

# Bio-Identical Hormones



*Please silence your cellphones*

***And save your questions  
for after the presentation...***

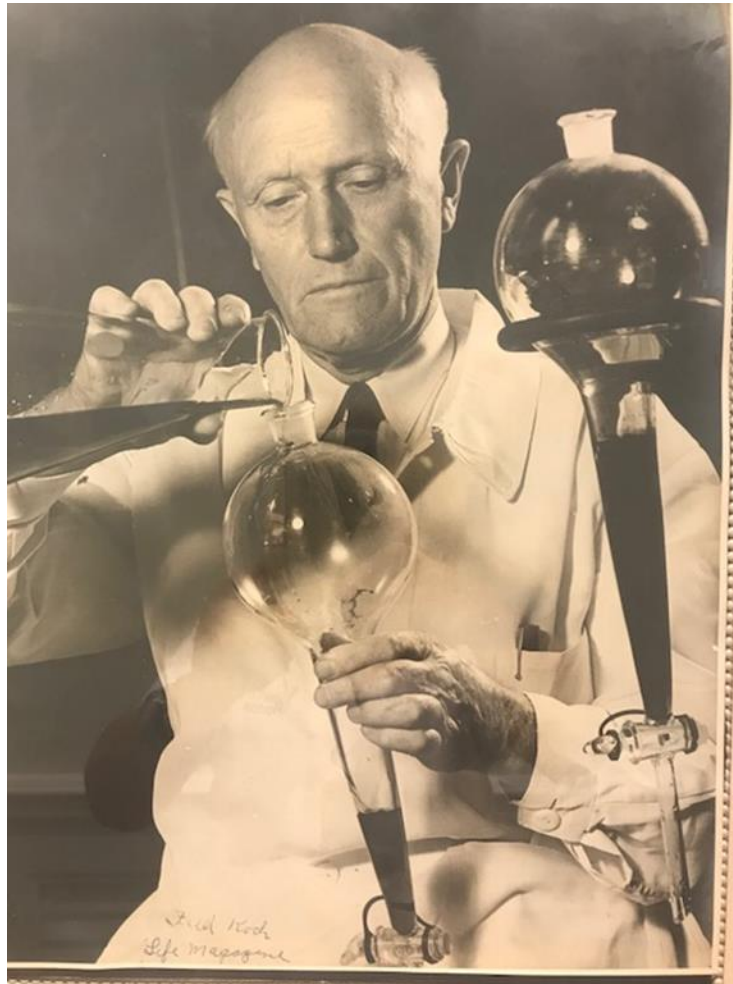


# My Great Aunt Edna



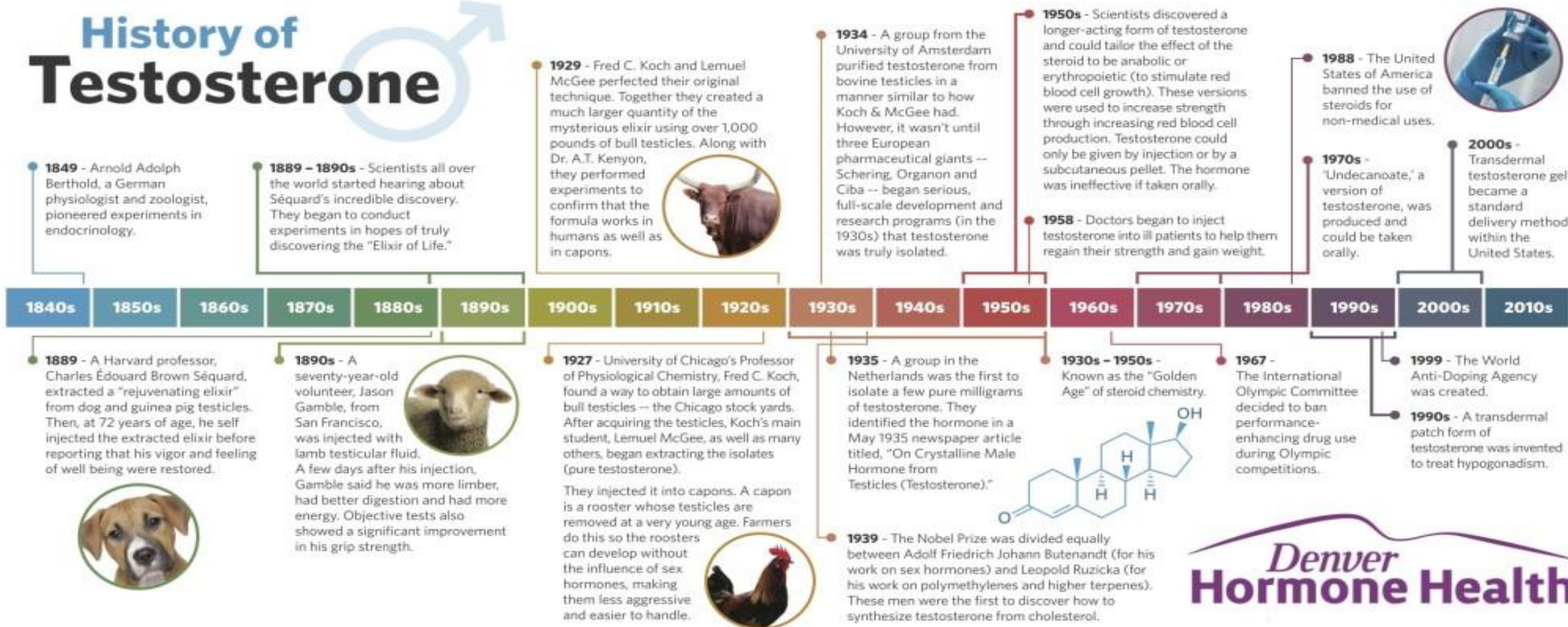








# History of Testosterone

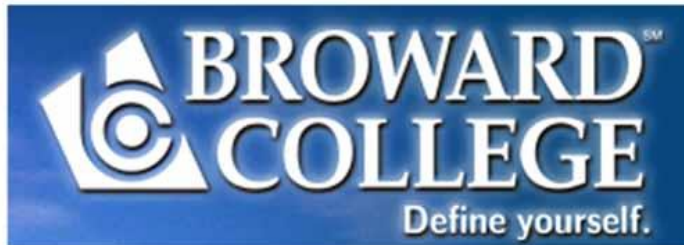


