Beyond Survival

Promising Therapies to Enhance Resilience as We Age With HIV



Nelson Vergel,
Activist & Author
Program for Wellness Restoration
PoWeRUSA.org

AGENDA

- Aging with HIV- Survey Findings
- Frailty in Aging- How to Deal with It
- The Latest Treatment for Lipodystrophy
- Hormones and Aging- How to Replace
- Immune Boosting Therapies- Need for Activism
- The Upcoming Tsunami: Psychedelic Therapies for Depression, PTSD, etc.
- Resources
- Questions and Answers

HealthHIV STATE OF Aging with HIV™

Third Annual National Survey

TABLE OF CONTENTS

Survey Methodology 3
Key Findings 4
Demographics 5
HIV Status and Viral Suppression 6
Physical, Sexual, and Mental Health: Frailty Among OPWH 8
HIV and the Aging Process 13
The Social Determinants of Health 16
Access and Paying for Care 24
Health Care Engagement 28
Care Coordination 29
Ongoing Health Crises: COVID-19 and Mpox 31
Conclusion and Implications 32
References 33

Key Findings

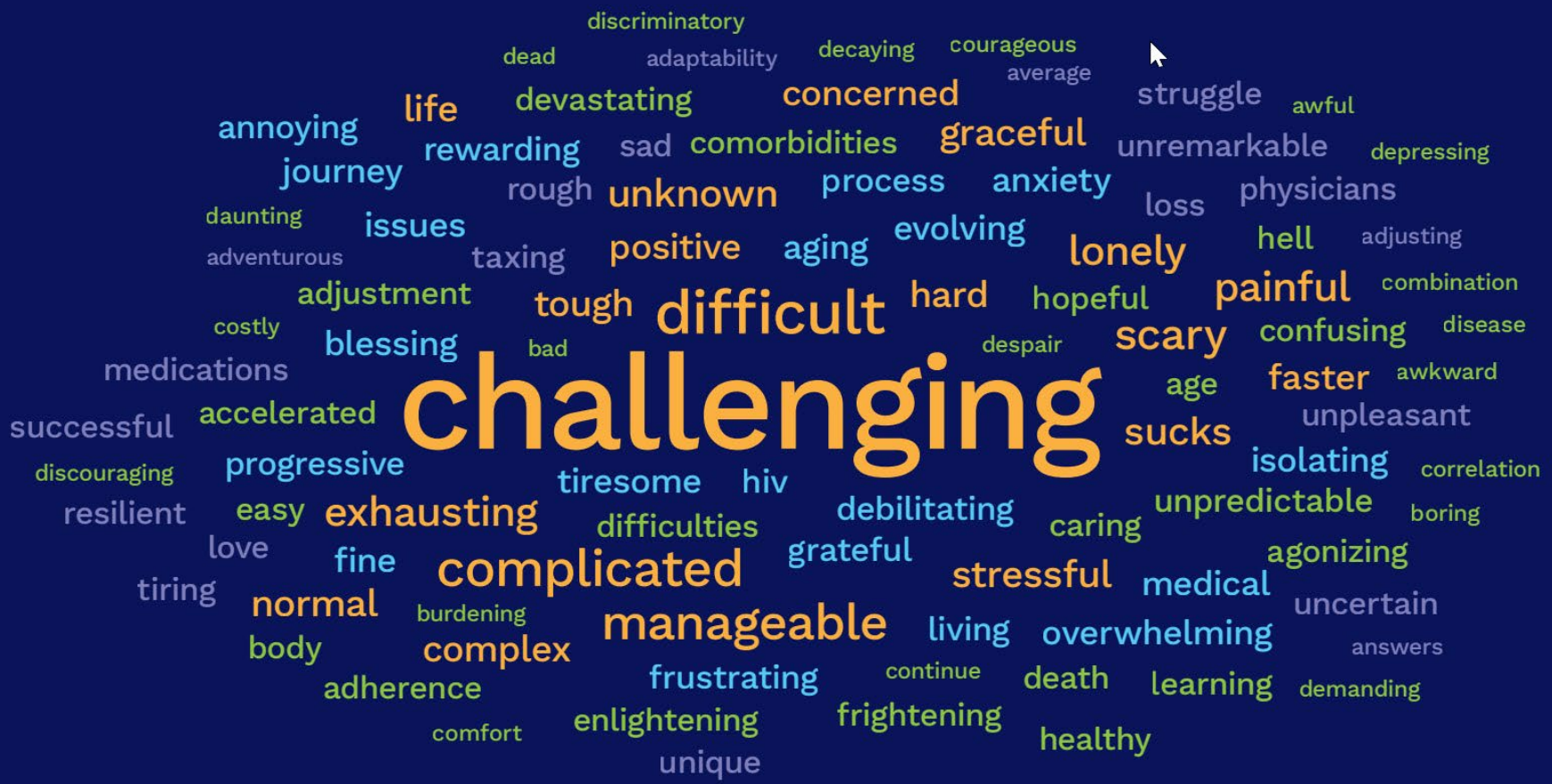
The State of Aging with HIV is challenging and complicated.

OPWH face a range of daunting problems as they age with HIV, including navigating a fragmented healthcare system that can make it difficult to access the care they need.

Key Findings From This Report

- **Multimorbidity and polypharmacy is a near-universal issue.** 2 in 3 respondents reported at least two comorbidities and 3 in 4 reported taking at least two daily medications.
- **Mental illness is on the rise.** 64% of respondents reported mental health concerns compared to less than 40% of respondents last year.
- **Retirement savings are minimal.** Half of respondents had no financial retirement plan and 4 in 5 had not saved enough for long-term care or supportive home care.
- **An uncertain future looms.** There was a strong sentiment among respondents that OPWH are often forgotten and left out of the conversation around HIV care.

When asked to describe aging with HIV in one word, more than 50% chose **“challenging,”** followed by the descriptors **“difficult”** and **“complicated.”**



COMORBID CONDITIONS REPORTED	
Anal Dysplasia	18.3%
Cancer	23.8%
Diabetes (Type 2)	17.5%
Frailty/Mobility Issues	27.9%
Hepatitis B	39.2%
Hepatitis C	14%
Heart/Cardiovascular Issues	32.3%
Hearing Problems	21.7%
Hypertension	59.9%
Hypertriglyceridemia	39.5%
Joint or Back Pain	64.4%
Kidney Disease	17.7%
Liver Disease	10.5%
Lung Disease/COPD	16.8%
Impaired Cognition	22%
Neurological Conditions/Stroke	16.8%
Neuropathy	45.7%
Osteoporosis/Osteopenia	29.3%
Periodontitis/Oral Health Issues	38.3%
Prediabetes	31.1%
Sex Drive/Libido	47.4%

A Long-Term Survivor's Diagnoses and Visits to Medical Specialists

- My records since 2009 (15 years) list 158 CPT codes
- I have seen since then 32 medical specialists

#	Specialty	#	Specialty	#	Specialty
1	Neurology	12	Internal Medicine	23	Sports Medicine
2	Orthopedics	13	Allergy and Immunology	24	Physical Medicine
3	Cardiology	14	Ophthalmology	25	Nutrition
4	Endocrinology	15	Gastroenterology	26	Psychology
5	Rheumatology	16	Hepatology	27	Hand Surgery
6	Surgery	17	Psychiatry	28	Vascular Surgery
7	Neurosurgery	18	Sleep Medicine	29	Intensive Care
8	Pain Management	19	Dermatology	30	Sleep Medicine
9	General Surgery	20	Colorectal Surgery	31	Plastic Surgery
10	Oncology	21	Urology		
11	Infectious Disease	22	Hematology		

Social Support

The majority of respondents reported some level of engagement with the community. However, the need for continued social groups, social activities, and social support was noted as a top priority for OPWH.

