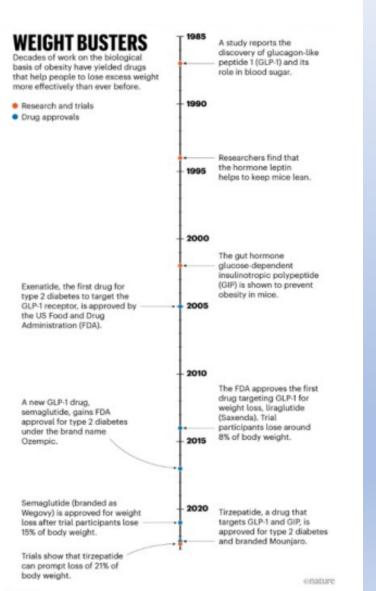
- CROI Feb 2023
- No increased incidence of heart disease
- Dr Sara Browne presented this abstract a few months ago.

In the HIV-Heart talk, 'weight' was discussed a lot.

New therapies for Medical Weight Loss

- Semaglutide (Wegovy) GLP-1 durg
- Tirzepatide (Mounjaro) –
 GLP-1 and GIP
- Expensive, duration of tx is unknown

Prillaman, M, Nature magazine on January 10, 2023



Traditional risk calculators underestimate ASCVD risk in PWH

Traditional risk factors are associated with increased CVD risk in HIV

Risk predictors developed in populations without HIV may not predict risk in HIV due to different etiologies •

HIV-specific calculators have been proposed (biomarkers, ART) • Multiple different studies have concluded that traditional risk calculators underestimate CV risk in PWH

Evaluate more than a risk calculation, consider CT Cardiac calcium score

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Basics

- Hep B not curable, controllable, preventable with vaccine
- Hep C curable and several options 8 or 12 weeks
- Hep B, active (form needs to be excluded before 2 drug HIV therapy
- Several recent examples of undetected active or occult Hep B that reactivated after change to 2 drug therapy, despite routine testing with 'triad'
- Consider revaccinating if hep b surface antibody neg, even if hep b core antibody positive (prior or current infection)

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PrEP

- A lot of marketing
- ViiV and others have studied PrEP drugs perhaps more than any other drug
- Crucial—bmi >= 30, use 2" needle for injectable PrEP
- (also for Cabenuva)

BMI body mass index

BMI Categories:

```
Underweight = <18.5
Normal weight = 18.5-24.9
Overweight = 25-29.9
Obesity = BMI of 30 or greater
```

- Body Mass Index (BMI) is a person's weight in kilograms (or pounds) divided by the square of height in meters (or feet).
- Kg/meters²

BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	3
Height	g	Weight in Pounds															
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	1
4"11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	1
5*	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	1
5"1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	1
5"2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	1
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	1
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	2
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	2
5%*	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	2
57*	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	2
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	2
5"9"	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	2
510"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	2
5"11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	2
6"	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	2
6"1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	2
6"2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	2
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	2

вмі	19	20	21	22	23	24	25	26	27	28	29	30
Height								Weigh	nt in P	ounds		
1'10"	91	96	100	105	110	115	119	124	129	134	138	143
4'11"	94	99	104	109	114	119	124	128	133	138	143	148
5"	97	102	107	112	118	123	128	133	138	143	148	153
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5'5"	114	120	126	132	138	144	150	156	162	168	174	180
5%"	118	124	130	136	142	148	155	161	167	173	179	186
57"	121	127	134	140	146	153	159	166	172	178	185	191
5'8"	125	131	138	144	151	158	164	171	177	184	190	197
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5'10"	132	139	146	153	160	167	174	181	188	195	202	209
5'11"	136	143	150	157	165	172	179	186	193	200	208	215
3"	140	147	154	162	169	177	184	191	199	206	213	221
3"1"	144	151	159	166	174	182	189	197	204	212	219	227
5"2"	148	155	163	171	179	186	194	202	210	218	225	233
3'3"	152	160	168	176	184	192	200	208	216	224	232	240
	Healthy Weight							Ov	orwoi	aht		

Is there enough data?

Trial Name	Age Information
iPREX (TDF/FTC v Placebo) - MSM/TGW	11%≥ 40 yrs old = TDF/FTC
iPreXOLE (TDF/FTC)- MSM/TGW	17% ≥ 40 yrs old = TDF/FTC
DISCOVER(TAF/FTC vs TDF/FTC) - MSM/TGW	Max Age: TAF/FTC = 43 y TDF/FTC = 44 yrs
Partners PrEP (TDF vs TDF/FTC vs Placebo) - heterosexual men and women	14% ≥ 45 yrs old = TDF/FTC 13% ≥ 45 yrs old = TDF
IPERGAY(TDF/FTC vs placebo) - MSM	10% ≥ 50 yrs = TDF/FTC
HPTN 083 (CAB vs TDF/FTC) - MSM/TGW	> 60 yrs CAB (0.3.%) CAB /TDF/FTC (0.3%) 50-59 yrs CAB (2.6%) and TDF/FTC (2.2%)
HPTN 084 (CAB vs TDF/FTC) - cisgender women	upper age 45 yrs

