Bio-Identical Hormones









Please silence your cellphones

And save your questions for after the presentation...







My Great Aunt Edna









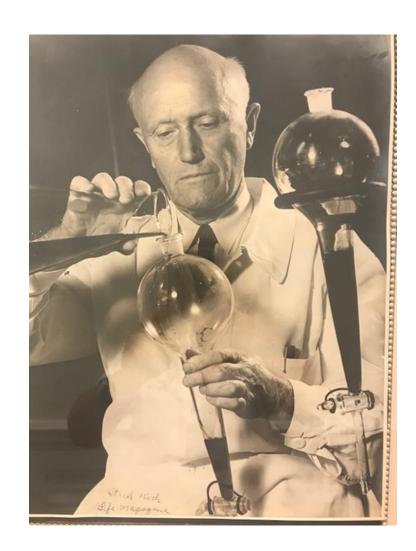














History of Testosterone

1849 - Arnold Adolph Berthold, a German physiologist and zoologist, pioneered experiments in endocrinology. 1889 – 1890s - Scientists all over the world started hearing about Sequard's incredible discovery. They began to conduct experiments in hopes of truly discovering the "Elixir of Life." 1929 - Fred C. Koch and Lemuel McGee perfected their original technique. Together they created a much larger quantity of the mysterious elixir using over 1,000 pounds of bull testicles. Along with Dr. A.T. Kenyon, they performed experiments to confirm that the formula works in

1934 - A group from the University of Amsterdam purified testosterone from bovine testicles in a manner similar to how Koch & McGee had. However, it wasn't until three European pharmaceutical glants -- Schering, Organon and Ciba -- began serious, full-scale development and research programs (in the 1930s) that testosterone was truly isolated.

1950s - Scientists discovered a longer-acting form of testosterone and could tailor the effect of the steroid to be anabolic or erythropoietic (to stimulate red blood cell growth). These versions were used to increase strength through increasing red blood cell production. Testosterone could only be given by injection or by a subcutaneous pellet. The hormone was ineffective if taken orally.

 1958 - Doctors began to inject testosterone into ill patients to help them regain their strength and gain weight. 1988 - The United States of America banned the use of steroids for non-medical uses.

"Undecanoate," a

testosterone, was

produced and

could be taken

1970s -

orally.

version of

2000s -

Transdermal testosterone gel became a standard delivery method within the United States.

1840s

1850s

1860s

1870s

)s

1890s

1900s

humans as well as

in capons.

1910s

1920s

1930s

1940s

1950s

1960s

H

1970s

1980s

1990s

2010s

1889 - A Harvard professor, Charles Edouard Brown Séquard, extracted a "rejuvenating elixir" from dog and guinea pig testicles. Then, at 72 years of age, he self injected the extracted elixir before reporting that his vigor and feeling



1890s - A

seventy-year-old volunteer, Jason Gamble, from San Francisco, was injected with lamb testicular fluid. A few days after his i

A few days after his injection, Gamble said he was more limber, had better digestion and had more energy. Objective tests also showed a significant improvement in his grip strength.

1880s

• 1927 - University of Chicago's Professor of Physiological Chemistry, Fred C. Koch, found a way to obtain large amounts of bull testicles — the Chicago stock yards. After acquiring the testicles, Koch's main student, Lemuel McGee, as well as many others, began extracting the isolates (pure testosterone).

They injected it into capons. A capon is a rooster whose testicles are removed at a very young age. Farmers do this so the roosters can develop without the influence of sex

can develop without the influence of sex hormones, making them less aggressive and easier to handle. 1935 - A group in the
 Netherlands was the first to
 isolate a few pure milligrams
 Age" of steroid chemistry.

of testosterone. They identified the hormone in a May 1935 newspaper article titled, "On Crystalline Male Hormone from

Testicles (Testosterone)."

• 1939 - The Nobel Prize was divided equally between Adolf Friedrich Johann Butenandt (for his work on sex hormones) and Leopold Ruzicka (for his work on polymethylenes and higher terpenes). These men were the first to discover how to synthesize testosterone from cholesterol. · 1967 -

The International Olympic Committee decided to ban performanceenhancing drug use during Olympic competitions. 1999 - The World Anti-Doping Agency was created.

