Bioidentical Hormone Restoration

Best Medical Practice

HormoneRestoration.com

Henry Lindner, MD

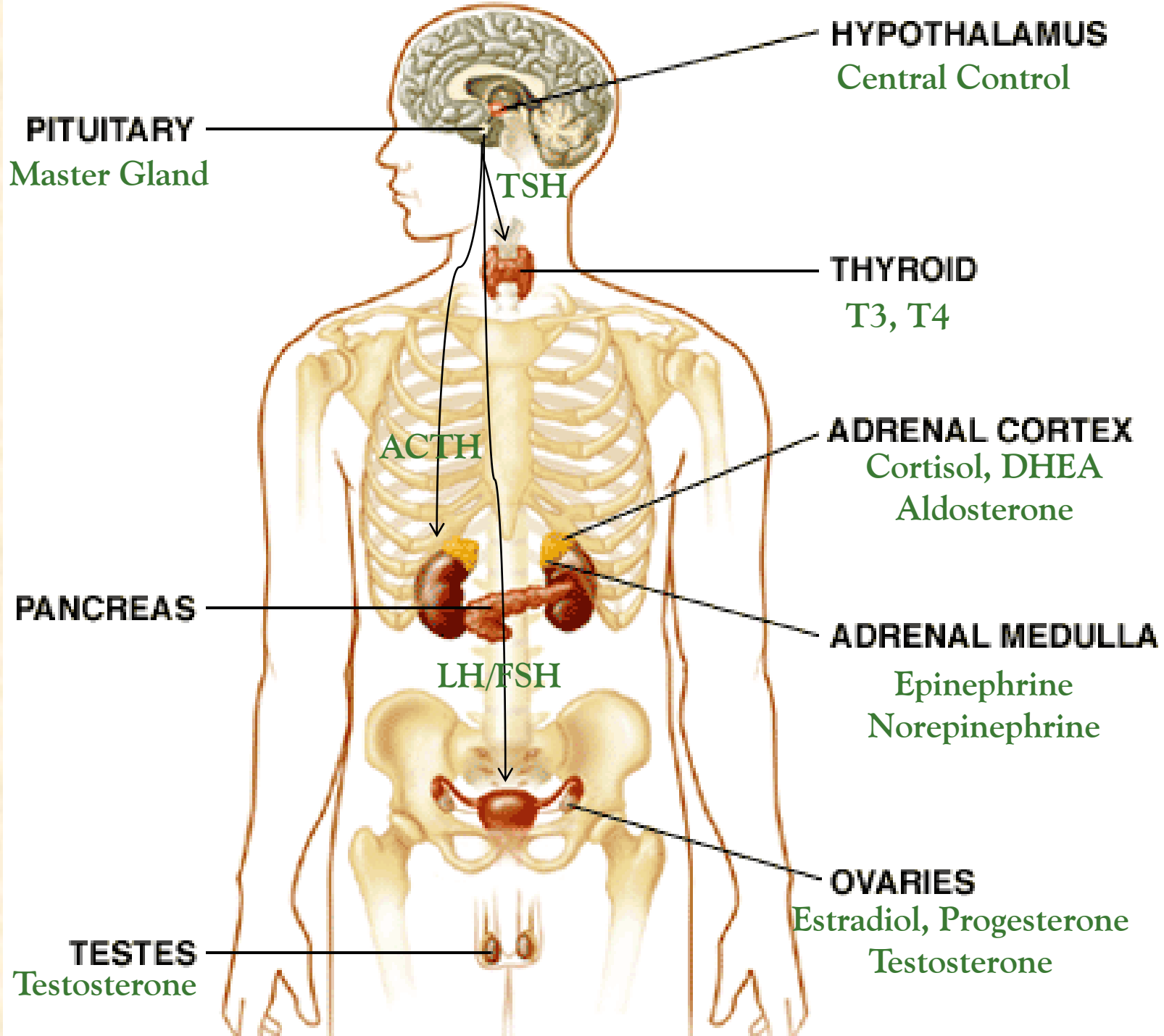
Relax: This presentation is available online.

Topics

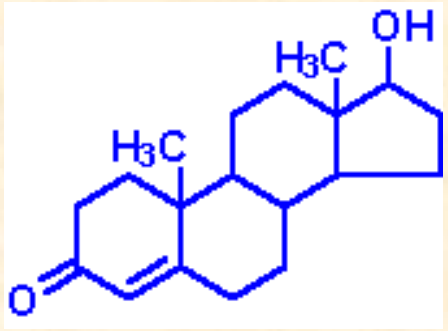
- Bioidentical Hormones are not Drugs
- Hormone Loss with Age
- The Problem with Reference Ranges
- Cortisol and Thyroid Deficiencies
- Testosterone for Men and Women
- Estradiol and Progesterone for Menopause
- Progesterone prevents Breast Cancer
- Pharmaceutical Hormone Substitution
- Compounding Pharmacies
- What can you do?

Hormones

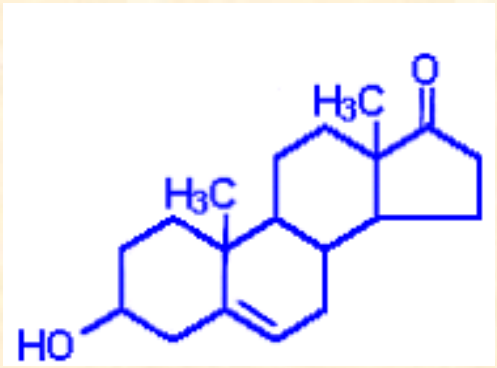
- The most **powerful** molecules in biology
- Parts of our integrated neuro-endocrine-immune system
- Travel via blood to all cells
- **Control** cells' proliferation, differentiation, protein synthesis, metabolic rate, etc.
- **Optimal** levels and effects are essential for health and quality of life


HYPOTHALAMUS
Central Control
PITUITARY
Master Gland
TSH
THYROID
T3, T4
ACTH
ADRENAL CORTEX
Cortisol, DHEA
Aldosterone
PANCREAS
ADRENAL MEDULLA
Epinephrine
Norepinephrine
LH/FSH
OVARIES
Estradiol, Progesterone
Testosterone
TESTES
Testosterone

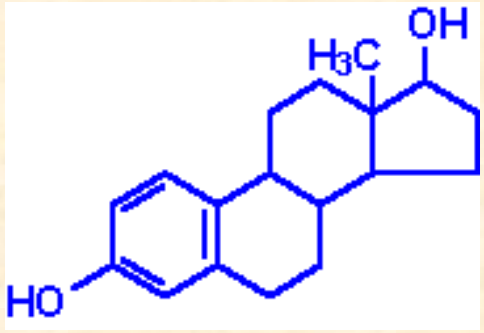
Human Steroid Hormones



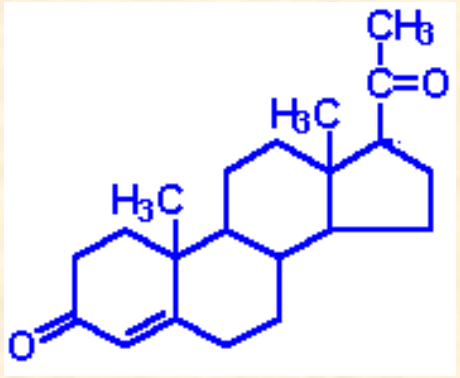
Testosterone



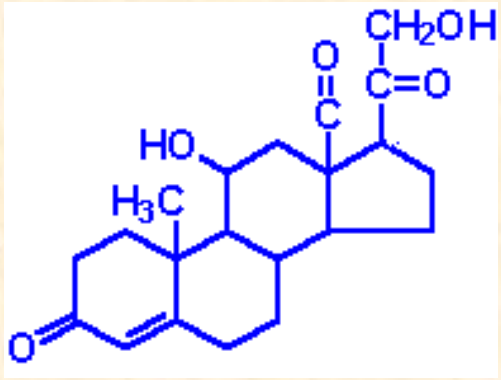
DHEA



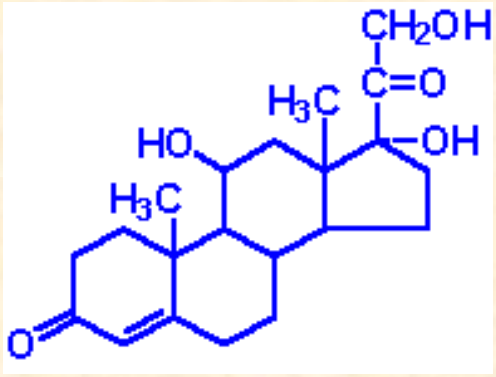
Estradiol



Progesterone



Aldosterone



Cortisol

Drug companies have patented ~5 to 200 variations of each molecule.