Grant et al. (2014) Lancet Infect Dis.; Mayer et al (2020). Lancet; Landovitz et al. (2021) NEJM; Baeten et al. (2012) NEJM; Molina et al. (215), NEJM

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2 drug therapy—per new CDC GL

- Dovato
- Juluca
- Cabenuva
- Dolutegravir/darunavir

Common 2-drug regimens

Dolutegravir – Rilpivirine

Dolutegravir – Lamivudine

Dolutegravir – Darunavir/c

Cabotegravir – Rilpivirine



2 drug therapy

• "easier,' safer, as or more effective

• Important considerations, and contra-indications

- Hep B
- Drug interactions
- Heavy treatment experienced
- Prior resistance testing

Hep B

- Exclude any active Hep B—many tests
- liver enzymes, pos hep b surface antigen, pos core antibody or antigen, hep b dna
- Triad=
 Hep B surface antibody

 Hep B surface antigen
- Hep B core antibody

HBsAg anti-HBc Ab anti-HBs Ab

Screen ALL adults for HBV

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What the Patient Voice Has to Say to the Care Team

- Learning Objectives for providers -Work with your team to incorporate insights from the experiences of people with HIV into your care setting, with a focus on learning of the diagnosis, treatment, dealing with stigma, and being a long-term survivor.
- "I'm a survivor, a thriver I decided I was going to show up and take care of what I needed to do."
- Tennessee—rural area, no access to care, > 2 years with AIDs and histoplasmosis, lover's life insurance policy not given to him because lover died of complications of hiv.
- "Still hard to come out as HIV."

The Denver Principles

- This is a document written by HIV advocates on June 12, 1983 at the Second
 National AIDS Forum, part of the Fifth Annual Gay and Lesbian Health Conference in
 Denver. These words are as relevant and powerful today as they were 40 years ago.
- In the opening words, the Denver principles called for the use of people-first language:
 - "We condemn attempts to label us as "victims", a term which implies defeat and we are only occasionally "patients", a term which implies passivity, helplessness, and dependence upon the care of others.

We are "People With AIDS."

https://actupny.org/documents/Denver.html



Recommend Terminology Related to HIV

 People with HIV have been prominent collaborators in medical progress to date and language should reflect this. There is terminology that should <u>no longer</u> be used.

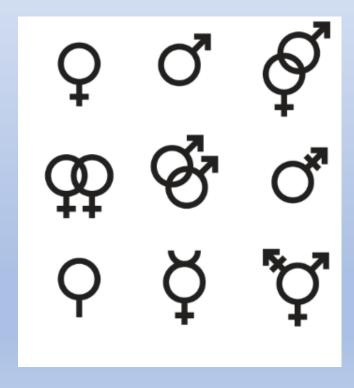
Stigmatizing	Preferred						
HIV-infected person							
AIDS patient	Person living with HIV or						
Positive or HIVers	Person with HIV						
HIV carrier							
Died of AIDS	Died of AIDS-related illness/AIDS-related complications						
AIDS virus	HIV (AIDS is a diagnosis)						
Full-blown AIDS	There is no medical definition for this use						
Zero new infections	Zero new transmissions						
Became infected	Contracted/acquired/diagnosed						
Mother-to-child transmission	Vertical transmission; Perinatal transmission						
Compliant	Adherent						
Prostitute	Sex work, transactional sex						

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Four patients, 2 cis-9, 1-3, 4, 1 cis-3, (What language will we use in 100 yrs?)

I suggest--symbols are more powerful than words



- The combined male-female symbol (♂) is used to represent androgyne or transgender people; and when additionally combined with
- the female (?) and male (?) symbols (?) it indicates gender inclusivity, though it is also used as a transgender symbol.

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Sex, Sexuality, and Sexual Health



Image source available under creative commons https://img.rawpixel.com/s3fs-private/rawpixel_images/website_content/395-ted3100-teddy_1.jpg?w=800&dpr=1&fit=default&crop=default&q=65&vib=3&con=3&usm=15&bg=F4F4F3&ixlib=js-2.2.1&s=3042d20699ef0a00da67e3fd31a2e314 (Sexuality)a central aspect of being human throughout life'....

....'(sexual health) a state of physical, emotional, mental and social well-being related to sexuality; not merely the absence of disease, dysfunction or infirmity.

https://www.who.int/health-topics/sexual-health#tab=tab_1



No large studies in hiv on sex and preservation or improvement in cognition and memory

Sex and Cognition

In a study of older adults, **greater sexual** satisfaction was associated with less cognitive changes.

In another study from the UK with 7,000 participants (50-89 years), sexually active men and women had improved cognitive function compared to those who did not have regular sex.