2000s

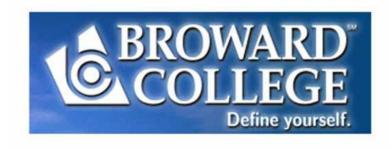
1990s - A transdermal patch form of testosterone was invented to treat hypogonadism.

Hormone Health













Prescribing hormones for over 28 years...





Apples & Oranges Synthetic vs. Bio-Identical







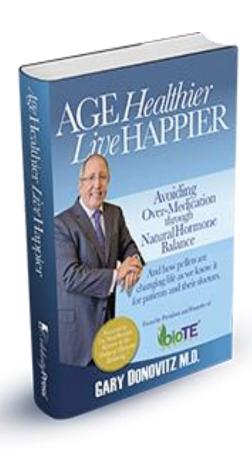
Studied Under the Nation's Greats in Hormone Therapy!

Salt Lake City – Dr. Neal Rouzier

Orlando – Dr. Sangeeta Pati

Naples - Dr. Daved Rosensweet

And finally...Dallas – Dr. Gary Donovitz





One car...





My goal....

Live Your Best Life!



Warning!!!

If they aren't up on it...
they are down on it...

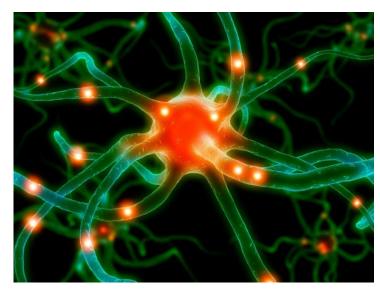




What are Hormones?

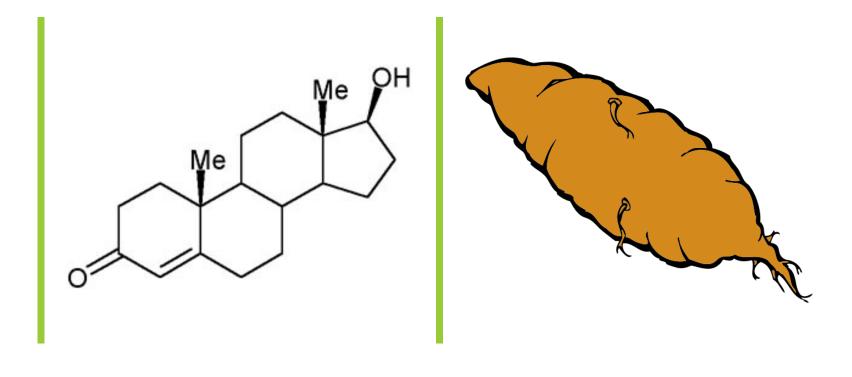
Chemicals made by the glands that act to control certain actions of cells and organs

They are the messengers & work in a Lock & Key Fashion









What is a Bio-Identical Hormone?

Carolyn Zaumeyer Nurse Practitioner

Conventional HRT Hormone Replacement Therapy Women's Health Initiative Trial 2002... A flawed study?

- ■41% increase in stroke
- ■29% increase in heart attacks
- ■26% increase in breast cancer
- Twice the rate of blood clots
- ■76% Increase in Alzheimer's Dementia

Note:

This was a FLAWED Study! After this trial many women were left with NO alternative for hormone balance and symptom relief.

Sadly, there have been safe, alternative methods available for years. The message should have been "lets take a closer look at hormones...."





W. H. I.- Worst Outcome!

Wrong Drug
Wrong Dose
Wrong Route

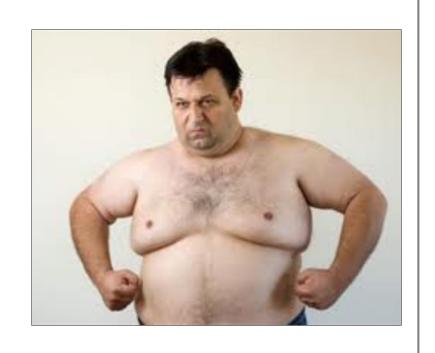




How Do You Feel?







Like This?





THE SEVEN DWARVES OF MENOPAUSE



Itchy, Bitchy, Sweaty, Sleepy, Bloated, Forgetful, & Psycho

LoL wall

www.lolwall.co/256882





- Extreme fatigue
 - 3-4 o'clock hit a wall??
- Mood swings
- Anxiety
- Tension & irritability
- Lack of sleep
 - 3-4 o'clock am wake up?
- Memory loss
- Depression
- Lack of focus
- Brain fog

- Hot flashes
- Night sweats
- Weight gain
- Joint pain
- Migraine/severe headache
- Bladder symptoms
- Decreased sex drive and/or performance?