*Denver*  
**Hormone Health**

**Carolyn Zaumeyer**  
Nurse Practitioner

# FIU

FLORIDA  
INTERNATIONAL  
UNIVERSITY



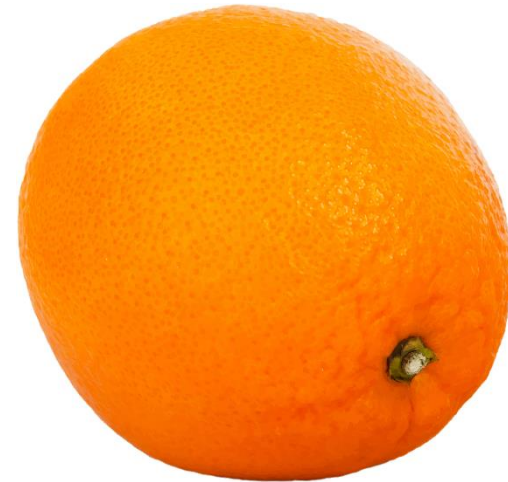


# Prescribing hormones for over 28 years...



# Apples & Oranges

*Synthetic* vs. *Bio-Identical*



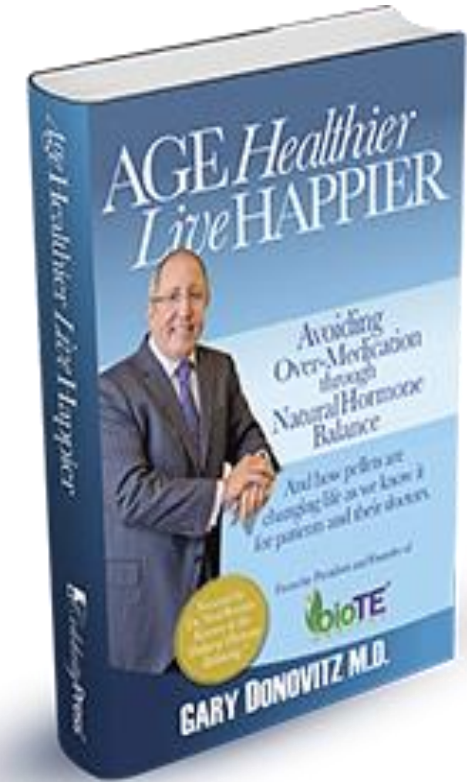