Allen, M.S. Sexual Activity and Cognitive Decline in Older Adults. *Arch Sex Behav* **47**, 1711–1719 (2018). https://doi.org/10.1007/s10508-018-1193-8 Wright H, Jenks RA. Sex on the brain! Associations between sexual activity and cognitive function in older age. *Age Ageing*. 2016;45(2):313-317. doi:10.1093/ageing/afv197



Sexual Activity, Quality of Life, and Health Outcomes

Sexual Activity & Desire





Greater risk of :

Cancer, CHD, Stroke

Poor Self-Rated Health

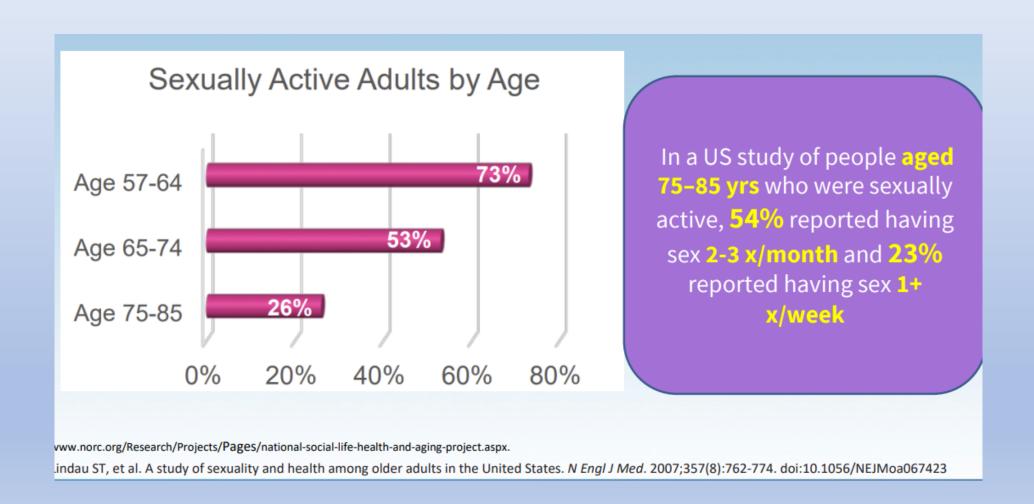
Jackson, S.E., Yang, L., Koyanagi, A. et al. Declines in Sexual Activity and Function Predict Incident Health Problems in Older Adults: Prospective Findings from the English Longitudinal Study of Ageing. Arch Sex Rehay 49, 929–940 (2020). https://doi.org/10.1007/s10508-019-1443-4

For Older Adults....

".....(sex) is deeper because they feel **more connected...**...much of it is related to their awareness
that time is running out, which makes intimacy feel
more sacred. Now, at the end of sex, one of them says
a version of: "Thank you, God, for one more time."

Jones, M. (2022). "Joys and Challenges of Sex After 70". New York Times Magazine.

How much sex do hiv patients have with age?



Talk about sex, ask you provider



Image: creative commons

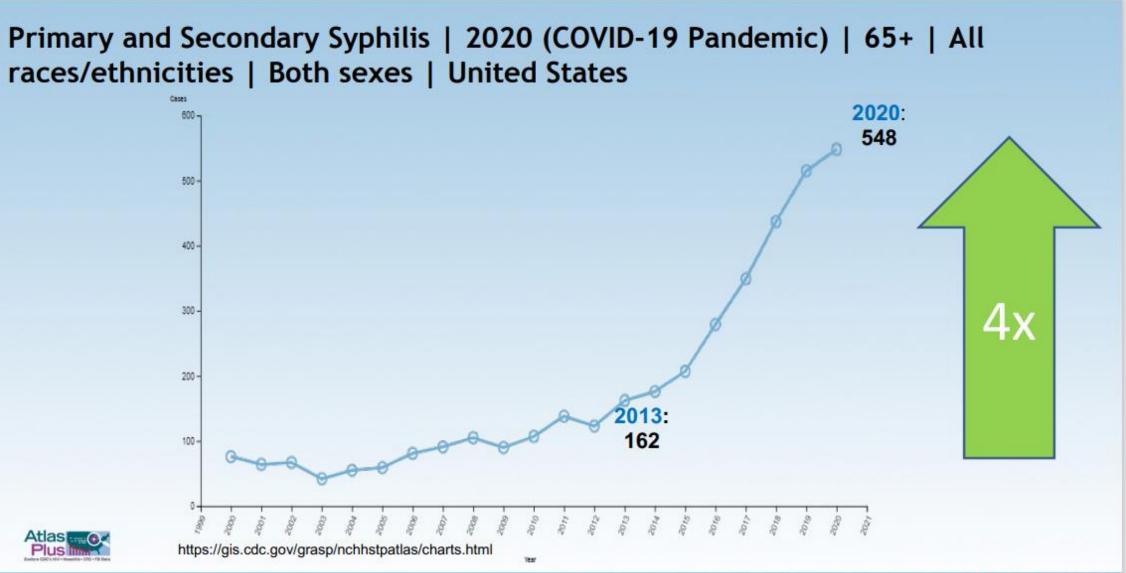
17% of older adults (65-80)
talked about sex with a health
care provider

However, 60% of older adults said they had to initiate the conversation

Agochukwu-Mmonu N, Malani PN, Wittmann D, et al. Interest in Sex and Conversations About Sexual Health with Health Care Providers Among Older U.S. Adults. *Clin Gerontol*. 2021;44(3):299-306. doi:10.1080/07317115.2021.1882637



People > 65 having sex



New HIV Diagnosis in U.S. (2019)