Sounding Familiar??

As we age...

Hot Flashes Depression Weight Gain Hyperlipidemia Hypertension





How are these symptoms usually addressed?

Self-treated: energy drinks, B12, alcohol, "uppers", weight loss meds, etc...
Many doctors don't take symptoms seriously

Fibromyalgia → pain meds → drowsiness/addiction

Depression → antidepressants → sexual dysfunction

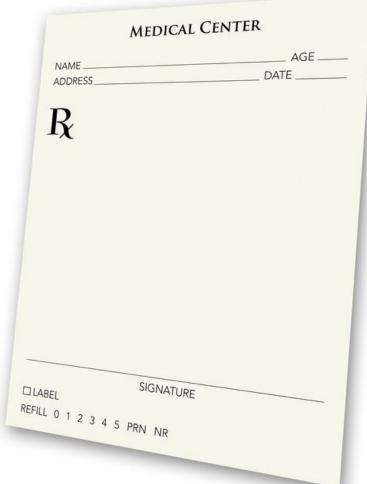
Insomnia → sleeping pills → worsening sleep apnea
or daytime sleepiness

Erectile dysfunction → from Medication side-effects??

(BP meds, diabetes meds, etc...) → Viagra, Cialis, etc...

Many more...





How do you want to age?



Avoid Over-Medication through Natural Hormone Balance!



Facts about menopause

3500 women enter menopause daily
Symptoms may begin up to 15 years earlier
Most women are affected in more ways than they realize
Most women do not ever "get over" or "get through"
menopause completely where they are completely
asymptomatic



1 in 7 Premenopausal women die of HEART DISEASE.
For Postmenopausal women

that number RISES TO 1 IN 3.



Leading Cause of Death (2006)

- 1. Heart disease ... 631,636
- 2.Cancer ... 559,888
- 3. Cerebrovascular disease ... 137,119
- 4. Chronic lower respiratory diseases ... 124,583
- 5. Accidents (unintentional injuries) ... 121,599



MEDICAL ERRORS - 98,000 (1998 IOM Estimate)
Would be the 6th leading cause of death

- 6. Diabetes ... 72,449
- 7. Alzheimer's disease ... 72,432
- 8.Influenza/Pneumonia ... 56,326
- 9. Nephritis, nephrotic syndrome, and nephrosis ... 45,344

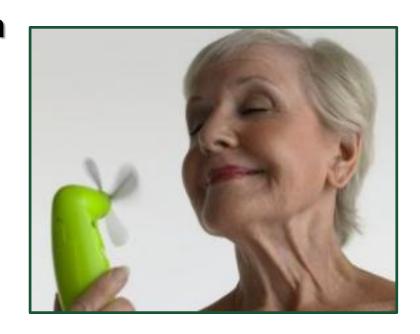
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *National Vital Statistics Reports*. *Deaths: Final Data for 2006*, Table B. Volume 57, Number 14, April 2009.



ESTROGEN

Present in both men and women Large amounts in women, very small in men

Has over 400 functions in the body
Control hot flashes
Maintain bone density
Helps maintain memory
Maintains collagen in your skin
Increases serotonin and dopamine
("happy" hormones in brain)