Bioidentical Hormones are not Drugs

- **Correct molecular structure**—same action at receptors, same metabolism and elimination.
- **Proper dose** determined by blood tests
- **Non-toxic:**
  - **No side effects**, only effects
  - **No interactions** with drugs
  - **No allergic reactions**
- **Safe** in youthful physiological levels/balance
- Negative effects?? Only with excessive dose, wrong delivery method, or imbalance with other hormones

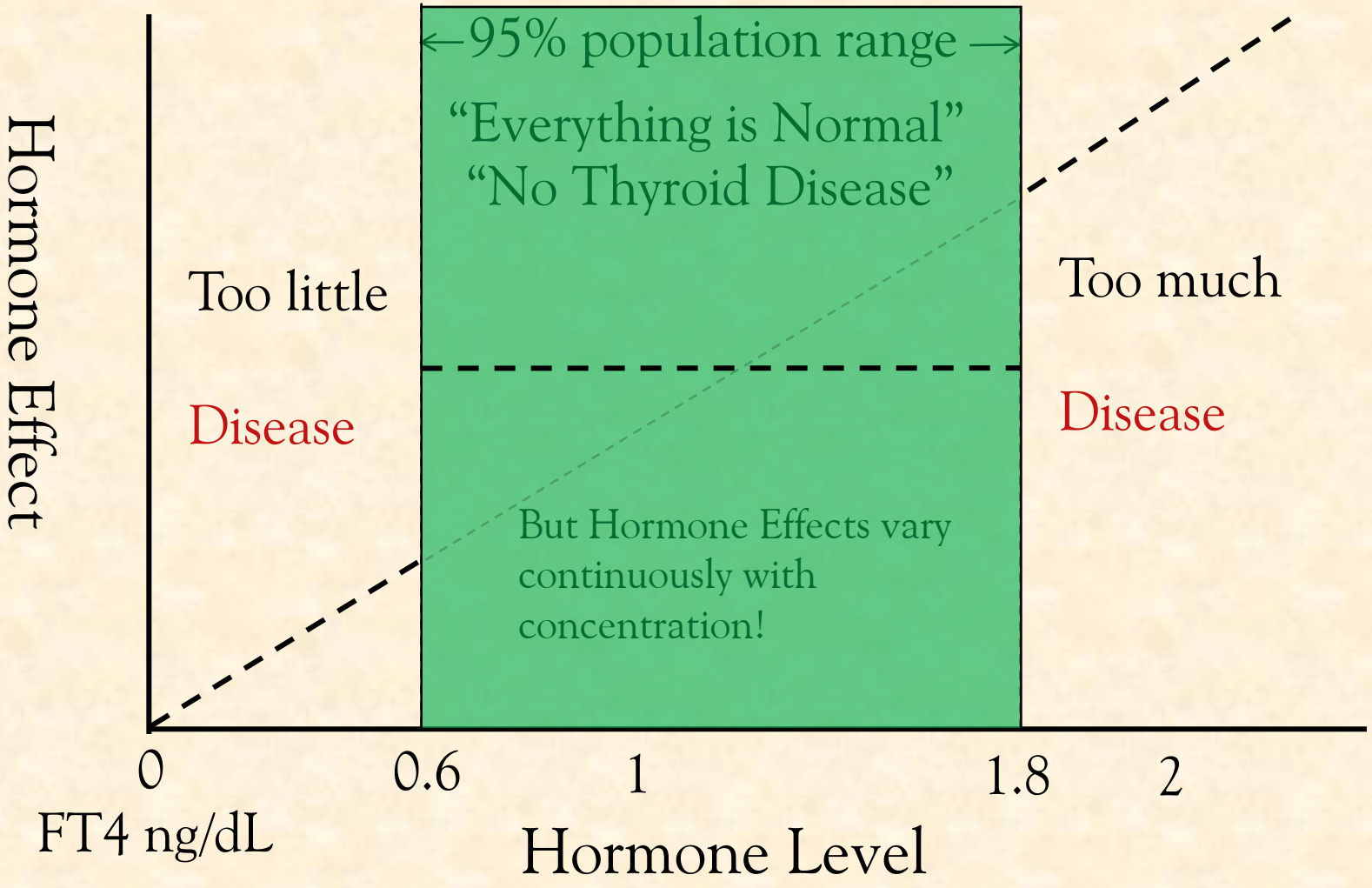
Bioidentical Hormone Restoration is Good Medical Practice

- If a hormone is low, restore optimal levels!
  - Type 1 Diabetes: bioidentical **insulin**
  - Hypothyroidism: bioidentical **T_4** (Synthroid, Levoxyl)
  - Growth hormone deficiency: bioidentical **GH**
  - Adrenal insufficiency: **cortisol** (hydrocortisone)
  - **Non-bioidenticals:** Menopause, autoimmune dz, allergy
- The Controversies:
  - How do we diagnose **deficiency**?
  - How do we decide which dose is **right**?
  - What do we do about **deficiencies** due to **aging?**

Why Docs Don't Get It: Reference Range Endocrinology

- "Normal" ranges are **not** optimal ranges!
  - Include **95%** of tested persons of **same decade in age**
  - Subjects **not** screened for ideal health
  - Only some are **diagnostic** ranges (glucose, cholesterol)
- Docs assume that all ranges are **diagnostic**, **but**
  - Male free testosterone: 35-155 **5x!**
  - Female free testosterone: 0.0-2.2 **∞!**
  - Thyroid - Free T4: 0.6-1.8 **3x!**
  - AM serum cortisol 5-25 **5x!**
- "**Normal**" result→no hormonal dx/rx→**drugs**