Age (Years)	Number of Diagnoses	
13-14	21	
15-19	1,646	
20-24	5,981	4.C 00% of Nove
25-29	7,396	16.8% of New HIV Diagnosis
30-34	5,731	
35-39	4,143	occurred in
40-44	3,004	persons 50
AF	2,60z	
50-54	2,329	years or older
55-59	1,863	
60-64	1,123	
65 and older	901	

American se. Guam, the Northern Mariana Islands Paraco, the Republic of Palau, and the US Virgin Islands



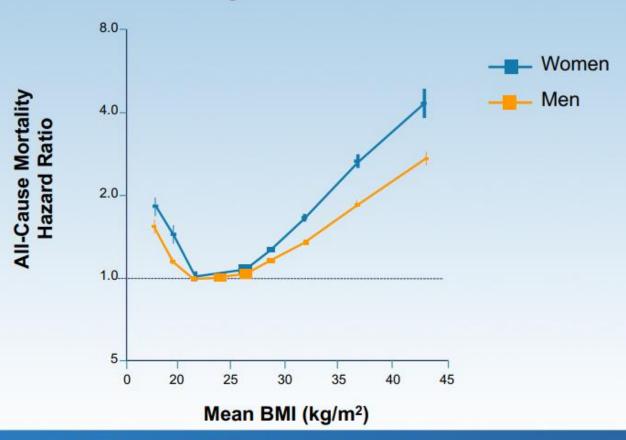
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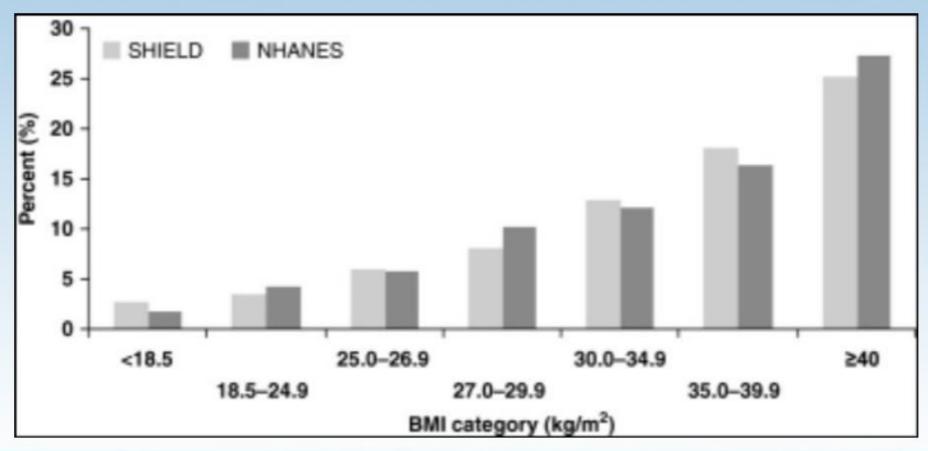
Diabetes, HIV and specialists

- Old knowledge from the 1990's—you will live longer with hiv if your medical provider is an hiv specialist
- By law in California, you have the right to see an HIV specialist.
- Most, more than ½ of conference attendees are both hiv specialists and primary care providers.
- Access to diabetes specialists is difficult.
- Diabetes care falls on the primary care provider.

Obesity and Mortality



Increased BMI Correlates with Increased Risk DM



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Bays. Int J Clin Pract. 2007

Weight gain associated with HIV and meds

- We all know...
- Within the first year after starting INSTI's, patients gained an average of 2.5 pounds.

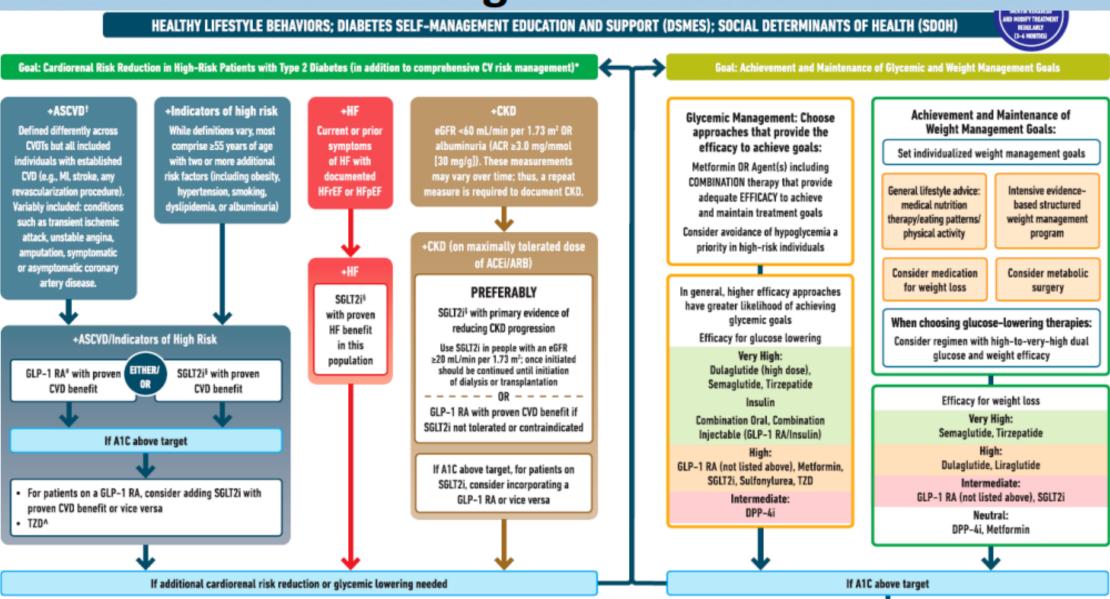
Select an appropriate weight loss medication option for patients with HIV