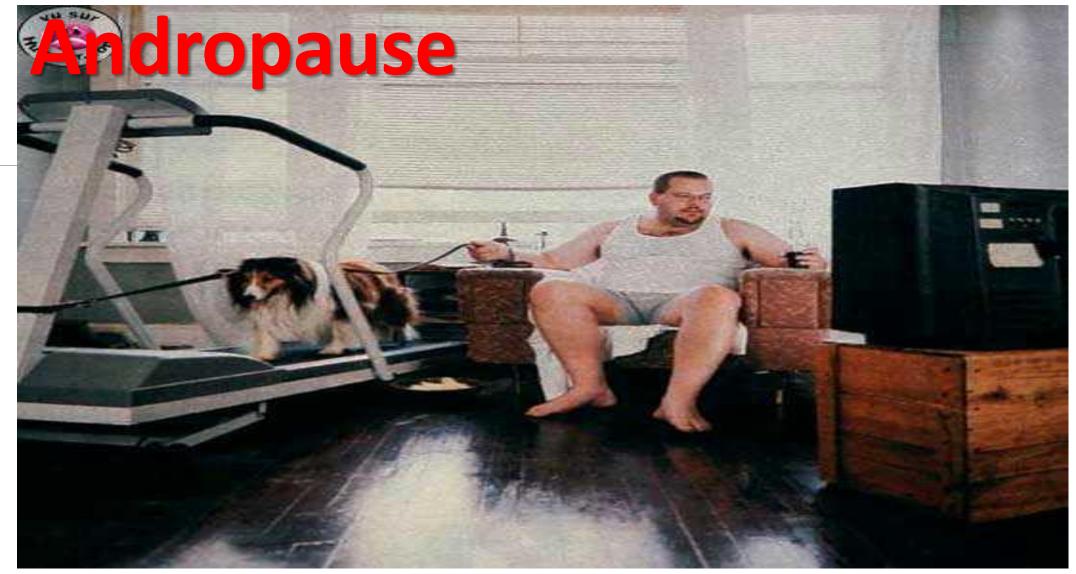


Bio-Identical Progesterone

Progesterone is necessary in women who still have a uterus if the women is on estrogen
Can be put into creams
Rx called Prometrium or micronized progesterone

Usually given at bedtime
Calming
May help some women with sleep





Carolyn Zaumeyer Nurse Practitioner

Facts about Andropause

AKA male menopause or "Manopause" 20% of males over 50 have low testosterone Low testosterone common in men with diabetes, high BP, sleep apnea & other chronic disease Low testosterone linked to early heart disease **Underdiagnosed**



TESTOSTERONE

Besides providing major symptom relief, it protects the BONES, BRAIN, BREASTS, HEART, JOINTS, and Relationships!!!

Present in both men and women
Large amounts in men, very small in
women
Men age 30-70 will lose 1- 3% of total
testosterone production per year
Women age 20-40 lose 50% of their
testosterone production



Positive Effects of Natural Testosterone for men AND women

Increased energy and vitality and zest for life

Improved feeling of overall well-being

Depression relief

Anxiety relief

Improved Cognitive clarity

Improved memory

Improved focus

Prostate protection

Breast protection

Cardiovascular protection

Increased bone strength

Increased muscle strength

Reducing body fat

Lowers cholesterol

Enhanced libido

Enhanced performance



Hormone Replacement Methods

- Synthetic
 - Pills
 - Patches
 - Shots

- Bio-identical
 - Pills
 - Patches
 - Creams/Gels/Oils
 - Pellets
 - Troches/Gummies

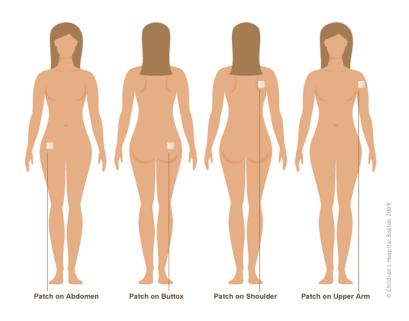


Potential and Unnecessary Effects of Oral Synthetic Estrogen Therapy

- Breast tenderness
- Increased risk of endometrial cancer and breast cancer
- Increase the risk of heart disease
- Increase risk of Alzheimer's Dementia
- Weight gain
- Vaginal bleeding
- Headaches
- Nausea and vomiting
- Fluid retention
- Blood clots
- Leg cramps



Patches





- Estradiol levels better than pills, but not as good as pellets
- Adhesive problem
- Need to be changed throughout the week
- Some weight gain, but less fluid retention than being on synthetic or horse estrogen
- 45% of people do not absorb hormone through the skin!

Creams/Gels

- Did you apply enough?
- •Have to remember to rub it in daily
- Short half-life; may need twice daily dosing
- •Applied topically onto the skin (is it even absorbing?)
- Can transfer to others (babies and pets)
- •Most important estriol (as in the product BiEst) does not have bone, heart, and brain protection- proven in studies!