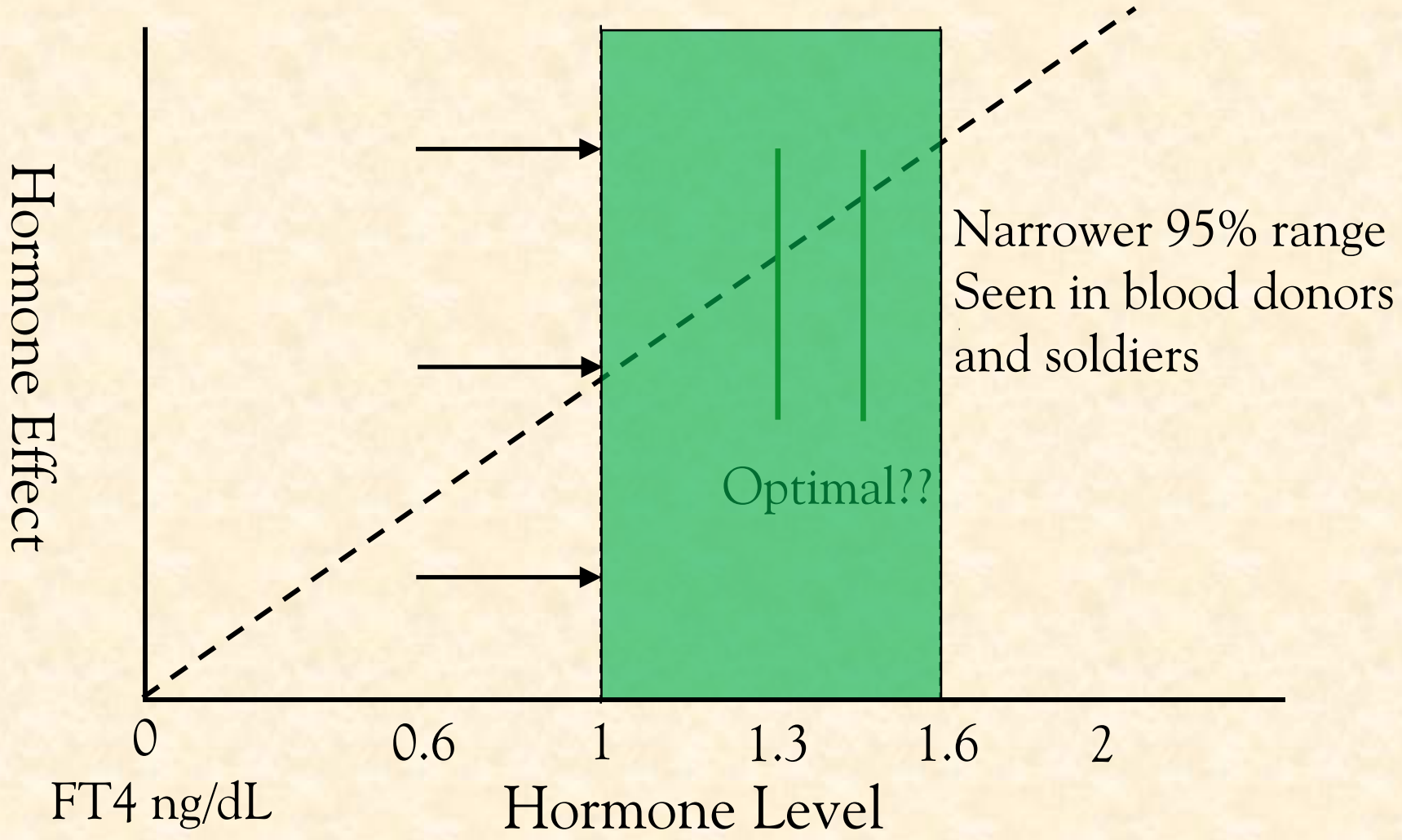
Reference Range Endocrinology



Intelligent Endocrinology

Tighter optimal range based on healthy persons and on physiological research

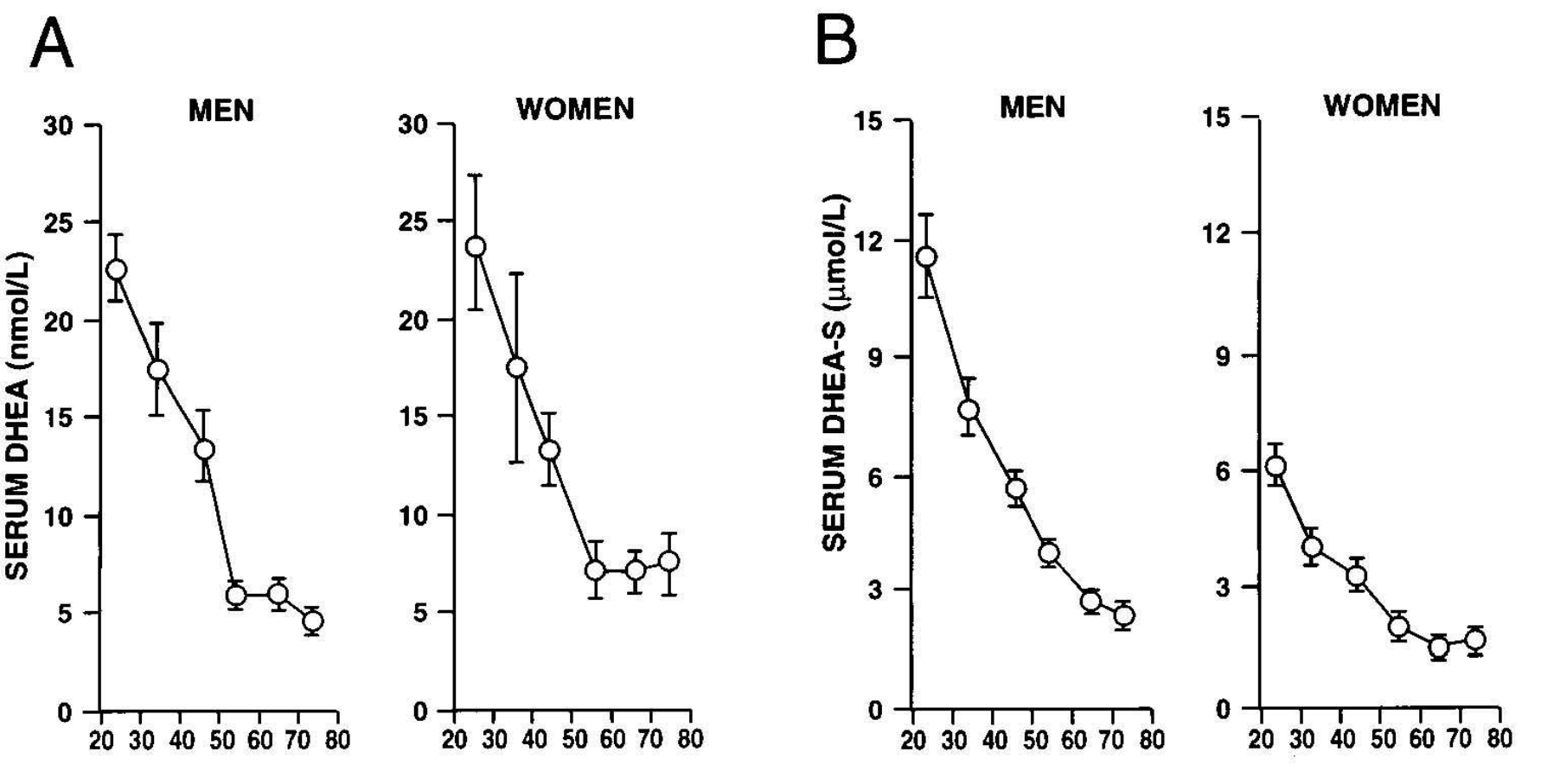
Individualized diagnosis and treatment



Kratzsch J, Clin Chem. 2005 Aug;51(8):1480-6, Walter Reed Army Med. Center

What about Losses due to Aging?

DHEA ↔ DHEA-S



J Clin Endocrinol Metab. 1997 Aug;82(8):2396-402

Thyropause

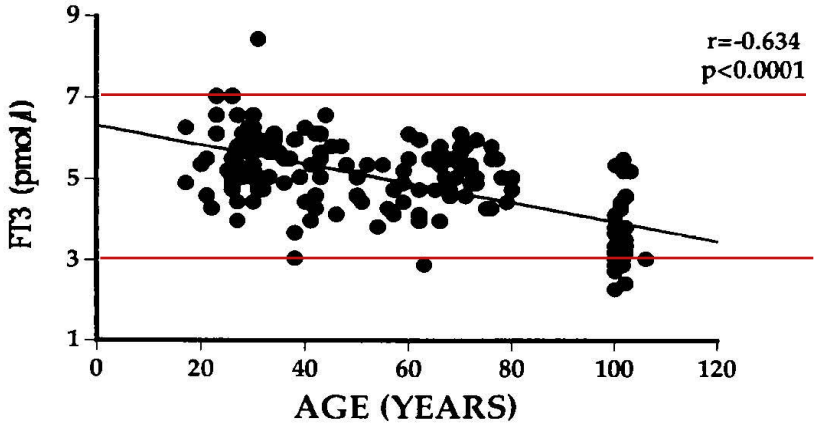


FIG. 7. Age-dependent variations in serum FT_3 concentration in healthy human subjects up to centenarians [Modified from S. Mariotti *et al.*: *J Clin Endocrinol Metab* 77:1130–1134, 1993 (147), with publisher's permission. © The Endocrine Society.]