Some respondents worried that social isolation was always looming, stating **"[you need to] stay connected to community; isolation is intense even when you've always been outgoing and involved. One serious illness & all connections vanish."**

Respondents were also aware of the deleterious effects of isolation on health outcomes: **"I find that a significant number of my peers tend to isolate and just exist. Isolation leads to significant mental health disorders."**

66%
participate in community groups

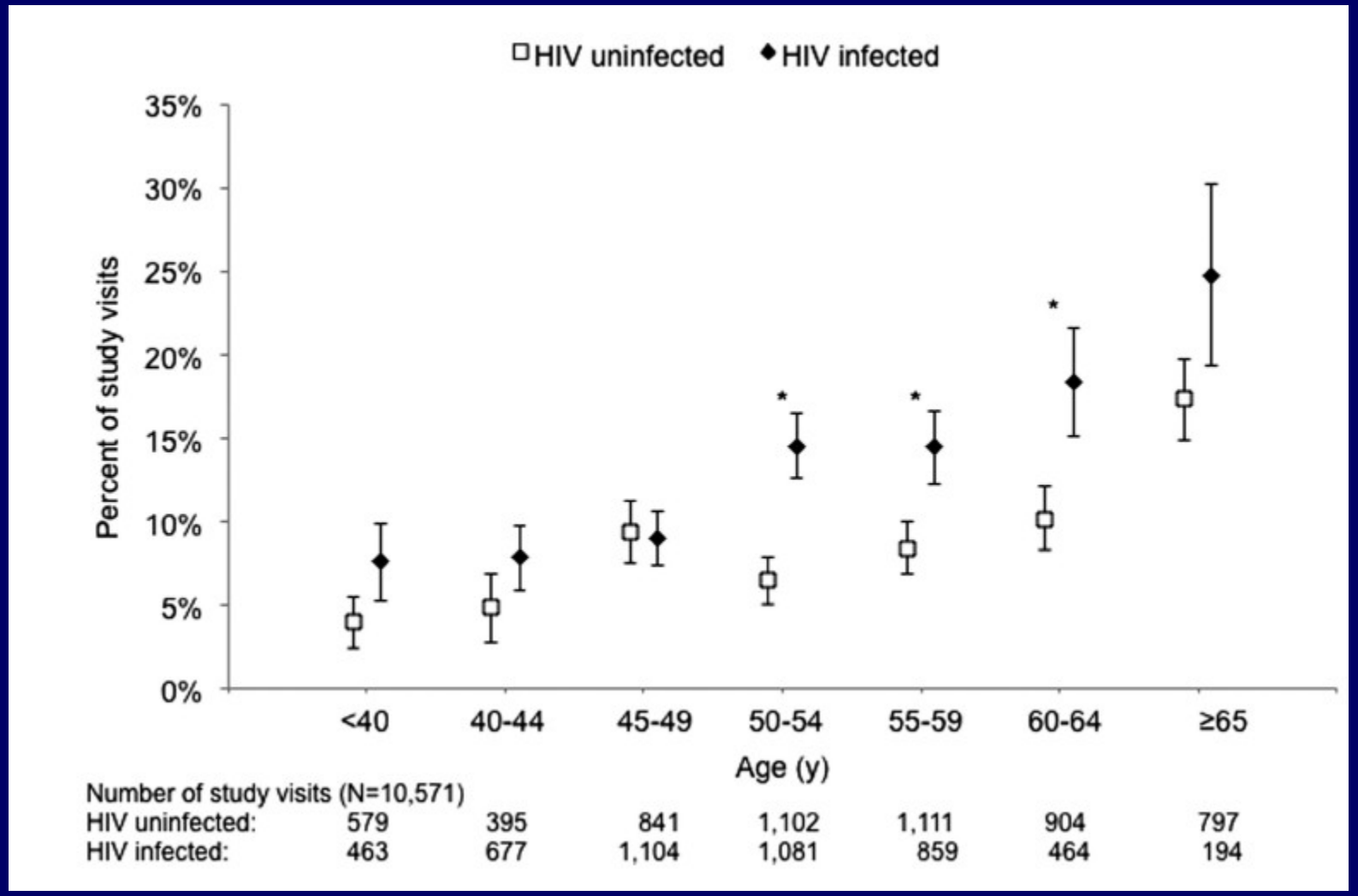
32%
don't have anyone who takes care of them when sick or injured



7%
say they have no one to call on in case of emergency

"The **erosion of resilience** that I've been seeing in our long-term HIV survivors here in PS. Their resilience over the decades has kept them alive, but when **housing costs** forces them out of their homes & communities as they have to relocate to a new area. Their increasing aging-related health issues force them to engage more with a **dysfunctional healthcare system** that makes it harder & harder to deal with their multiple co-morbidities, **ever-increasing financial pressure** on their fixed incomes, etc--many no longer have what it takes to deal with all this. **Isolation, depression, drug use, and lower QOL** all result." *Jeff Taylor*