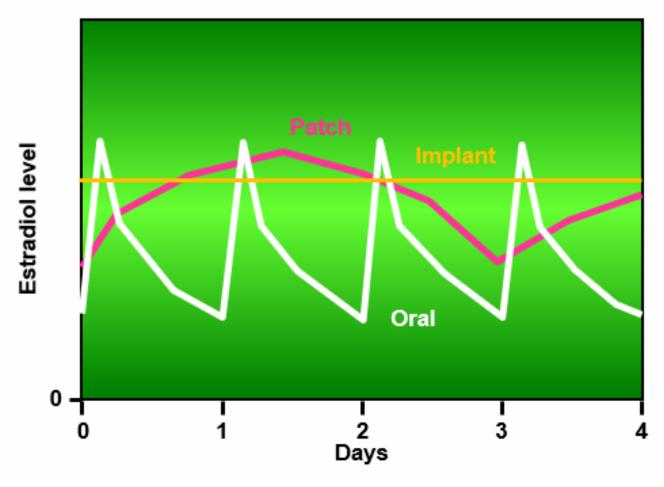
Hormone Pellets

- Natural, non synthetic, Soy or YAM derived compounds
- Same molecular structure as human hormones
- Lasts longer than other treatments 4-6 months
- •Are the most widely studied form of natural hormone therapy
- Provides a steady stream of hormone in your blood
- Individualized dosing
- Injected under the skin
- Don't even know its there!





Estradiol Levels Pills, Patches vs. Pellets





Smith R/ Studd, J WW Brit Jour Hosp Med, 1993, Vol 49, No 11

Injectable Testosterone

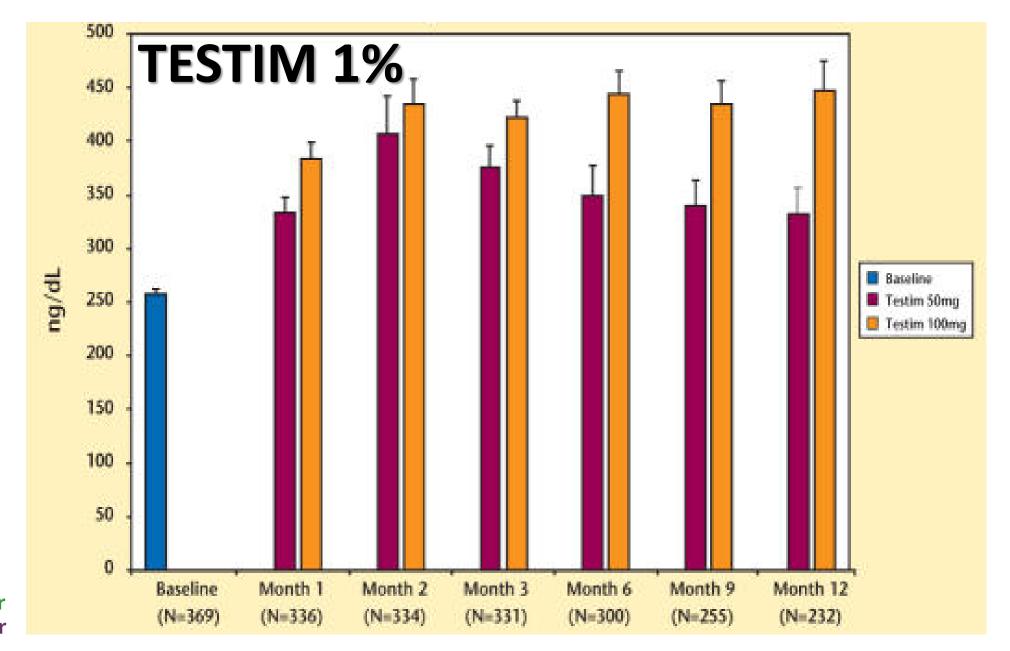
- •Uneven absorption
- Significant "roller coaster" effect
- ■99% synthetic hormone
- Significant adverse effects:
 - Liver toxicity, heart disease,
 - Elevate LDL, VLDL, decrease HDL cholesterols
- **ALWAYS** Wears off before time for next shot...

makes guys really cranky....











got low Ta

Know your numbers – get tested today!