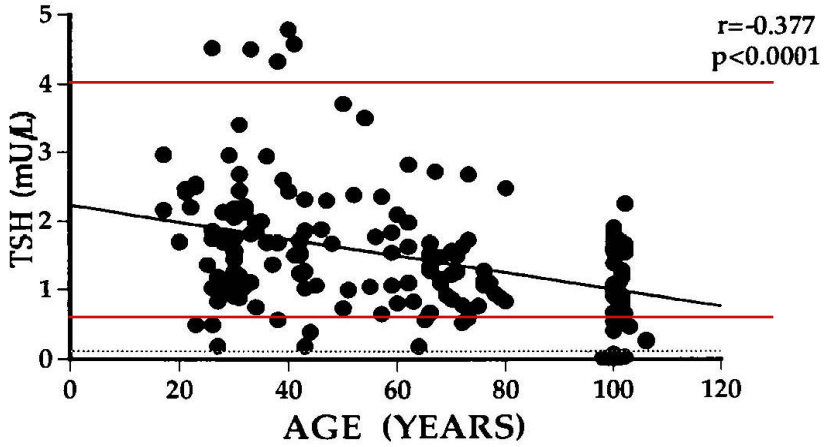
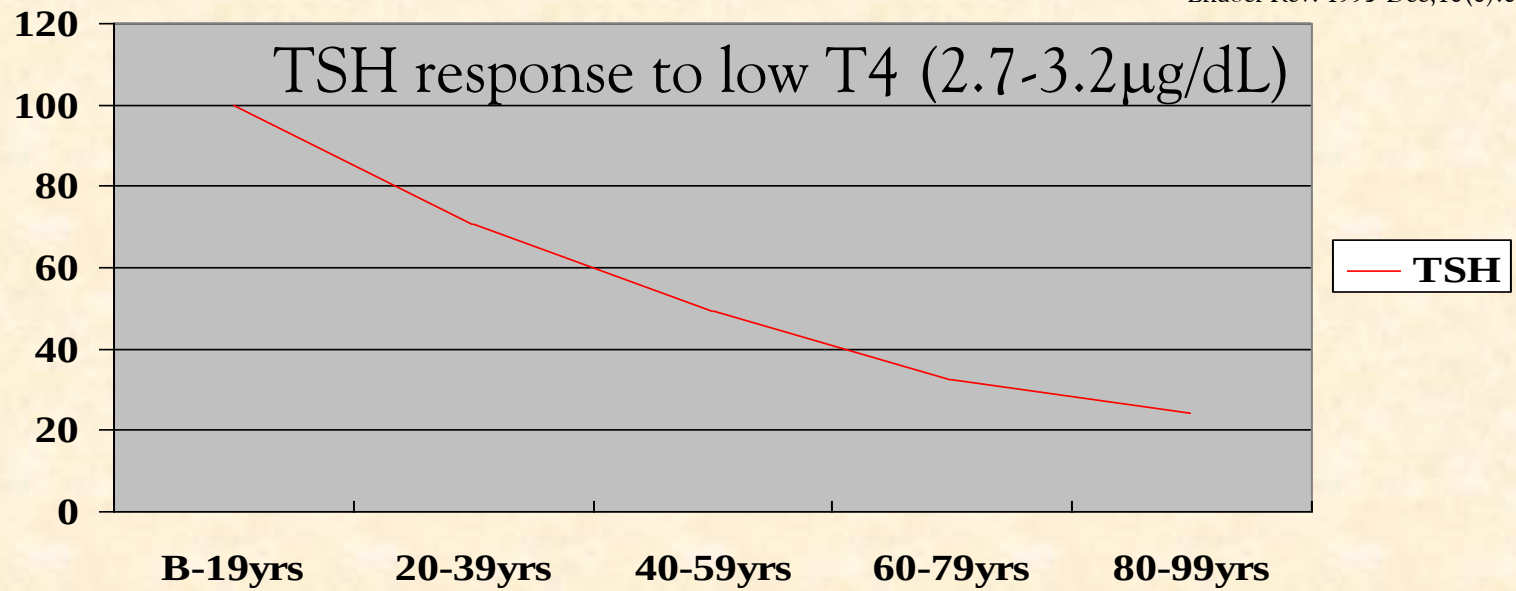


FIG. 8. Age-dependent variations in serum TSH concentration in healthy human subjects up to centenarians [Modified from S. Mariotti *et al.*: *J Clin Endocrinol Metab* 77:1130–1134, 1993 (147), with publisher's permission. © The Endocrine Society.]