**Studied Under the Nation's Greats in Hormone Therapy!**

**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!!!

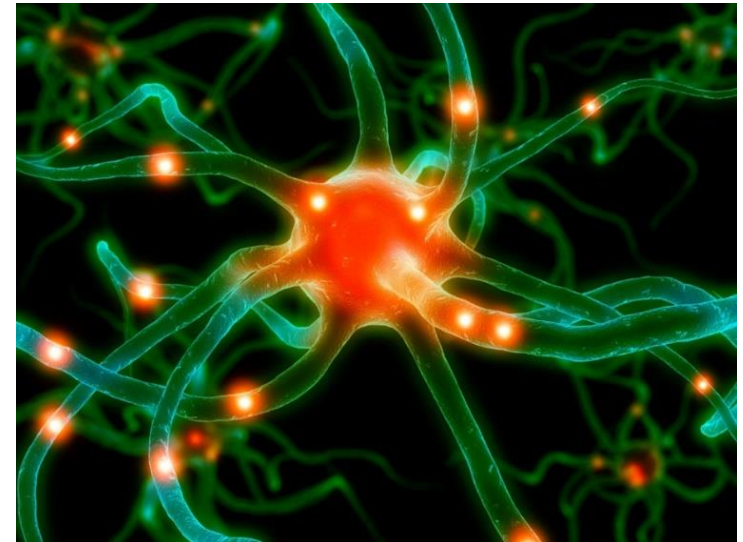
If they aren't up on it...  
they are down on it...

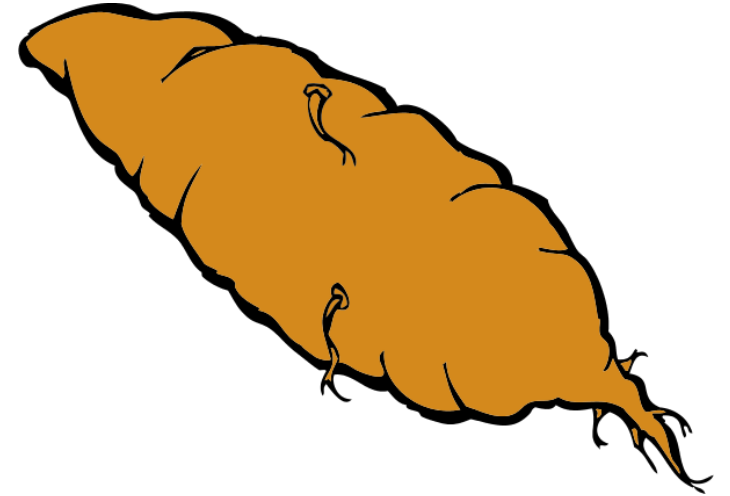
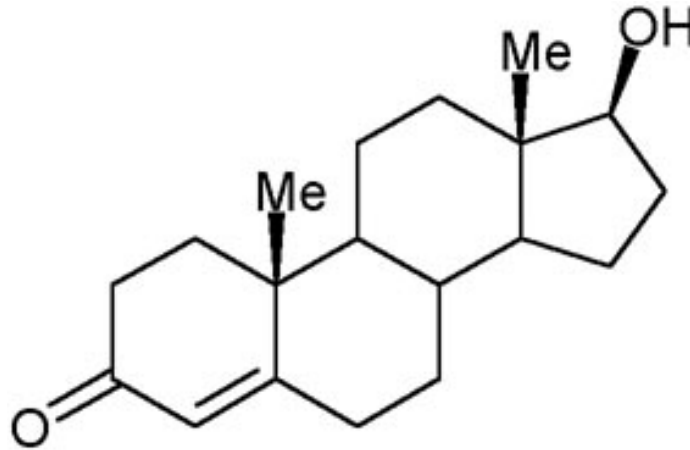