HIV+ Men Are More Frail At a Younger Age vs HIV- Men: MACS



Althoff, J of Gerontology, 2013

Frailty: A Brief Overview

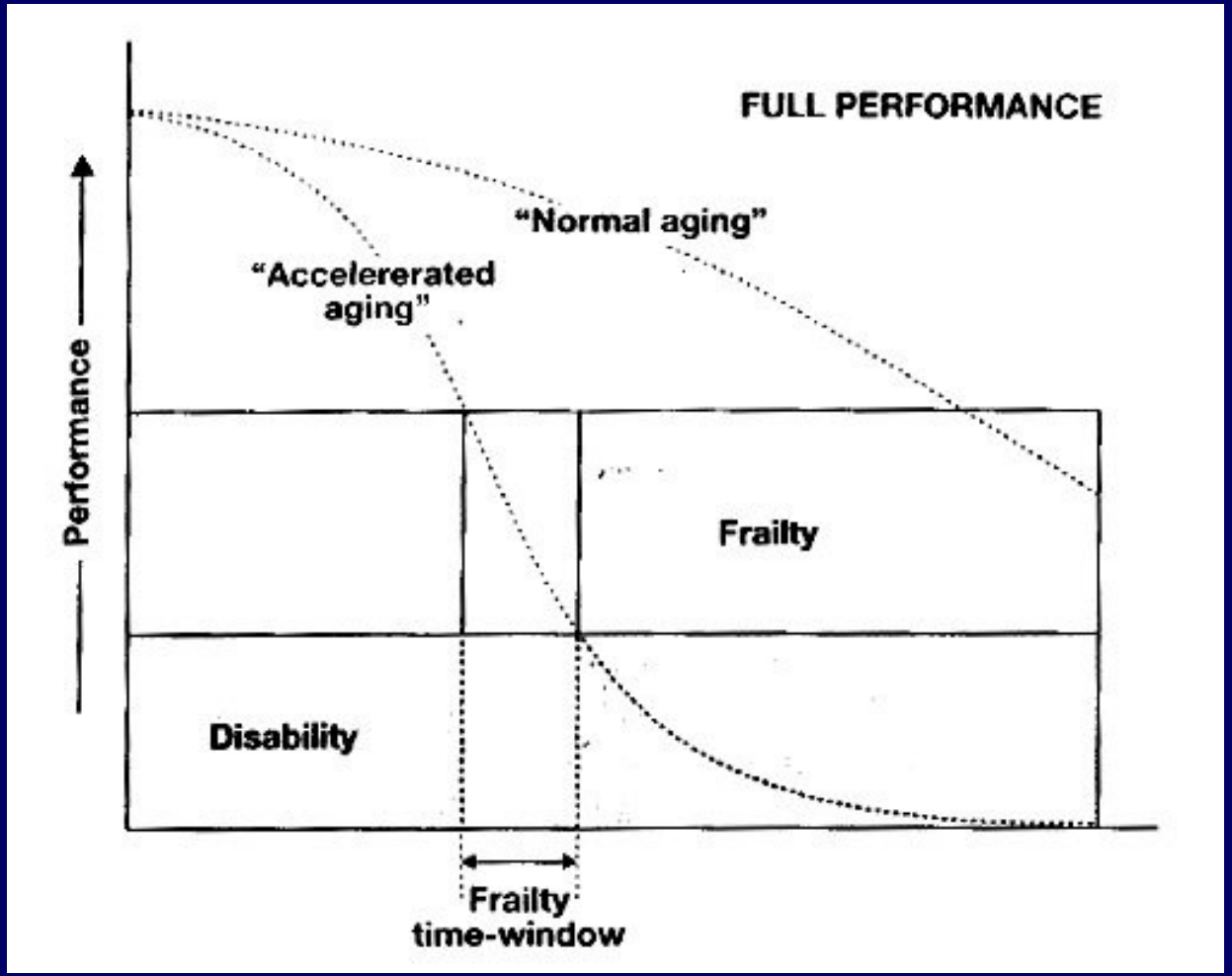
Weight loss

Weakness

Exhaustion

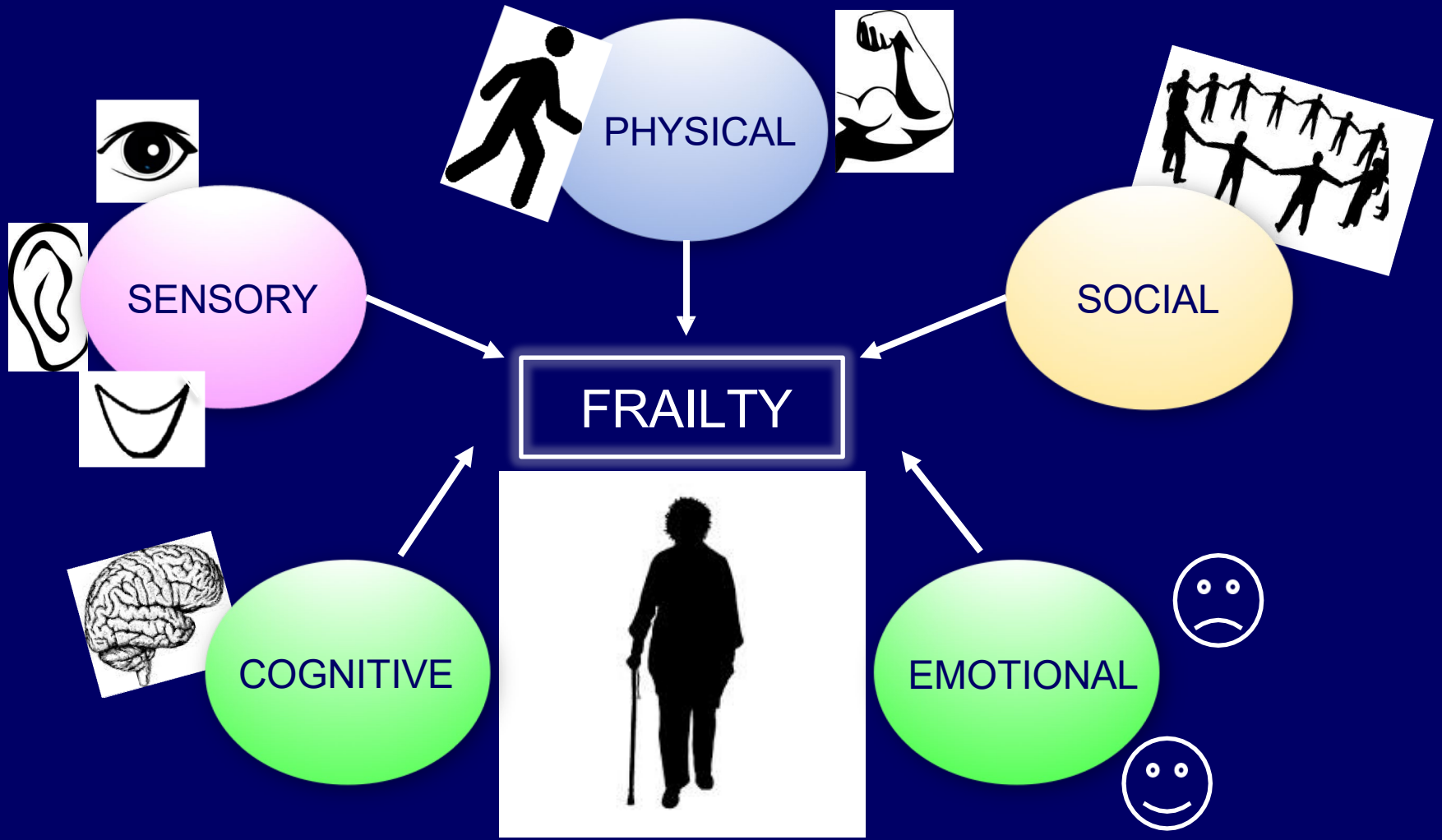
Slowness

↓ Physical Activity



Fried LP, *et al.* 2005

The Faces of Frailty

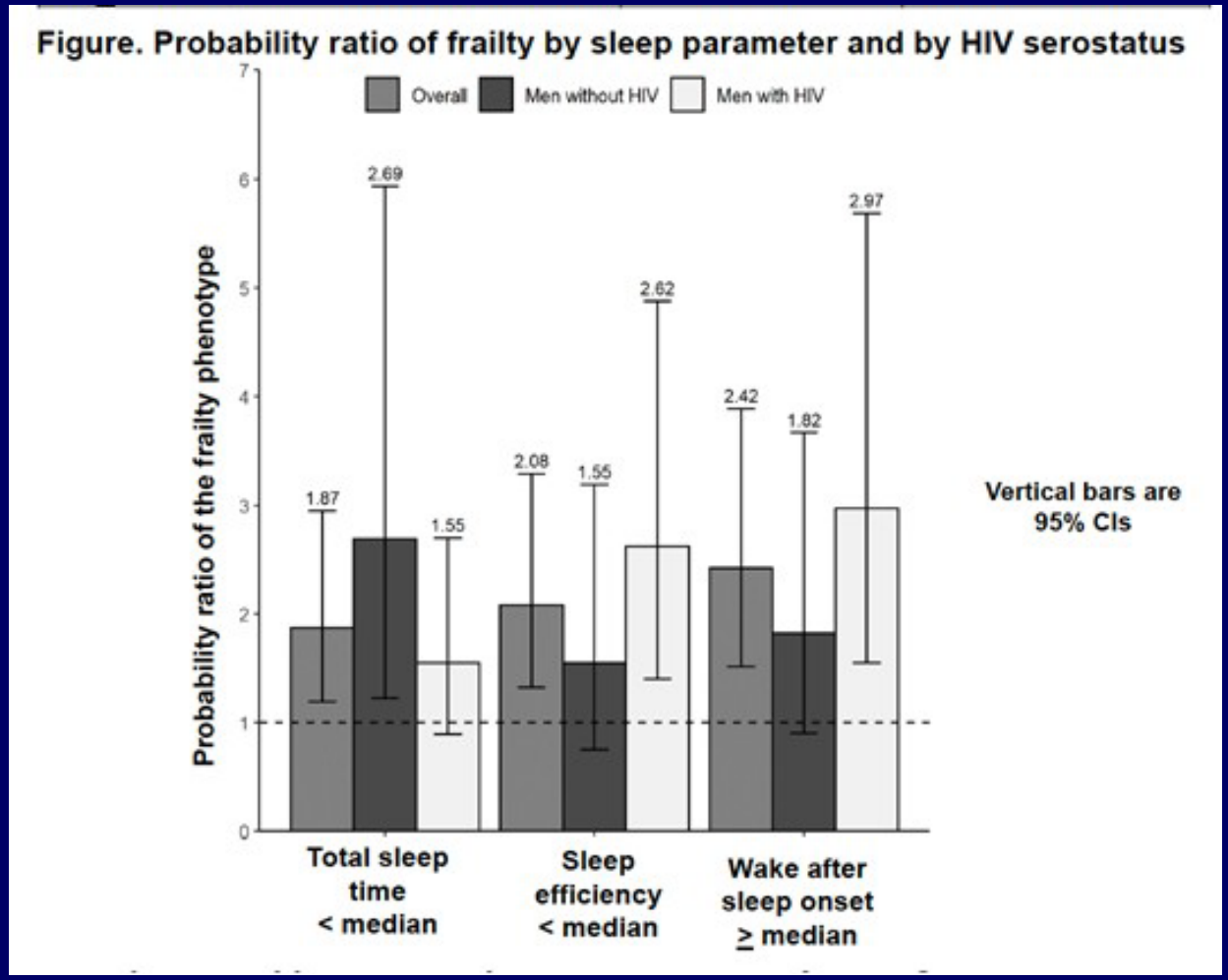


Thurn & Gustafson, *Current HIV/AIDS Reports*, 2017.