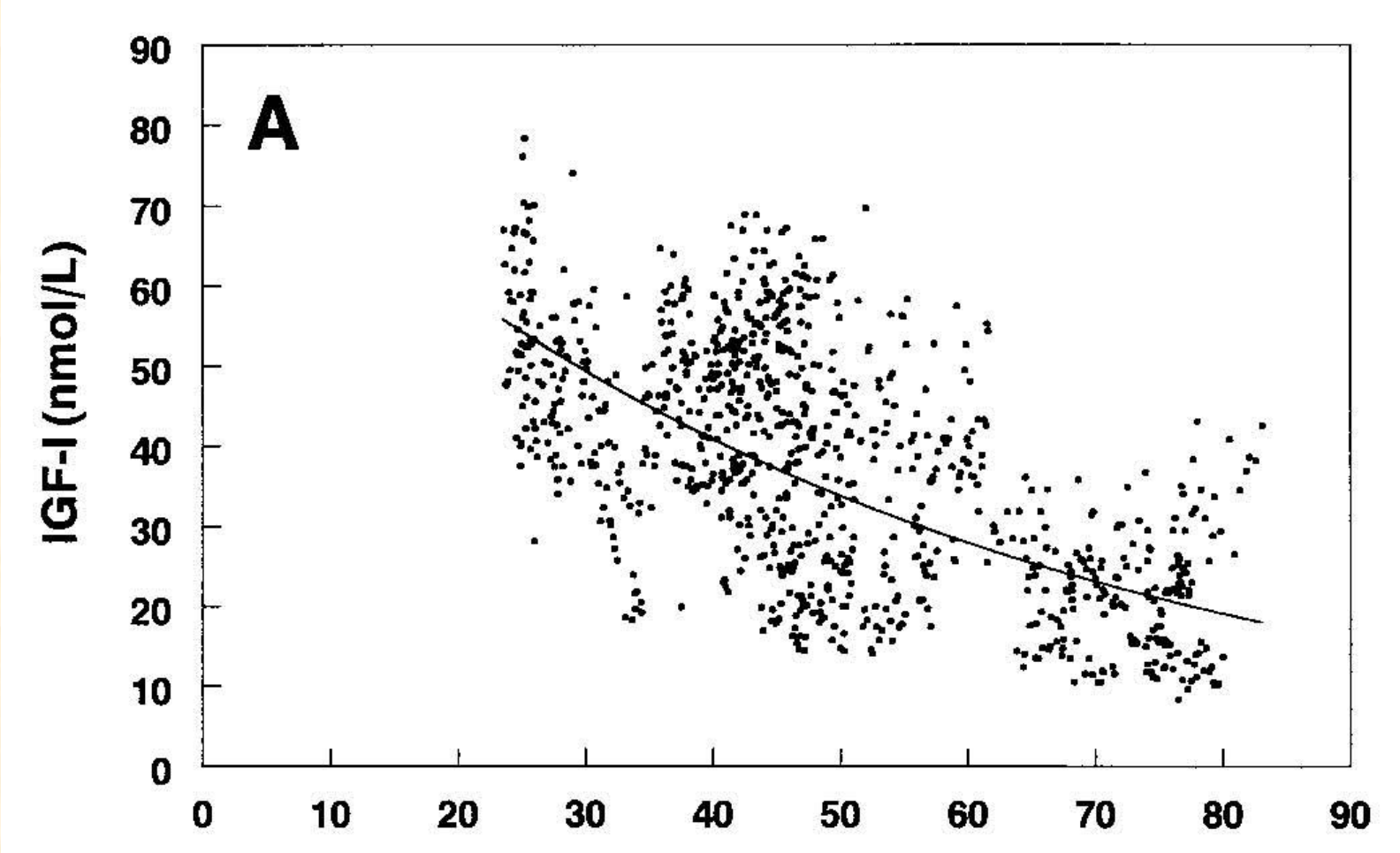
Endocr Rev. 1995 Dec;16(6):686-715

80% decline



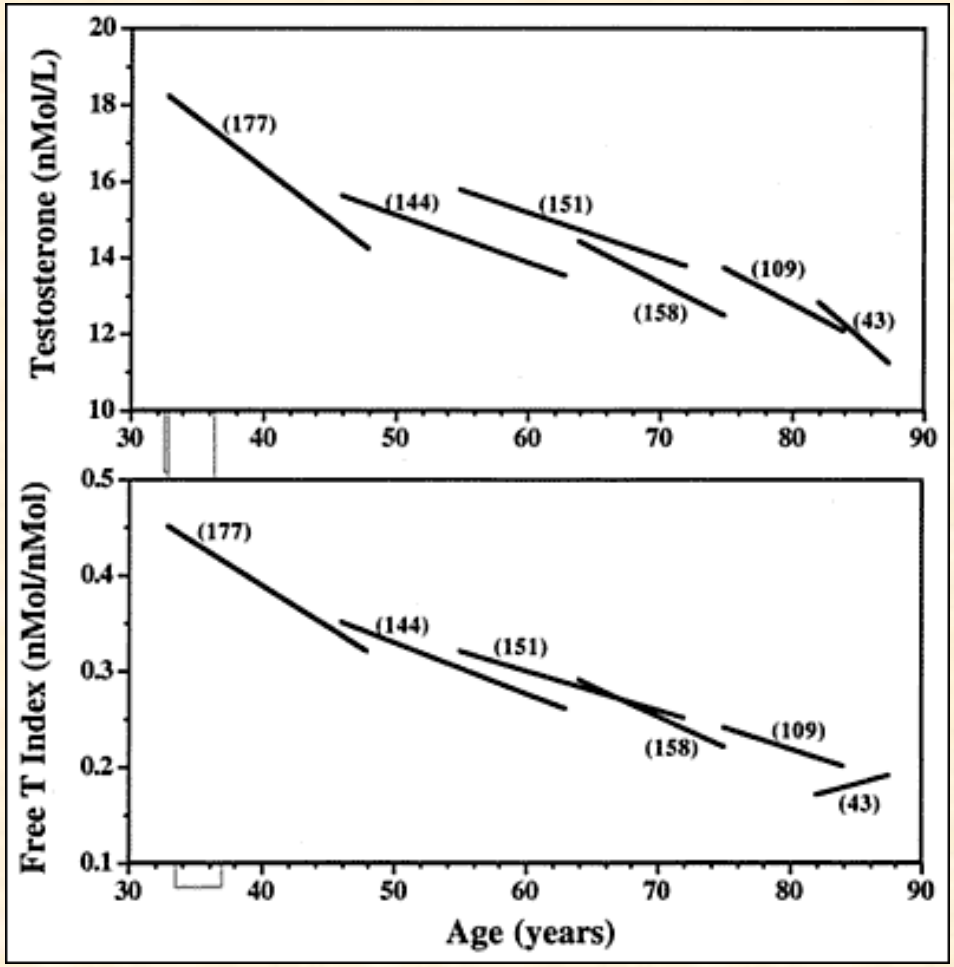
Carle, Thyroid. 2007 Feb;17(2):139-44

Somatopause
Growth Hormone (GH)