Determine an appropriate diabetes medication regimen for patients with HIV

New guidelines for diabetes treatment

- Metformin no longer first choice
- SGLT-2 inhibitor (specifically helpful with heart failure and DM)
- GLP-1 receptor agaonist (this and SGLT-2 inhibitors useful with h/o stroke)
- CKD SGLT-2 inhibitor
- Obese—GLP-1 agonist
- If aic <10, oral ok
- If aic > 10, insulin

Diabetes Treatment Algorithm



Whom to test for diabetes

Diabetes Screening

- All people 35 years and older
- Overweight or obese adults with one or more additional risk factors
- Previous pre-diabetes
- History of gestational diabetes
- People with HIV

Recent report → 40\$% of Americans are obese

Diabetes Diagnosis

Test	Pre-Diabetes	Diabetes
Fasting Blood Glucose Reading	100-125 mg/dL	≥126 mg/dL
Random Blood Glucose Readings		≥200 mg/dL
Hemoglobin A1c	5.7-6.4%	≥6.5%
Oral Glucose Tolerance Test	140-199 mg/dL	≥200 mg/dL

AIC very important AIC > 7, increased risk of heart attack and stroke

Diabetes Goals

Test		
HbA1c	≤7%	
Pre-meal Glucose	80-130 mg/dL	
Post-meal Glucose	<180 mg/dL	

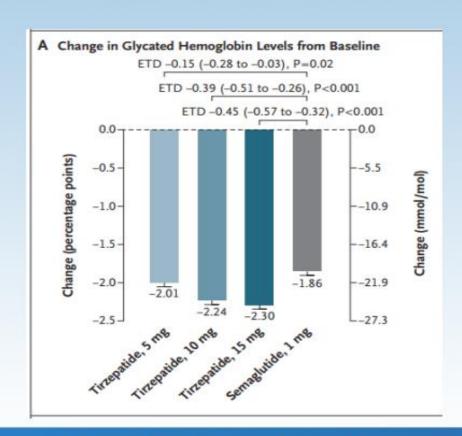
Practical Goal for Patients

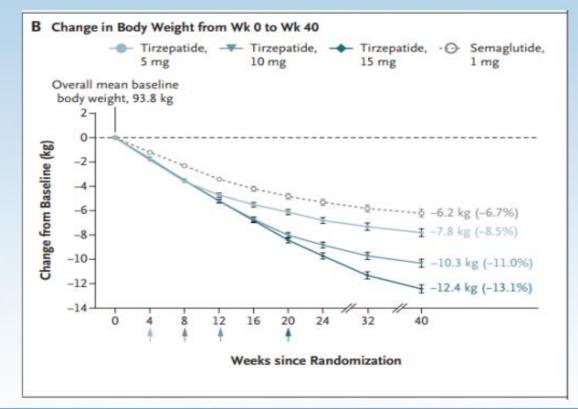
Most readings to be 100 to 150 mg/dL



Mounjaro™ - (tirzepatide) injection

Tirzepatide: Dual Incretin Therapy





Ozempic and Wesgovy suddenly in short supply

- CNN 17 March 2023
- TikTok and other social media largely to blame

- Diabetes
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- Mental Health
- Memory and aging
- Gender-affirminmg care
- syphilis
- STI's
- Substance abuse and harm reduction
- Patient-provider relationship in the tech era--

Gender affirming care

• To be broadcast live 11am

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syphilis

- Not much new, still old, inadequate tests
- If < 1 year, one injection penicillin
- If > 1 year, weekly injections x3
- Doxycycline if pcn allergic
- Rates increasing

- Diabetes
- Weight gain, and loss
- Mental Health
- Memory and aging
- Gender-affirminmg care
- syphilis
- STI's (9am today)
- Substance abuse and harm reduction
- Patient-provider relationship in the tech era--

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Diagnosis of SUD



- DSM-5 Criteria: at least 2 criteria met within a 12-month period
- Physiology:
 - Tolerance: using more for the same effect or less effect with the same amount
 - Withdrawal: characteristic withdrawal syndrome or similar substance taken to avoid withdrawal symptoms
- The Core Problem of SUD:
 - Knowledge of adverse consequences, yet continued use
- Internal Preoccupation:
 - Desire to cut down on use or unsuccessful attempts to stop using
 - Time: a lot of time spent acquiring, using, and recovering from use
 - Larger quantities used over a longer period of time than intended
 - Craving or a strong desire to use
- **External Consequences:**
 - Activities reduced or given up because of use
 - Role obligations neglected
 - Social or interpersonal problems
 - Recurrent use in situations that are physically hazardous
- Severity: Mild: 2-3 sx; Moderate: 4-5 sx; Severe: >6 sx