Sleep and Frailty Among Men with and Without HIV

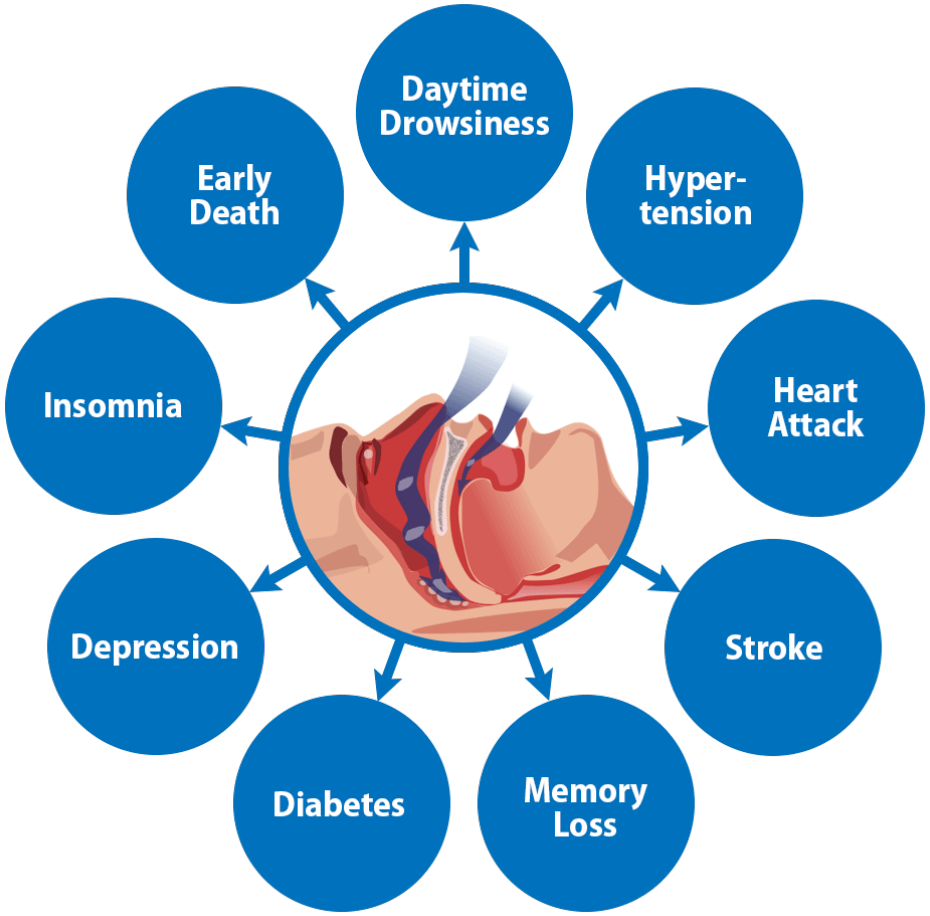
Table. Participant Characteristics by HIV Serostatus

Characteristic	Men without HIV (N = 356)	Men living with HIV (N = 446)
Frailty phenotype	30 (8%)	49 (11%)
Age in years, median (IQR)	63.0 (56.5-68.7)	56.3 (49.2-63.6)
BMI (kg/m^2), median (IQR)	27.0 (24.1-30.7)	26.5 (23.4-30.2)
Type 2 diabetes	130 (38%)	187 (44%)
Suppressed HIV viral load		423 (96%)
Current CD4 cell count, median (IQR)		704.5 (526.0-912.0)
Total sleep time *< Median, 382 minutes*	162 (46%)	236 (53%)
Sleep efficiency *< Median, 93%*	163 (46%)	224 (50%)
Wake after sleep onset *≥ Median, 33 minutes*	179 (50%)	224 (50%)



Masters, CROI, 2022

Health Consequences of Poor Sleep



Sleep Apnea- CPAP Masks



HIV Aging-Related Frailty- Treatment Options

- Aging HIV+ people have higher incidence of frailty than healthy controls
- Potential treatment options:
  - Exercise
  - Higher protein, lower glycemic index diets?
  - Diagnosis and treatment of sleep apnea
  - Creatine supplementation
  - Testosterone, nandrolone and oxandrolone
  - Glutathione enhancement
  - Vitamin D supplementation
  - Thyroid balance

Clinic Optimizers

Progressive Resistance Exercise (PRE): Anti-Frailty Therapy

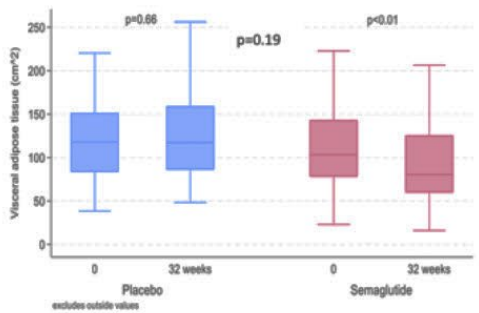
- Warm up and stretch before a session
- Start with compounded exercises
- Lift maximum weight for muscular failure (exhaustion) at 8-12 repetitions
- One-hour sessions 3-4 times a week
- One light set and two heavier sets per body part
- If no access to a gym, start with crunches, push ups, and squats at home. Use stairs!
- For more details, visit www.ExcelMale.com

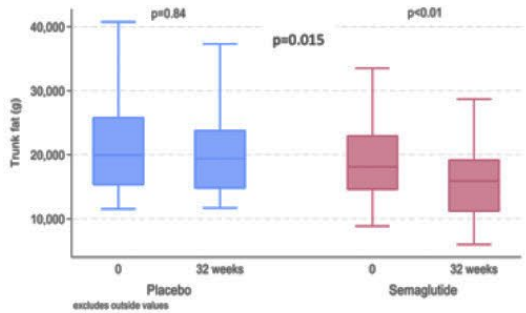
Clinic Optimizers

Semaglutide and HIV Lipodystrophy



Changes in Central Abdominal Fat



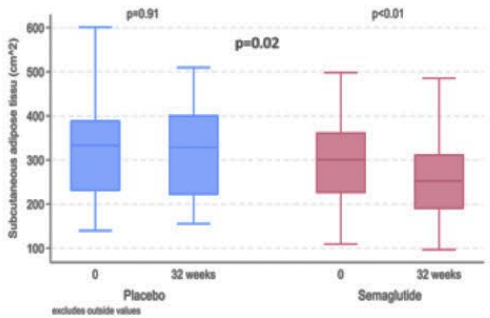


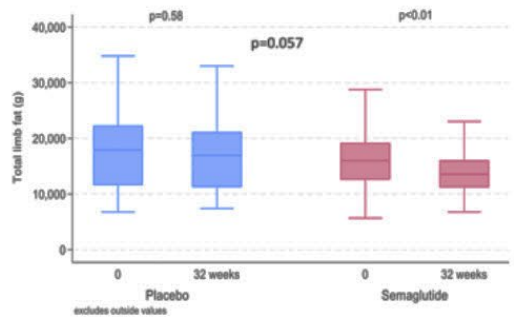
VAT ↓ 13% vs ↑ 5%

Trunk fat ↓ 17% vs ↑0.4%

- On average, VAT has changed by 13% and -5% in the Semaglutide and Placebo groups, respectively. So, VAT decreased by 13% in the treated group and increased by 5% in the control group. So, the effect size is 18%.
- Note, equation for VAT change = ((Week 0 VAT – Week 32 VAT)/Week 0 VAT)*100.
- On average, trunk fat has changed by 17% and -0.4% in the Semaglutide and Placebo groups, respectively. So, trunk fat decreased by 17% in the treated group and increased by 0.4% in the control group.
- Used the same equation as the above equation for the Trunk fat change measurement.

Changes in Peripheral Fat





SAT ↓ 13% vs ↑1.5%

Limb fat ↓ 13% vs 0%

- On average, SAT has changed by 13% and -1.5% in the Semaglutide and Placebo groups, respectively. SAT decreased by 13% in the treated group and increased by 1.5% in the control group. So, the effect size is 14.5%.
- Limb fat has changed by 13% and 0% in the Semaglutide and Placebo groups, respectively. So, Limb fat decreased by 13% in the treated group, and No change in the control group. So, the effect size is 13%.
- Used the same equation as the above equation for the Trunk fat change measurement.