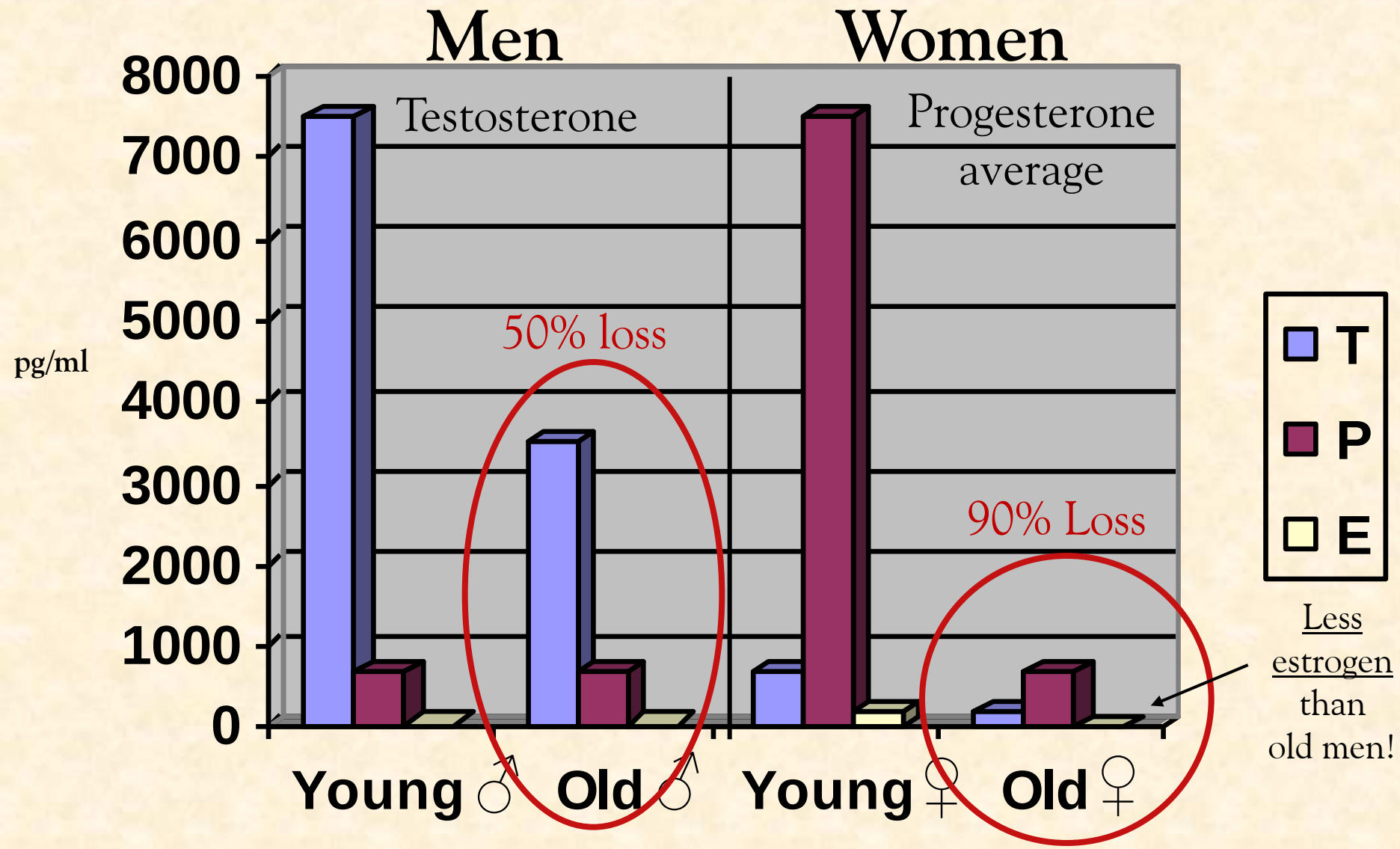
Clinical Chemistry 48, No. 12, 2002

Andropause
Testosterone in Men



Baltimore Longitudinal Study of Aging (BLSA). Harman et al., 2001

Steroid Loss in Women>>Men



DHEA-S 5,000,000pg/ml Cortisol 100,000 pg/ml

Common View

- Persistence of youthful levels of hormones would cause more heart attacks and cancers as we age (?)
- The loss of hormones is **adaptive**–helps us to live longer (?)
- Fits the **Pharmaceutical Agenda: Take drugs** for every symptom and disorder caused by hormone loss (!?!)

Against the Common View

- **Aging** is a natural **self-destruct program** that kicks in around age 25 in humans
- Obesity, high blood pressure, diabetes, heart attacks, autoimmune diseases, and many cancers **increase** **years after** hormone **deficiencies** set in **and** occur **more often** in those with **lower** levels!
- Aging and the loss of hormones due to it are both **natural** and **bad** for you!
- Studies of balanced hormone restoration show the expected youthful benefits and improvements in these disorders--and **no proof of harm**!!

New Paradigm:
Restorative Endocrinology

- Endocrine glands **and** hypothalamic-pituitary control systems **deteriorate** with age.
- Our bodies **cease** to regulate our hormones for **optimal health**.
- These partial hormone deficiencies are **harmful**.
- The restoration of youthful/optimal nutrient and hormone levels is:
  - **Essential** to **preventative medicine**
  - **Essential** to the **treatment** of all **disease**
  - **Essential** to our **quality of Life!**

Fatigue, Depression, Pain
Thyroid and Cortisol Deficiencies

- Thyroid sets throttle, cortisol delivers the fuel.
- Thyroid determines metabolic rate in every tissue.
- Lack of either leads to hypometabolism.
- Health and quality of life require **optimal** levels of both!
- Conventional tests and ranges are **insensitive.**
- **Irrational fear** of thyroid and cortisol supplementation
- **Underdiagnosed**, **undertreated**—Docs prescribe pharmaceuticals instead (SSRIs, amphetamines, anti-seizure drugs, anti-psychotics, sedatives, etc.)

Cortisol

- **Foundation of the hormonal system**—all other major hormones counteract cortisol
- Our body's **natural** "steroid"—**anti-inflammatory**
- We need **more cortisol** with stress, inflammation, and disease.
- Too much→Diabetes, HTN, belly fat, osteoporosis
- Too little→fatigue, depression, aches & pains, anxiety, hypoglycemia, insomnia, inflammation
- **Modulates** the immune system—prevents and controls allergies and autoimmune diseases

Cortisol Deficiency

- Fatigue— "Adrenal Fatigue"
- Depression
- Aches & pains
- Anxiety, irritability
- Can't cope with stress or exertion
- Insomnia—frequent awakening
- Severe PMS, PMDD
- Hypoglycemia
- Allergies, autoimmune diseases
- Variability: good days, bad days

A Female Problem

- Women make **1/2** as much **cortisol** as men and release less cortisol under stress.

  Vierhapper H, Metabolism. 1998 Aug;47(8):974-6 Takai N, Ann N Y Acad Sci. 2007 Mar;1098:510

- Explains **much greater** incidence of chronic fatigue, pain, depression, and autoimmune diseases in women

- **Rheumatic diseases** assoc. with ↓HPA activity, **lower cortisol** levels, and relative **adrenal insufficiency**

  Johnson EO, Ann N Y Acad Sci. 2006 Nov;1088:41-51. Demir H, Scand J Rheumatol. 2006 May-Jun;35(3):217-23. Chikanza IC, Arthritis Rheum. 1992 Nov;35(11):1281-8. Cutolo M, J Endo Invest. 2002;25(10 Suppl):19-23. Ann N Y Acad Sci. 2006 Jun;1069:289-99. Gudbjornsson B, J Rheumatol. 1996 Apr;23(4):596-602. Mastorakos G, Z Rheum.2000;59 Suppl 2:II/75-9. Kebapcilar L, J Endocrinol Invest. 2009 Jul 20. Shah D, Kathmandu Univ Med J (KUMJ). 2009 Jul-Sep;7(27):213-9

- Anti-depressants increase **cortisol** levels and effects.

  Sagud M, Neuropsychobiology. 2002;45(3):139-43

Diagnosis of Cortisol Deficiency

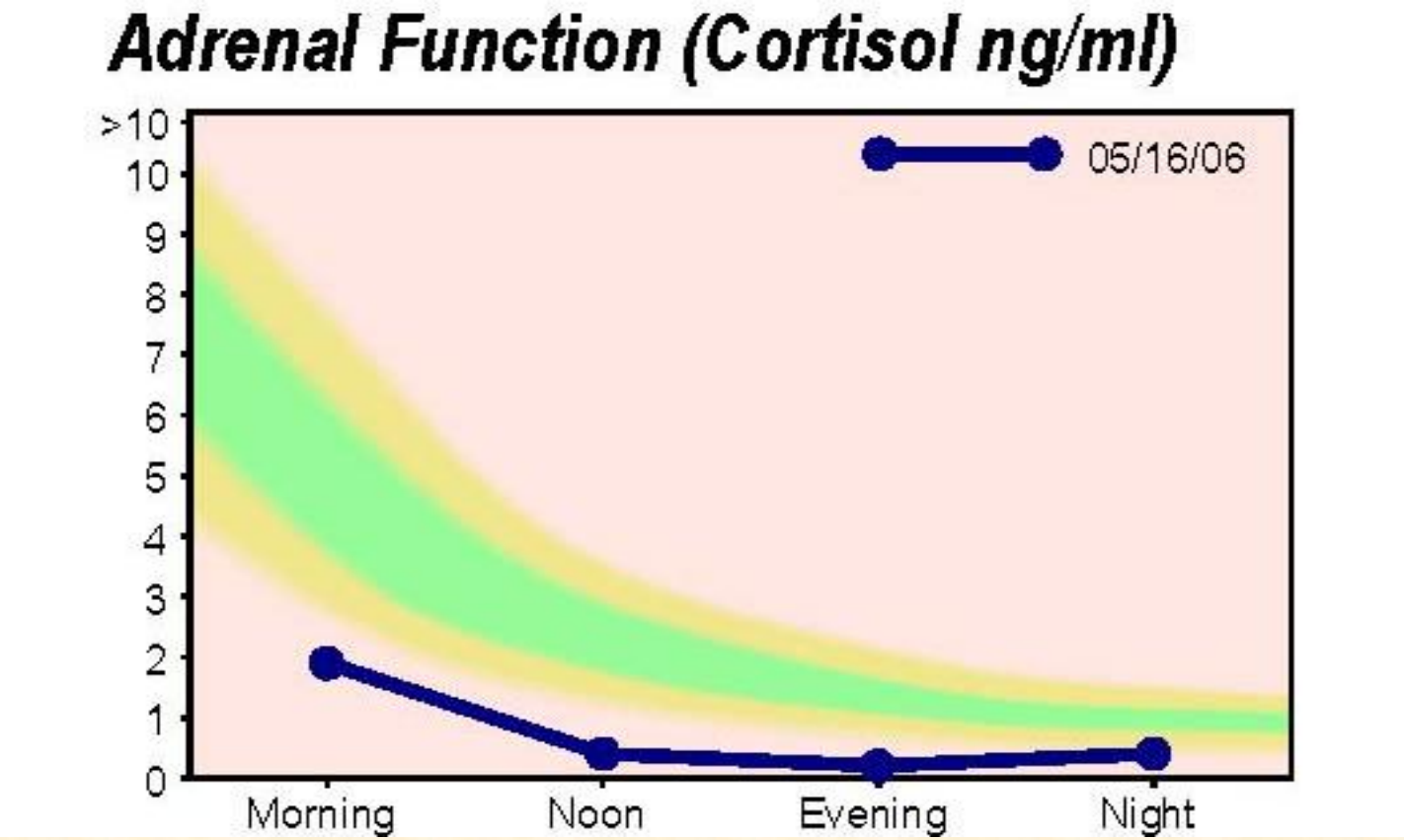
- Serum cortisol and ACTH stimulation tests are **insensitive**