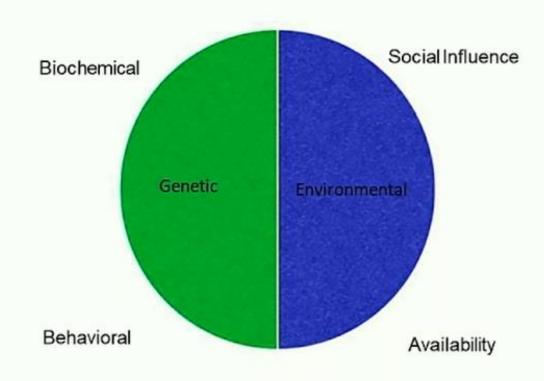
DSM-5 (https://www.psychiatry.org/psychiatrists/practice/dsm) and P. Levounis, Academic Psychiatry, 2015

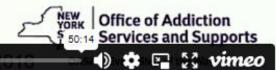




Vulnerabilities for Developing S

- Genetic predisposition (40-60% of risk)
- Concomitant mental health diagnoses: bipolar disorder, anxiety (panic disorder, PTSD, social anxiety), major depression, ADHD, personality disorders (borderline, antisocial), antisocial conduct disorder (especially in adolescence), eating disorders; whether undiagnosed or undertreated or untreated or treated inappropriately
- History of trauma and/or abuse: preadolescent sexual trauma (especially females), victim/witness to violence (males/females); ACEs; LGBTQIA+ communities; BIPOC communities
- Poor coping mechanisms: substances are used to cope;
 escapism from trauma or negative feelings; harm avoidance
- Impulsivity plays a role in the initiation of substance use
- Sensation/novelty seeking play a role in the initiation of substance use
- Environmental triggers/sensory cues are triggers to use/resume use
- Lack of homeostatic reward regulation; reward "deficiency": orientation towards pleasurable rewards, priming of the brain by early substance use





Trauma and SUD

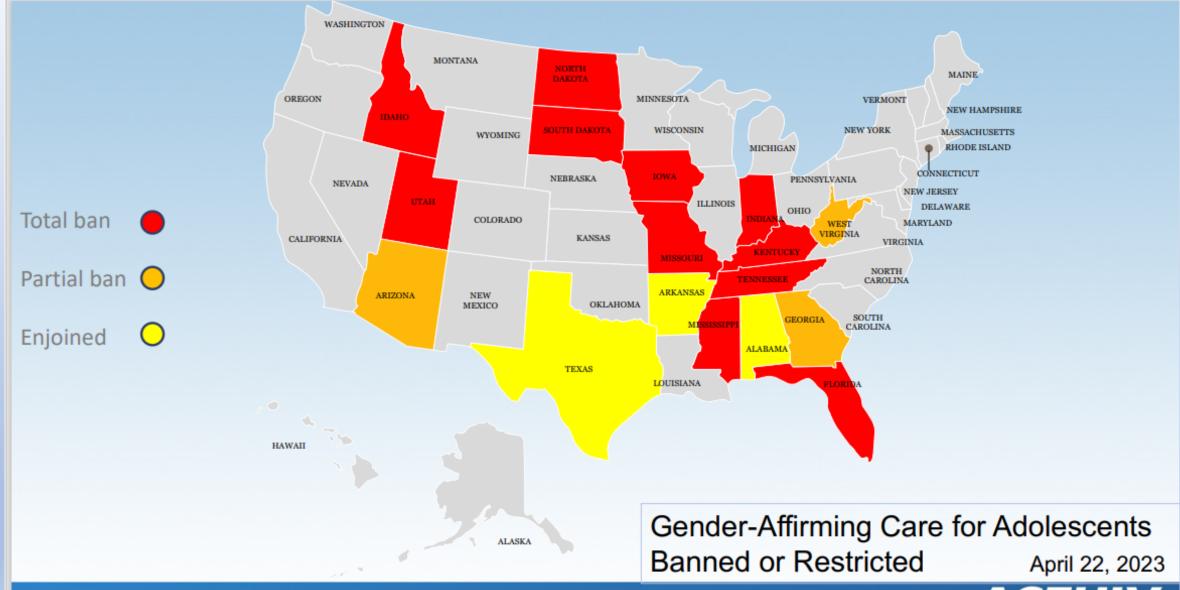
- Abuse
- Neglect
- Household dysfunction

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Legal talk on current politics endangering our relationships with medical providers

 USE RELIGIOUS FREEDOM RESTORATION ACT TO DISMANTLE ACA AND LEGALLY AFFIRM discrimination

- Medicaid Restrictions on Gender-Affirming Care All Age
- Many Gender-Affirming Care Bans Criminalize the Provider
- Abortion restrictions criminalize the patient and the providers
- DEHUMANIZE AND CRIMINALIZE TRANS & NON-BINARY PEOPLE