Safety and Premature Discontinuation

- Adherence excellent, even with COVID-19
- 96% in semaglutide vs 91% in placebo had ≥1 AE
- 42% in semaglutide vs 58% in placebo had ≥1 Grade 2 AE
- Possibly/probably study-related AEs split evenly between groups
- Four Grade 3 events; not related to study (↑CK, 2 lipids, headache/high BP)
- AEs ≥5% in semaglutide: nausea/vomiting, abdominal pain, constipation, ↑ TG (vs. placebo: diarrhea, ↑ cholesterol and ↑ TG)
- 16 prematurely DC'd:
  - 9 schedule conflicts; 1 jail; 1 intent to get pregnant; 2 loss to follow up
  - 3 AE leading to discontinuation (1 Grade 4 lipase-asymptomatic; 1 Grade 1 memory loss; 1 Grade 1 nausea & abdominal pain)

Conclusion

- Semaglutide (1 mg sc) was well tolerated and safe in PLW up to 32 weeks
- Adherence was excellent, despite weekly visits for sc injections & COVID
- Semaglutide was effective at decreasing weight and total fat, and both central and peripheral depots.
- This study raise some concerns
  - Semaglutide did not decrease liver or pericardial fat depots.
  - Lean mass loss in a population known to lose lean mass overtime (GLP1RA + exercise should be investigated)
  - Lipoatrophy may worsen
- Further analyses ongoing for other endpoints (CVD, detailed immune activation and inflammation, gut markers, gut hormones, etc..)

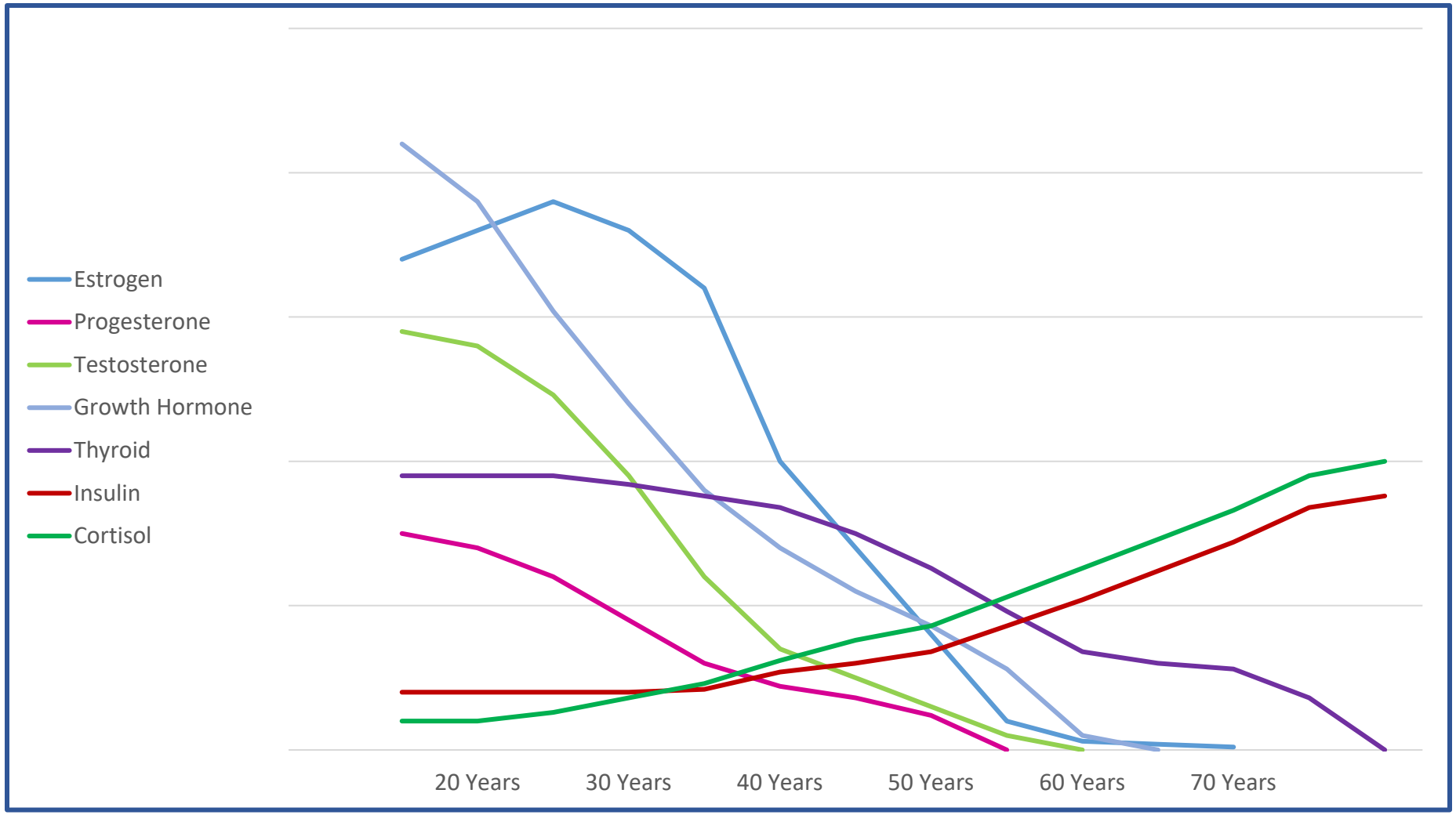
Effects of Semaglutide on Adipose Tissue in HIV-Associated Lipohypertrophy

Grace A McComsey[1,2], Abdus Sattar[1], Qian Wu[1], Kianoush Ansari Gilani[1,2], Danielle Labbato[2], Theresa Foster[2], Allison Eckard[3]

[1]Case Western Reserve University, [2]University Hospitals of Cleveland, [3]Medical University of South Carolina

Hormones and Aging

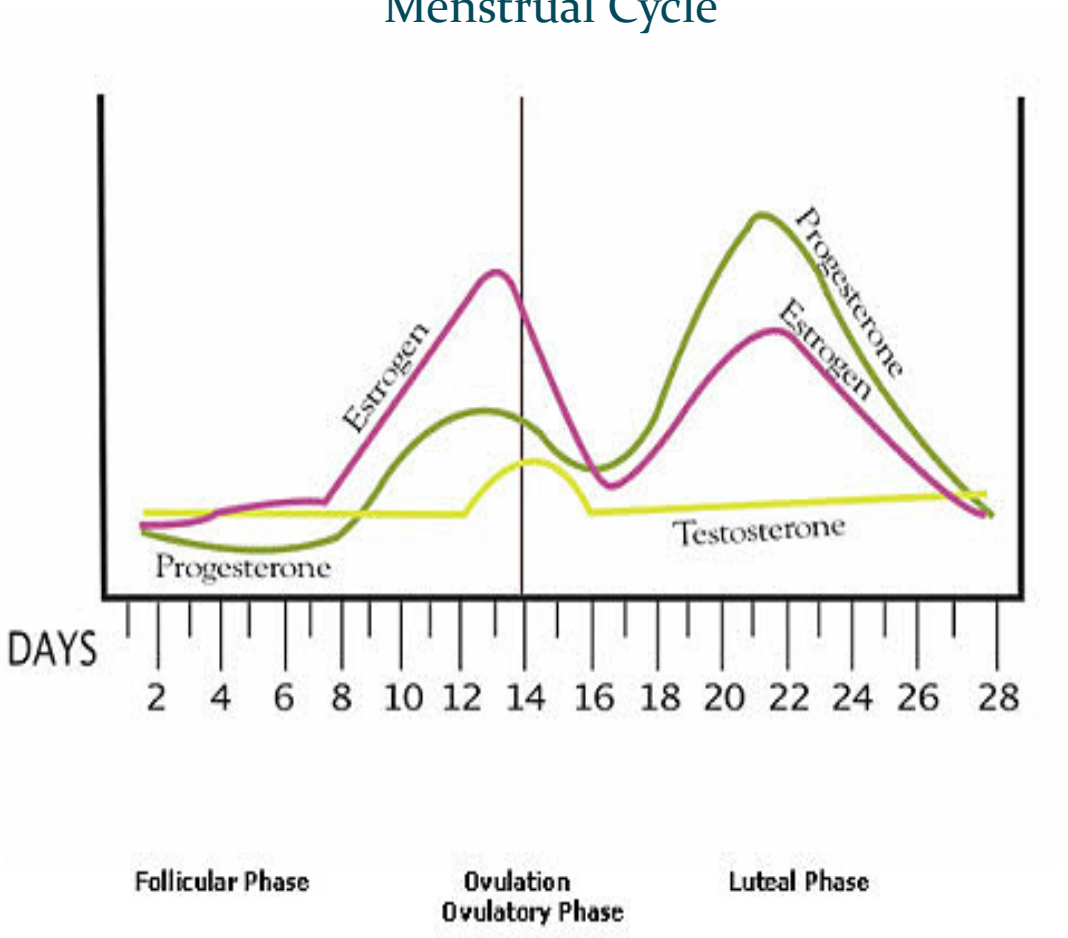
Age-Related Change of Hormones in Women and Men