  Reimondo G, Pituitary. 2008;11(2):147-54., Streeten DH, J Clin Endocrinol Metab. 1996 Jan;81(1):285-90.

- **Clue:** Feels much better on prednisone, often needs steroids for allergies, illnesses, etc.
- **Should be assumed** in anyone whose condition **improves** with steroids—artificial versions of **cortisol**
- **Unrecognized:** Docs only know Addison's Disease (near total adrenal gland failure)

Diagnosis by Saliva Testing

Symptoms and low saliva cortisol levels



Cortisol Restoration

- Use hydrocortisone (cortisol), 2-4 doses /day
- Safe in physiological doses and balance with other hormones
- Cortisol replacement suppresses DHEA levels
- Must replace DHEA to prevent bone loss, increased blood sugar and abdominal fat, etc.
- Must maintain thyroid/cortisol balance.
- Must optimize sex hormones.

See Dr. William Jeffries' *Safe Uses of Cortisol*

DHEA:
The Other Adrenal Hormone

- Most abundant steroid hormone; yet **ignored**
- Cells make testosterone and estradiol from it
- Levels decline with age, stress and disease
- Lower levels assoc. with ↑disease, ↑mortality
- **Balances** and **counteracts** cortisol's effects
- All persons on cortisol or steroids must take DHEA
- Reduces pain and inflammation
- Improves fertility and sexual function in women

Hypothyroidism

- Mental fog, poor concentration, depression
- Fatigue, need for excessive sleep
- Cold extremities, always feels cold
- Aches and pains
- Thinning, dry, coarse scalp hair
- Weight gain
- Constipation
- Ankle swelling, puffy face
- High cholesterol, increased atherosclerosis

Diagnosing Hypothyroidism

- **First:** symptoms and physical signs
- **Second:** low free T_4 and free T_3 levels—even if within laboratory reference range ("normal")
- **Third:** TSH level—indirect, fallible test, only useful to determine the cause of hypothyroidism
- **Ultimately—response** to therapeutic trial of thyroid optimization
- Conventional medicine relies on TSH only—has it backwards!

Restorative Thyroidology

- **"Standard" Treatment:** give only **T_4** (Levoxyl, Synthroid) to "normalize" the TSH level.
- Often inadequate, resulting in **lower** free **T_3** levels, higher **reverse T_3**, persistence of symptoms
- Give **T_4** plus **T_3** (Armour®, levothyroxine+Cytomel®)
- **Adjust dose** according to **symptoms** and free **T_4** and free **T_3** levels
- The TSH **cannot** be used to determine dose.

Fraser WD, Br Med J (Clin Res Ed). 1986 Sep 27;293(6550):808-10

Not Just "Sex Hormones"

Estradiol, progesterone, testosterone and DHEA are required for the function, growth, and maintenance, of **all tissues** in **both sexes**!

- **Maintain brain function and health**—neurosteroids affect mood, cognition, memory, pain, etc.
- **Maintain** the **immune system**—progesterone and testosterone are mild immunosuppressants
- **Maintain connective tissue**: skin, hair, bone, muscle
- **Improve insulin sensitivity**: prevent diabetes, fatty liver
- **Reduce blood pressure**—improve endothelial function
- **Prevent** atherosclerosis (plaques in arteries)

Male Andropause

- Testosterone levels decline slowly in men—"just getting old."
- Fatigue, reduced mental function
- Passivity and moodiness—loss of drive, ambition
- Loss of muscle, increased abdominal fat
- Increased blood sugar and blood pressure
- Loss of libido, spontaneous erections, and eventually erectile function.

Testosterone Restoration for Men

- Improves mood and sociability
- Restores energy and ambition
- Improves cognition, probably protects against Alzheimer's disease
- Increases libido and sexual performance
- Increases muscle and bone mass
- Reduces abdominal fat, improves insulin sensitivity, lowers blood pressure--counteracts metabolic syndrome (Syndrome X)

Haider A, Exp Clin Endocrinol Diabetes. 2009

Testosterone and the Heart

- **Low** testosterone levels correlate with coronary artery disease and stroke

  Arterioscler Thromb. 1994; 14:701-706
  Eur Heart J 2000; 21; 890–4
  Int J Cardiol. 1998 Jan 31;63(2):161-4
  Arterioscler Thromb Vasc Biol. 1996 Jun;16(6):749-54

- Testosterone dilates coronary arteries—improves angina
- T decreases fibrinogen levels— ↓risk of blood clots

  Endocr Res. 2005;31(4):335-44

- T increases heart muscle size, strength
- Androgen deprivation therapy for prostate cancer causes heart attacks, strokes, diabetes (FDA 2010)

Testosterone and the Prostate

- Lower testosterone levels increase the risk of prostate cancer.

  J Natl Cancer Inst. 2008 Feb 6;100(3):170-83
  Morgenthaler A, Urology 2006;68:1263-7

- Testosterone supplementation **does not** increase the risk of prostate cancer.

  Morgentaler A, Can J Urol. 2006 Feb;13 Suppl 1:40-3

- Low testosterone associated with **more aggressive** prostate cancers

  Slater S, Drugs Aging 2000 Dec;17(6):431-9

- Testosterone is a prostate growth factor, but does not promote prostate cancer.
- Prostate cancer growth can be temporarily slowed only by eliminating all testosterone from the body.

Read *Testosterone for Life*, Dr. Abraham Morgentaler

Female Andropause

- Young woman's free testosterone level is **2x** her free estradiol
- DHEAS declines with age—main source of androgen effect and 50% of circulating testosterone in women
- Female testosterone levels decline **50%** between age 20 and 45.
- Oral estrogens and birth control pills reduce free testosterone and DHEAS levels

Women Need Testosterone

- Improves energy, mood, and mental function
- Improves sexual desire and sensation
- Increases muscle and tissue strength
- With estradiol, increases bone density