# What are Hormones?

**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](http://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...

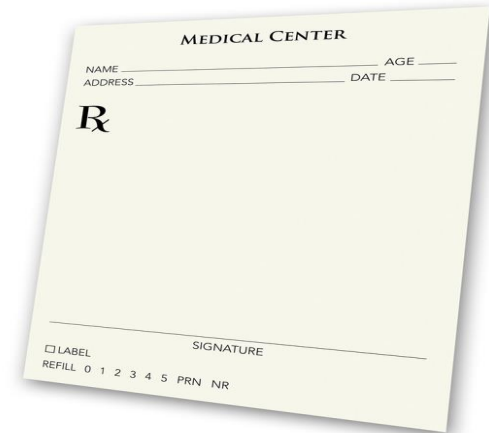
**Hot Flashes**

**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...**

MEDICAL CENTER

NAME \_\_\_\_\_ AGE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ DATE \_\_\_\_\_

Rx

SIGNATURE \_\_\_\_\_

☐ LABEL  
REFILL 0 1 2 3 4 5 PRN NR

# How do you want to age?

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# **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

6. Diabetes ... 72,449

7. Alzheimer's disease ... 72,432

8. Influenza/Pneumonia ... 56,326

9. Nephritis, nephrotic syndrome, and nephrosis ... 45,344

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

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**

# Andropause



# 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**

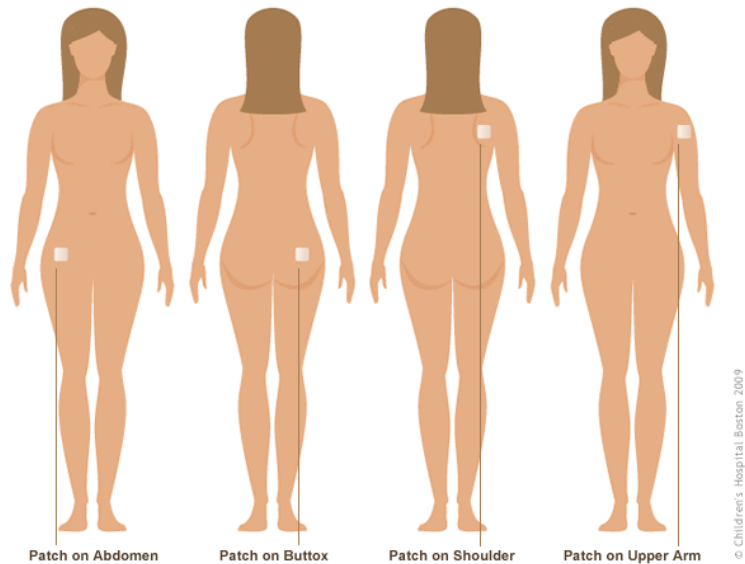
- **Pellets**

- **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!*



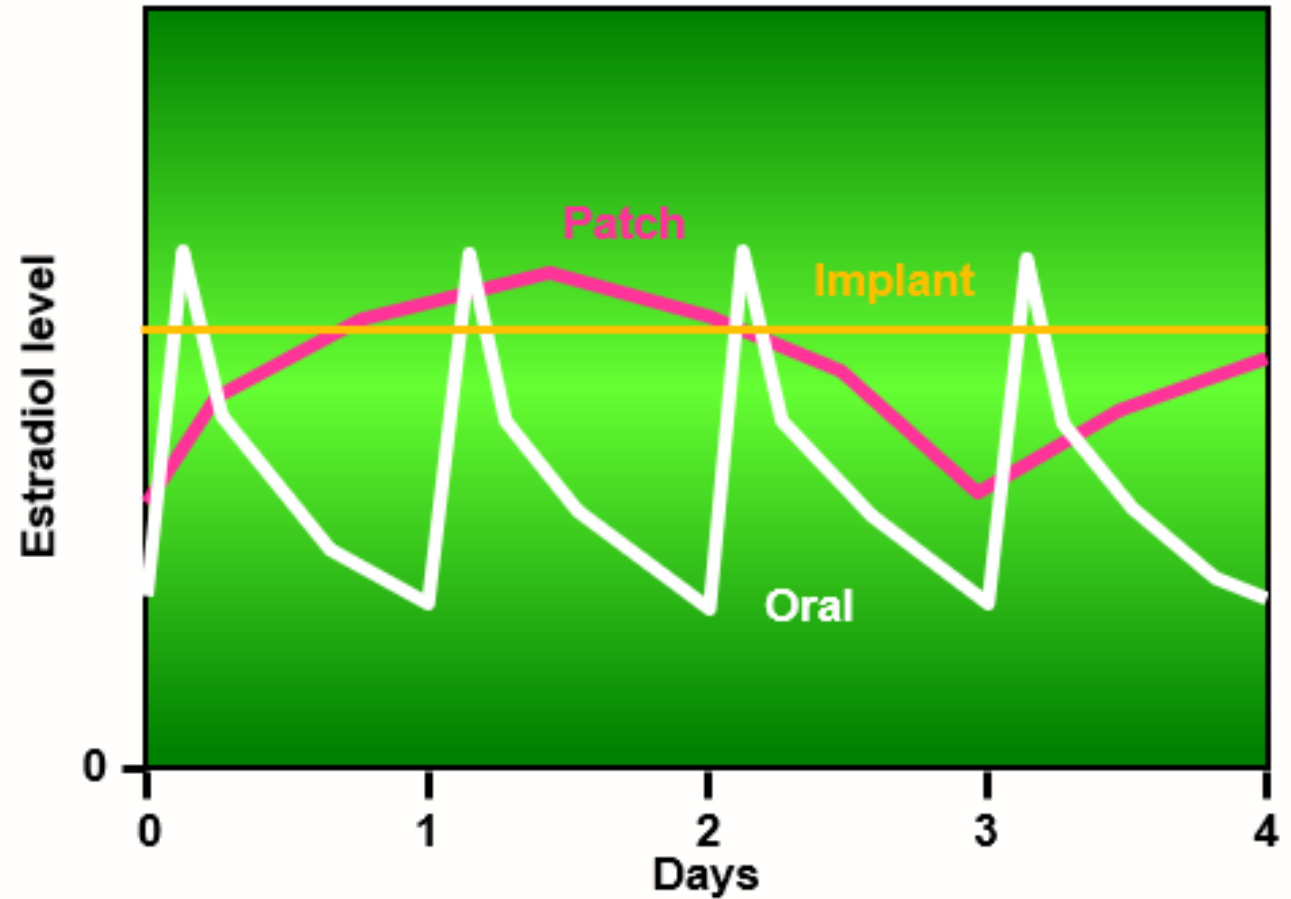
# Hormone Pellets

- 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



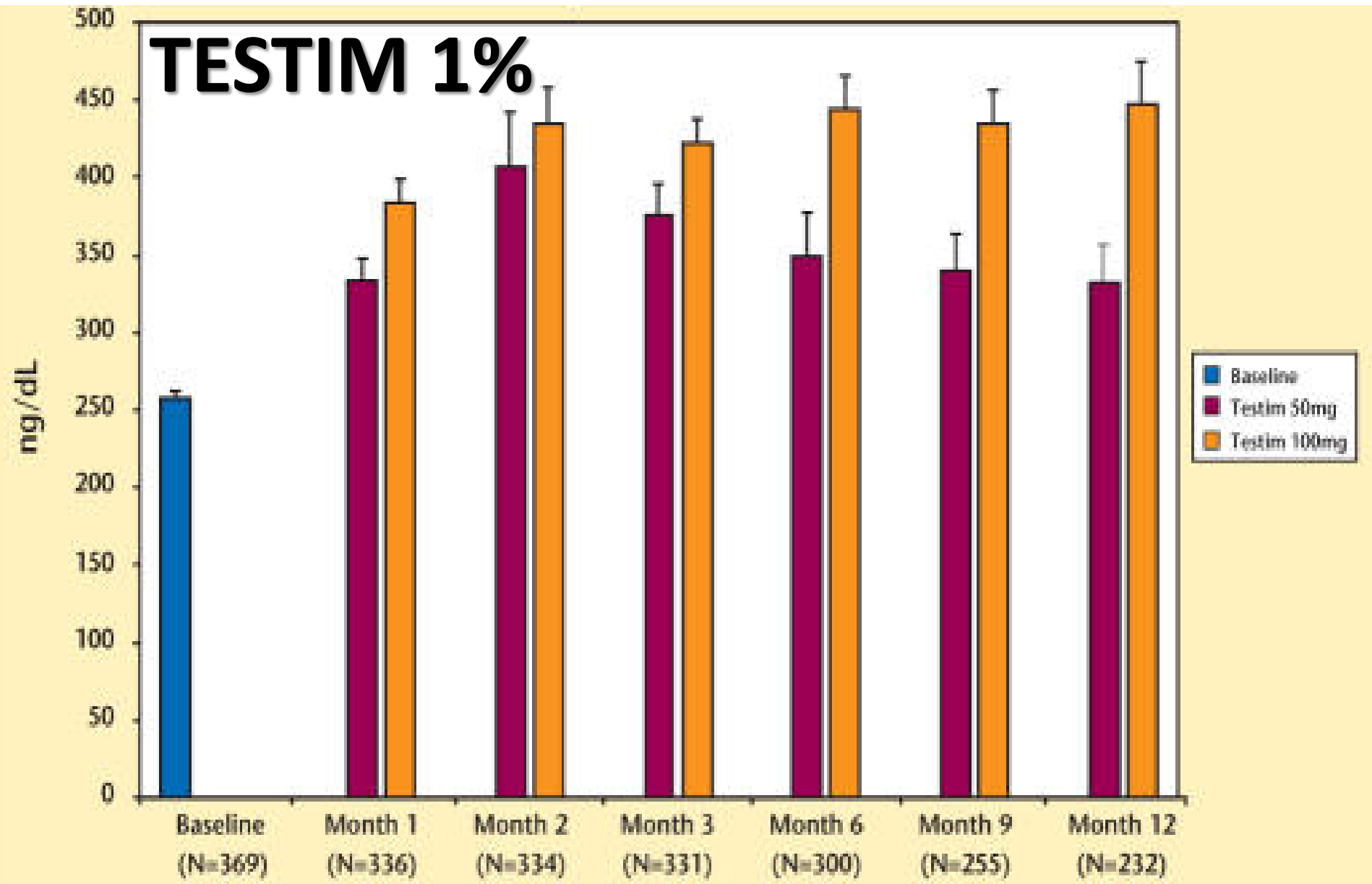
Smith R/ Studd, J WW *Brit Jour Hosp Med*, 1993, Vol 49, No 11

# Injectable Testosterone

- Uneven absorption
- Significant “roller coaster” effect
- 99% synthetic hormone
- Significant adverse effects:
  - Liver toxicity, heart disease,
  - Elevate LDL, VLDL, decrease HDL cholesterol
- **ALWAYS Wears off before time for next shot...**  
*makes guys really cranky....*



# TESTIM 1%



# got low T?

**Know your numbers – get tested today!**



# 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, DrPH

- **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)

Colditz NEJM 1995



# 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 4<sup>th</sup> 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?