ACTHIV

Approach to Neurocognitive Decline in the Aging Person with HIV

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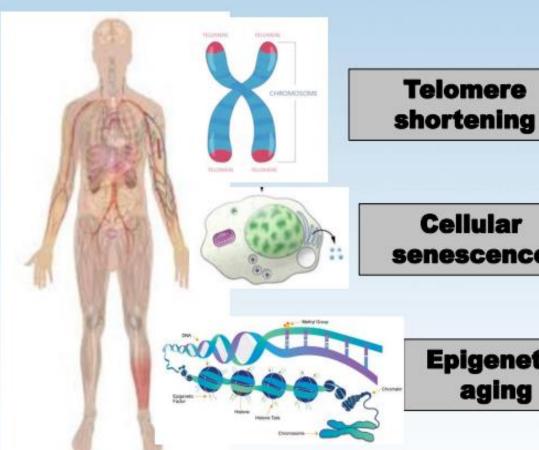
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Memory and HIV

- Previous studies reported up to 20 year 'brain lag' with hiv
- Recent studies show about 5-year gap.
- HIV patient have remarkably more life stresses which affect memory (p value=0.0001)
- The level of social adversity, fear response, learning and memory
- Changes in brain, midbrain and amygdala
- Request memory and cognitive testing.

MEASURING BIOLOGICAL AND BRAIN AGING



senescence

Epigenetic aging



Reduction in gray matter volume

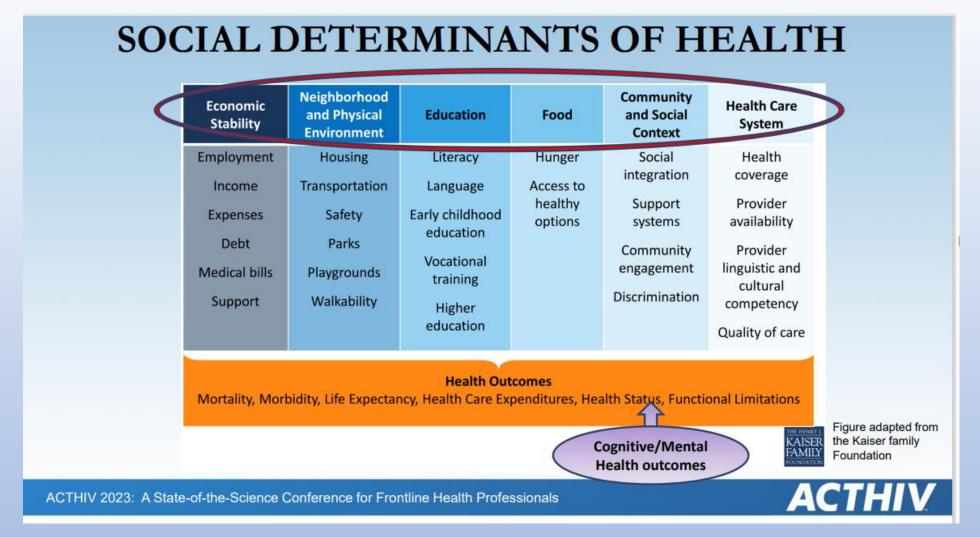
Thinning of cortical structures

Decreased Cerebral Blood Flow

Loss of white matter integrity

Figure sources: Wikipedia, Fancy Tapis/Shutterstock, Whatisepigenetics.com, Gettyimages/istockphoto





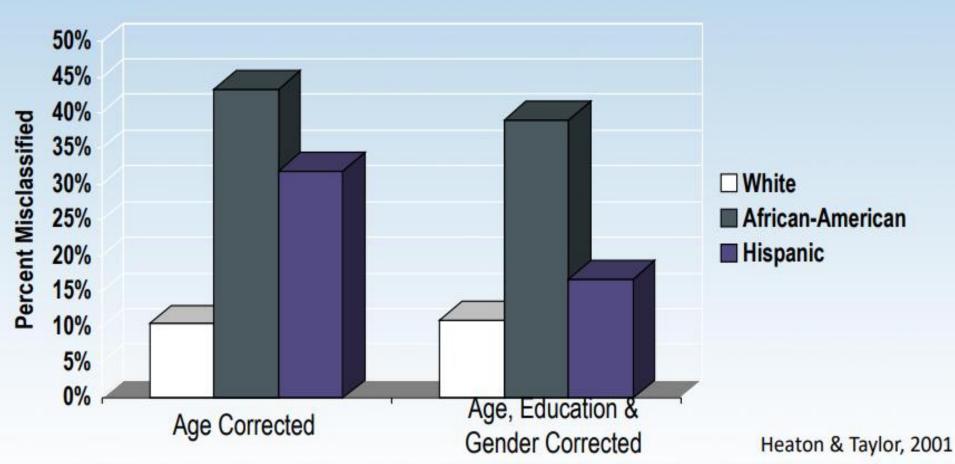
Dr Caperna, UCSF 1993, cause of death = 'poverty'

Death certificate rejected.

Neuropsychological testing vs Cognitive testing

 Research shows results of these tests are highly variable, dependent on education and poverty levels, social support, loneliness---and more so in HIV.

COGNITIVE MISCLASSIFICATION BY RACE/ETHNICITY



Reminded of prior studies...