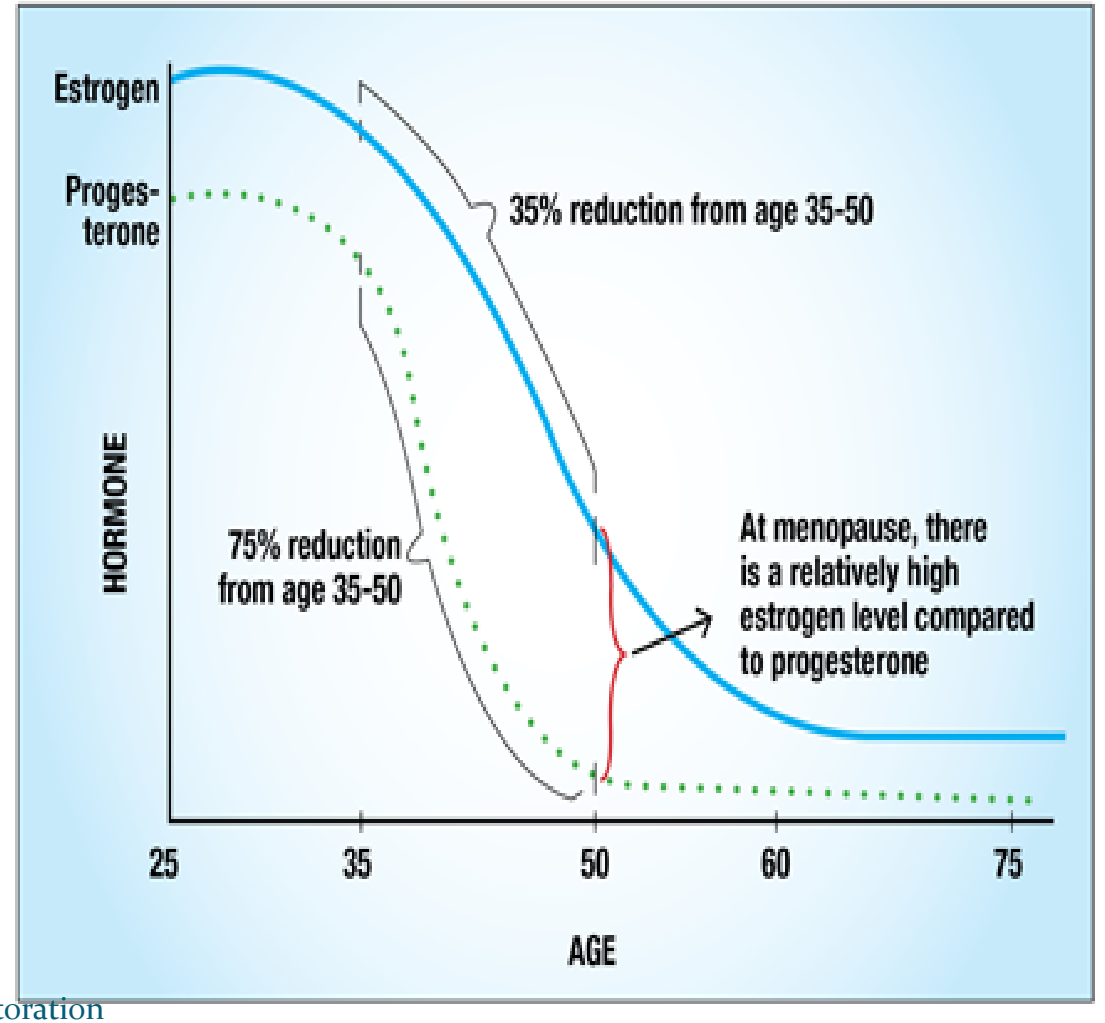


As we age, hormones change. Sex hormones like estrogen, progesterone, and testosterone decrease both in men and women. Growth hormone and thyroid function also decrease in both genders. Unfortunately, insulin from the pancreas and cortisol from the adrenal glands tend to increase as we age due to inflammation and insulin resistance.

Hormone Levels Pre and Post Menopause

Menstrual Cycle



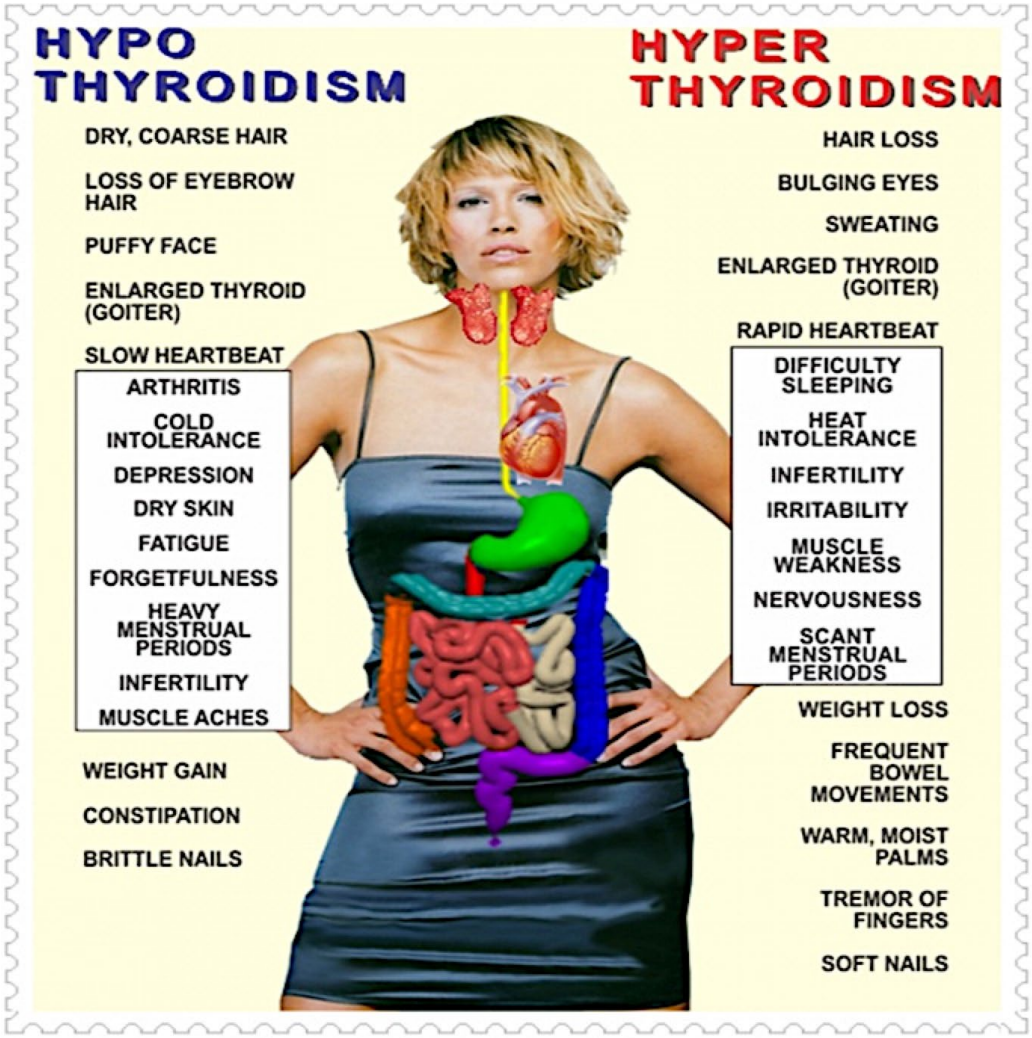


Symptoms related to hormone deficiency during postmenopause include:

Estrogen	Progesterone	Testosterone
• Headaches	• Muscle weakness	• Low libido
• Fatigue	• Irregular heartbeat	• Decreased sexual desire
• Hot flashes	• Vaginal infections	• Low mood
• Joint pain	• Mood swings	• Lack of energy
• Mood swings	• Anxiety	
• Memory lapses	• Headaches	



Symptoms of Low and High Thyroid Hormone Blood Levels



Hypothyroidism (Low thyroid function) increases risk of:

- Heart Disease
- Kidney Dysfunction
- Mental health Issues
- Peripheral neuropathy.
- Myxedema (intense cold intolerance and drowsiness followed by profound lethargy and unconsciousness)
- Infertility
- Birth defects

Source: Mayo Clinic

Clinic Optimizers

Evolution of Testosterone Therapy

1935-1937

Testosterone first synthesized

- Oral 17a-methyltestosterone
- Injectable esterified 17β-hydroxy Testosterone
- Subdermal pellets

1979

Depo-Testosterone (testosterone cypionate)

- intramuscular injection



1995

Androderm (testosterone)

- transdermal patch



2000

Androgel (testosterone)

- transdermal gel



2014

Natesto (testosterone)

- nasal gel



2018

Xyosted (testosterone enanthate)

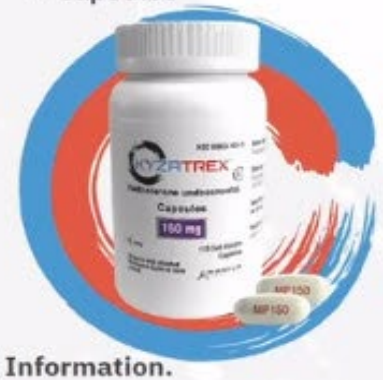
- subcutaneous injection (autoinjector)



July 2022

KYZATREX™ (testosterone undecanoate)

- capsules



All trademarks are property of respective owners.

Please see Important Safety Information, including Boxed Warning, on slides 3-4 and accompanying Full Prescribing Information.

Testosterone Options









Fortesta (2 % gel)







Androgel packets



Testim tubes

Gels



Androgel pump for higher doses

Not to scale

Underarm lotion

Axiron

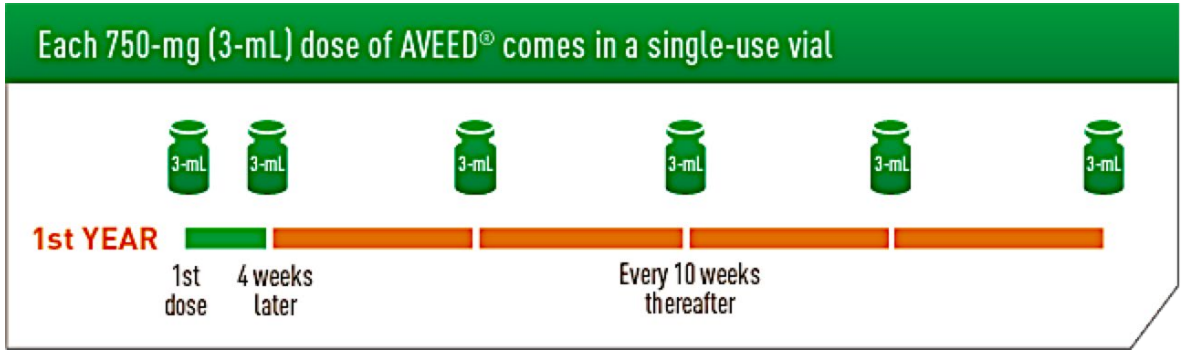


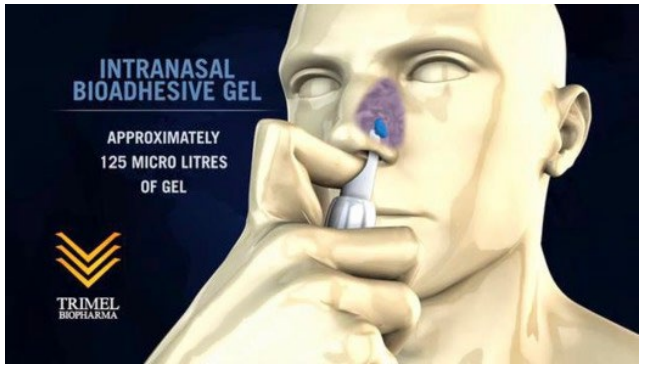
EXCELMALE
Your Men's Health Community

Newest Testosterone Products





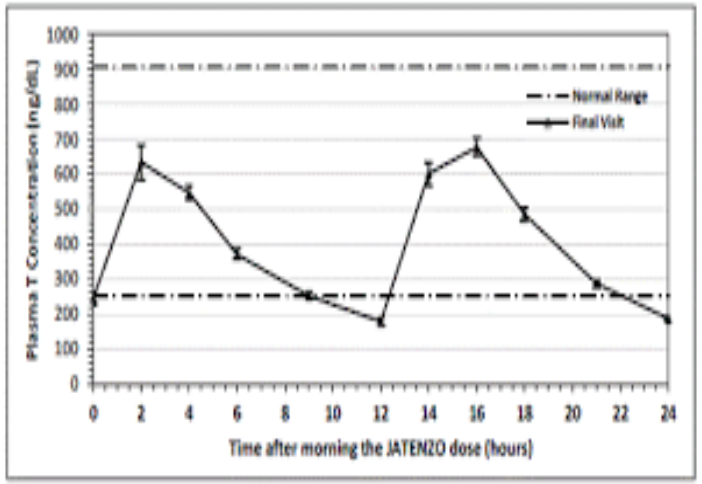




Oral BID



Jatenzo PK



SEM = standard error of the mean; T = testosterone

Testosterone enanthate subcutaneously injected weekly



Weekly Dosing	50 mg	75 mg	100 mg
		Recommended Starting Dose	

Latest FDA Approved TRT Options

EXCELMALE
Your Men's Health Community

Oral Testosterone: Kyzatrex

How Supplied[1]

Capsules:
- 100mg
- 150mg
- 200 mg

Dosing Recommendations[1]

Twice daily dosage with food
- 400mg daily: KYZATREX™ 100mg ii po bid #120
- 600mg daily: KYZATREX™ 150mg ii po bid #120
- 800mg max daily: KYZATREX™ 200mg ii po bid #120



1. KYZATREX™ [prescribing information]. Raleigh, NC: Marius Pharmaceuticals; 2022.

Please see Important Safety Information, including Boxed Warning, on slides 3-4 and accompanying Full Prescribing Information.