Archives of Internal Medicine

ORIGINAL INVESTIGATION

Combined Estrogen and Testosterone Use and Risk of Breast Cancer in Postmenopausal Women

Rulla M. Tamimi, ScD; Susan E. Hankinson, ScD; Wendy Y. Chen, MD; Bernard Rosner, PhD; Graham A. Colditz, MD, DvPH

- Oral, synthetic, chemical methyl testosterone increased the risk of breast cancer
 - Estratest, Estratest HS, Syntest and Syntest DS
- Non-oral, testosterone (hormone) prevents the stimulation of breast tissue and lowers the risk of breast cancer



Medical Studies

Nurses Health Study

- 121,700 nurses
- Conjugated Estrogens increase risk of breast cancer

RR 1.32 (1.14-1.54)

 Estrogen plus Testosterone no increase risk of breast cancer



RR 1.64 (0.53-5.00)

Breast Cancer Studies

There are hundreds of studies, the take home is this:

- Testosterone delivered by pellet implants does not increase risk of breast cancer unlike oral, synthetic methyl-testosterone
- Testosterone implants have shown less stimulation of breast tissue
- Treatment with testosterone and estradiol implants does not increase the risk of breast cancer, even in breast cancer survivors



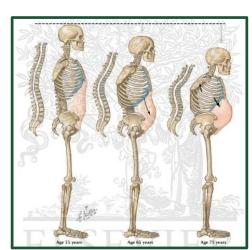
Medical Studies

Osteoporosis:

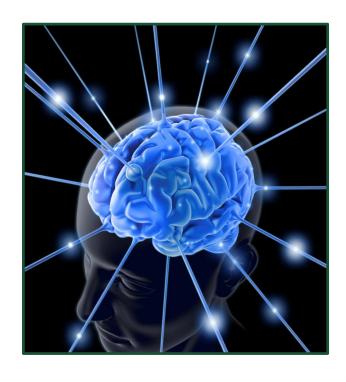
- 1. Testosterone the bone builder
- 2.Demonstrated the four fold increase in bone density over oral estrogen and 2.5 times greater than patches
 - 8.3% per year for pellet therapy
 - 3.5% per year for patches
 - 1-2% per year for oral estrogen

Studd (1990) AM, Journal OB/GYN





Alzheimer's Disease



- Women get Alzheimer's
 Disease 8:1 over men
- Women on Estrogen are 50% less likely to develop
 Alzheimer's Disease
- Men with low Testosterone are 3x more likely to develop Alzheimer's Disease



Recent Advances in Hormone Replacement Therapy

- No increase in blood clot activity with pellet therapy. Reduces cardiovascular risk compared to oral therapy.
- Does not increase the risk of breast cancer incidence.



British Journal of Hospital Medicine, 1993 Roger NJ Smith/John WW Studd et al

Susan Davis, et al *Menopause Vol. 7*, No. 6, pp.395-401



- Conclusion: Estrogen replacement with pellets has effects on body fat in post menopausal women that are associated with improved lipid parameters.
 - decreased total cholesterol & LDL
 - increased HDL
 - decreased triglycerides
- Addition of testosterone does not negate the favorable effects of estrogen on LDL Cholesterol
 - Marked reduction in fat mass was seen in the estrogen plus testosterone group after two years
- Many studies concluding the beneficial effects of natural testosterone on the heart! (primarily males have been studied)

Arthritis: Hormones Could Ease Pain

- 10% of men and 18% of women >60 Y.O.
 have osteoarthritis
- By 2020 Osteoarthritis will be 4th leading cause of disability
- Both Estrogen and Testosterone can stimulate pre-cartilage cells, possibly reversing development of arthritic tissue



What Patients are Saying

- Increased energy levels
- Restored interest in life
- Increased sexual drive
- Consistency in moods
- Relief from anxiety and depression
- Increased mental clarity and ability to FOCUS
- Decreased body fat
- •Greater capacity for getting the body in shape





How Could
Something this
Small Make a
BIG DIFFERENCE?

History of Pellets

Developed in 1939 for women who had radical hysterectomies

Salmon, U., et al. Use of estradiol subcutaneous pellets in humans. Science 1939, 90: 162.

 Discussed the use of estradiol and testosterone pellets for the symptoms of menopause

Greenblatt, R. (1949). American Journal of OB/GYN 57, 244-301.



Widely used in Europe and Australia



Key take-homes:

- Hormone imbalance can occur in men and women at any age
- Not all therapies are created equal
- •Hormone balance is not a "one size fits all approach"
- FIND A HORMONE EXPERT
- GET TESTED
- Low normal labs may not be optimal for health
 Vitamin D, thyroid, testosterone, etc.





Any Questions?