STRESS RESPONSE - BRAIN

- Prolonged exposure to adversity is associated with impairments in emotional regulation and learning and memory (Richards & Wadsworth, 2004; Shonkoff et al., 2012; Tottenham et al., 2010).
- Disruption of the HPA-axis has been associated with loss of neuronal connections and smaller hippocampal volume (Rao, Chen, Bidesi, Shad, Thomas & Hammen, 2010; Sapolsky, 1996; Woon & Hedges, 2008) and altered amygdala
 Connectivity (Thomason, Marusak, Tocco, Vila, McGarragle & Rosenberg, 2015).



SOCIAL ADVERSITY AND HIV ON NEUROBEHAVIOR

Study 1 (Williamson, Mahmood, Kuhn, & Thames, 2017)

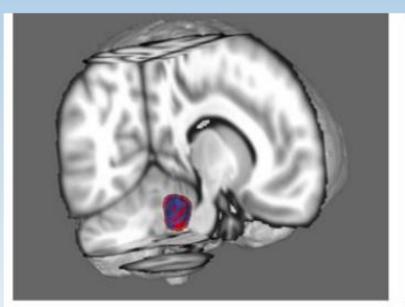
- Participants (n = 149)
 - HIV+ (n = 93)
 - HIV (n = 56)
- Social adversity
- Cumulative score that consisted of current SES, community SES, child SES, restricted medical care due to finances, racial discrimination
- Depression symptoms (BDI-II)

Study 2 (Thames, Kuhn, Mahmood et al., 2017)

- Participants (n = 93)
 - HIV+ (n = 70)
 - HIV- (n = 23)
- Subcortical shape analyses
- Cognitive performance (comprehensive battery)
- Social adversity



Study 2 Results: HIV*adversity interaction



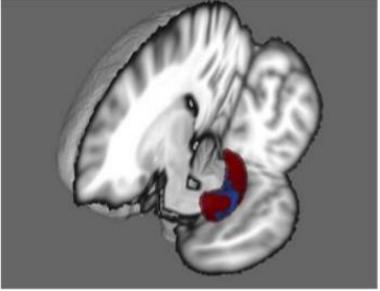
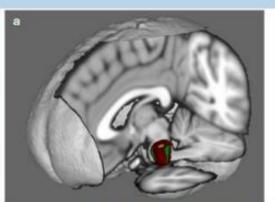


Fig. 1 Area in blue represents the surface region where a significant HIV*Adversity interaction was observed. Figure A shows the right amygdala and Figure B shows the left hippocampus (seen from sagittal and coronal views, respectively). HIV+ participants with higher adversity scores evidenced the greatest atrophy of these regions

Study 2 Results: Social adversity and amygdala and hippocampal shape



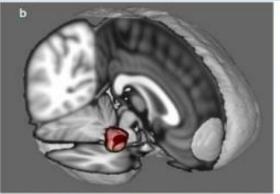
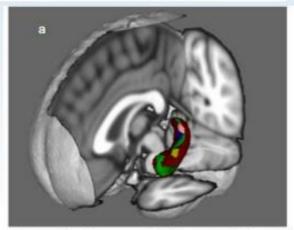


Figure 4a. Amygdala shape correlations with social adversity indicators (Figure a = left amygdala: Figure b = right amygdala). Green = financial strain; Yellow = current SES; Pink = childhood neighborhood SES; Blue = racial discrimination; Brown = current neighborhood SES.



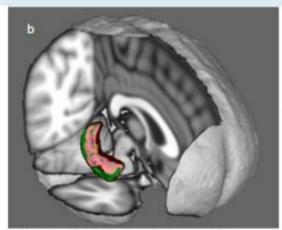


Figure 4b. Hippocampal shape correlations with social adversity indicators (Figure a = left hippocampus; |b = right hippocampus). Green = financial strain; Yellow = current SES; Pink = childhood neighborhood SES; Blue = racial discrimination; Brown = current neighborhood SES.

Trauma, economic hardship and stress on HIV and functional outcomes

 PWH had more traumatic events, more food insecurity, lower socioeconomic status, and higher perceived stress compared with HIVindividuals (all ps < .0001).

 Among PWH, a higher composite trauma score was associated with worse executive functioning, learning, working memory and declines in ADLs.

Watson, CW, Sundermann, E., Hussain, M.,Moore, D. (2019). Health Psychology

Composite trauma score did not predict these outcomes in controls



Lessons Learned for the HIV Care Team and Future Directions

- Social determinants are critical to the study of HIV outcomes in the context of aging
 - Community levels of adversity
- Screening for early life trauma and economic instability should be incorporated in clinical care settings
- Use of patient navigators to connect PWH to community resources is essential
- Patient input and community partnerships are essential to understanding root causes in poor outcomes



Today 11-1130 am

- Gender affirming care in HIV
- https://mm.swoogo.com/ACTHIV2023



Next Meeting Aging and HIV Jerry Turner, Pozabilities 4 June 2023 Saturday 10am AHF 3850 Fifth Ave

Thank you, for participating

- Patients
- Advocates
- Pozabilities, Jerry Turner and Michael Donovan
- Being Alive, John Steinmetz
- Medical Providers

AHF—for the space, and food