TRT-RELATED COMPOUNDED PRODUCTS

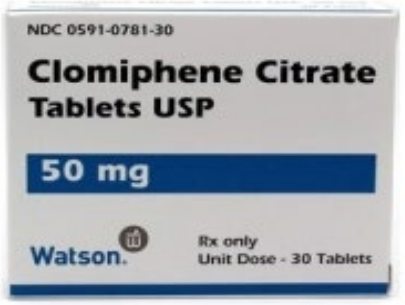












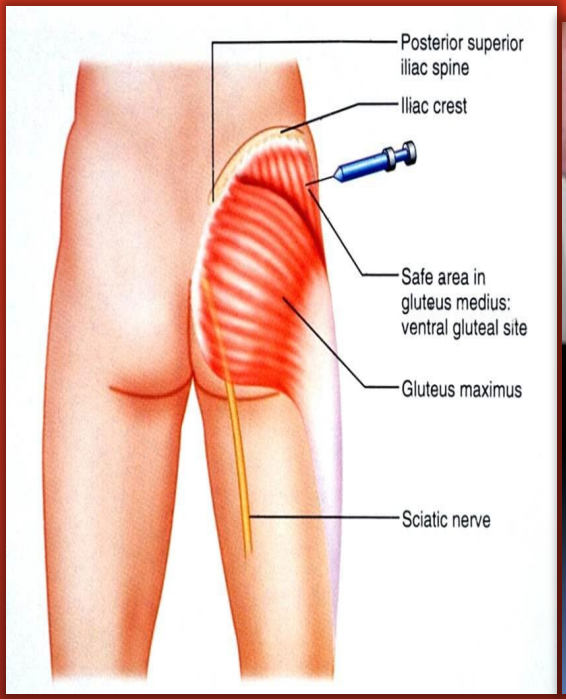




EXCELMALE
Your Men's Health Community

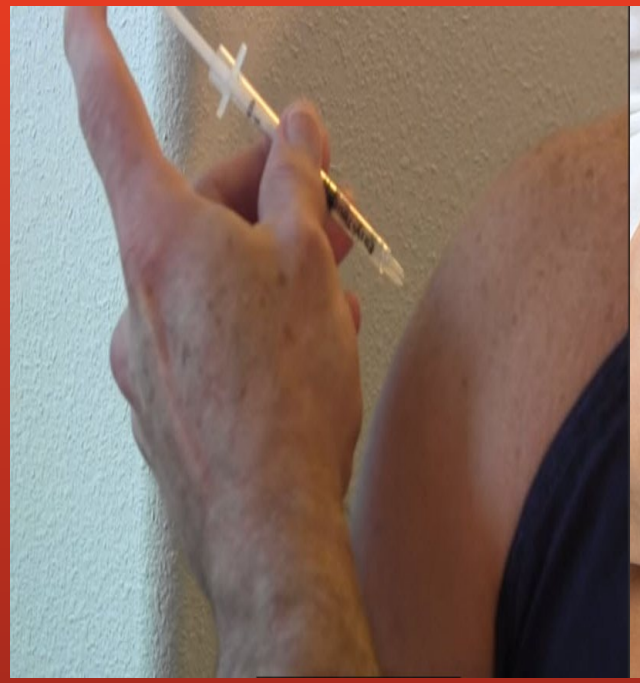
Testosterone Injection Sites for Deep and Shallow IM & Subcutaneous Methods

INTRAMUSCULAR (IM)





SHALLOW IM



SUBCUTANEOUS (SC)

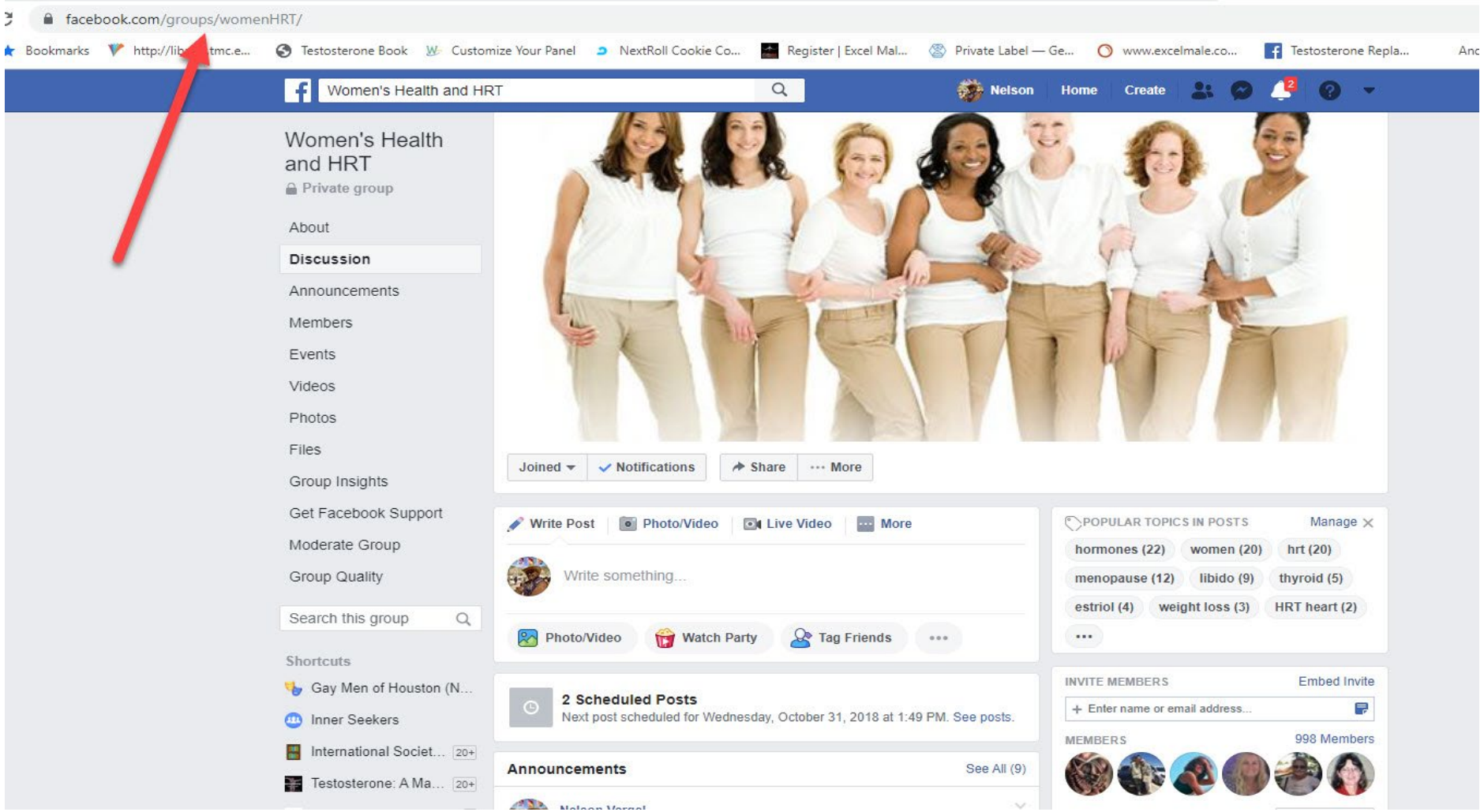


Psychedelic Drug Reactions

Drug	Reactions
Psilocybin (*O*-phosphoryl-4-hydroxy-*N*,*N*-dimethyltryptamine)[3]	Mydriasis, mild hypertension and tachycardia, dizziness, nausea, anxiety, drowsiness, hyperreflexia, mild headache
LSD (lysergic acid diethylamide)[4]	Mydriasis, mild hypertension and tachycardia, hypophagia, dizziness, nausea, mild headache
Ayahuasca (*Banisteriopsis caapi* and *Psychotria viridis* or *Diplopterys cabrerana*)[5]	Mild hypertension, poorly tolerated gastrointestinal effects (nausea, vomiting, diarrhea)
MDMA ((±)-3,4-methylenedioxymethamphetamine)[7]	Mydriasis, mild hypertension and tachycardia, hypophagia, bruxism, fatigue, xerostomia, hyperthermia

RESOURCES

Join: Women's Health and HRT Group on Facebook



EXCELMALE
YOUR MEN'S HEALTH COMMUNITY



Free EBook
For Registered Members
Register on ExcelMale.com

- Get Answers to Your Questions
- Newsletters
- Expert Interviews
- Product Reviews
- Doctor/Pharmacy Referrals
- And Much More!



DiscountedLabs.com

BUY YOUR OWN LAB TESTS ONLINE.
NO DOCTOR VISIT. LABS NEAR YOU.

Affordable Lab Tests Panels Used for:

- TRT Follow Up
- Gynecomastia
- Bodybuilders
- Erectile Dysfunction
- Pre and Post Menopause
- Fatigue
- Thyroid and More

Subscribe to Nelson and Jeff's Online Information Group:

Send an email to

Pozhealth+subscribe@groups.io

THANK YOU

Questions?