J Reprod Med. 1999 Dec;44(12):1012-20

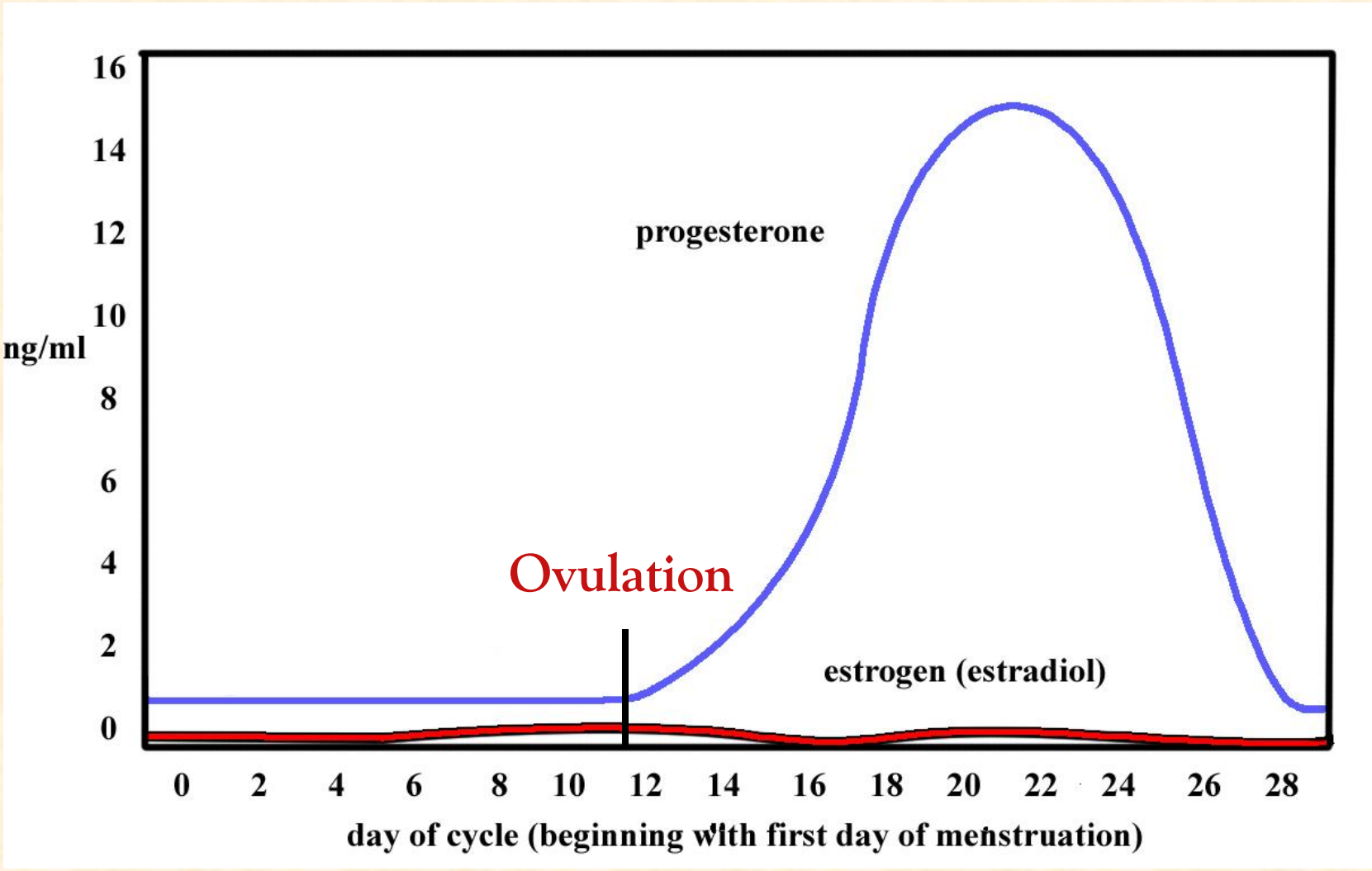
- Opposes estradiol-induced breast stimulation and reduces risk of breast cancer

Menopause. 2003 Jul-Aug;10(4):292-8, Endocr Rev. 2004 Jun;25(3):374-88
Menopause. 2004 Sep-Oct;11(5):531-5, FASEB J. 2000 Sep;14(12):1725-30

Female Endocrinology: Estradiol and Progesterone

- Nature makes special demands on the female body for **reproduction**.
- More **complex** hormonal system than men
- Breast, uterine and ovarian tissues undergo a **monthly cycle** of proliferation, differentiation, and breakdown
- Defects in this cycle can lead to cancers in female organs and to many medical disorders.

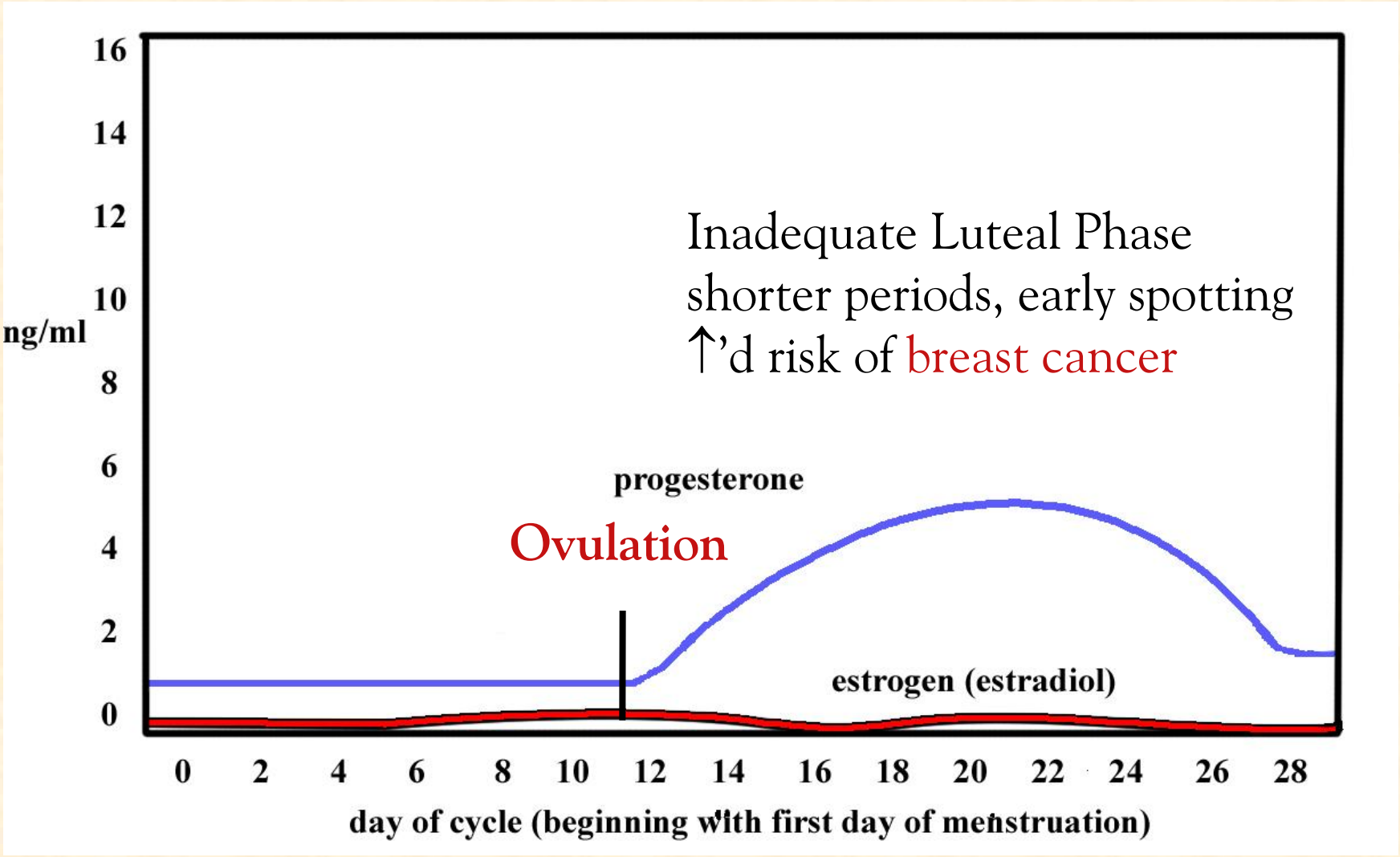
Normal Progesterone Dominance



Menstrual Cycle

Perimenopause

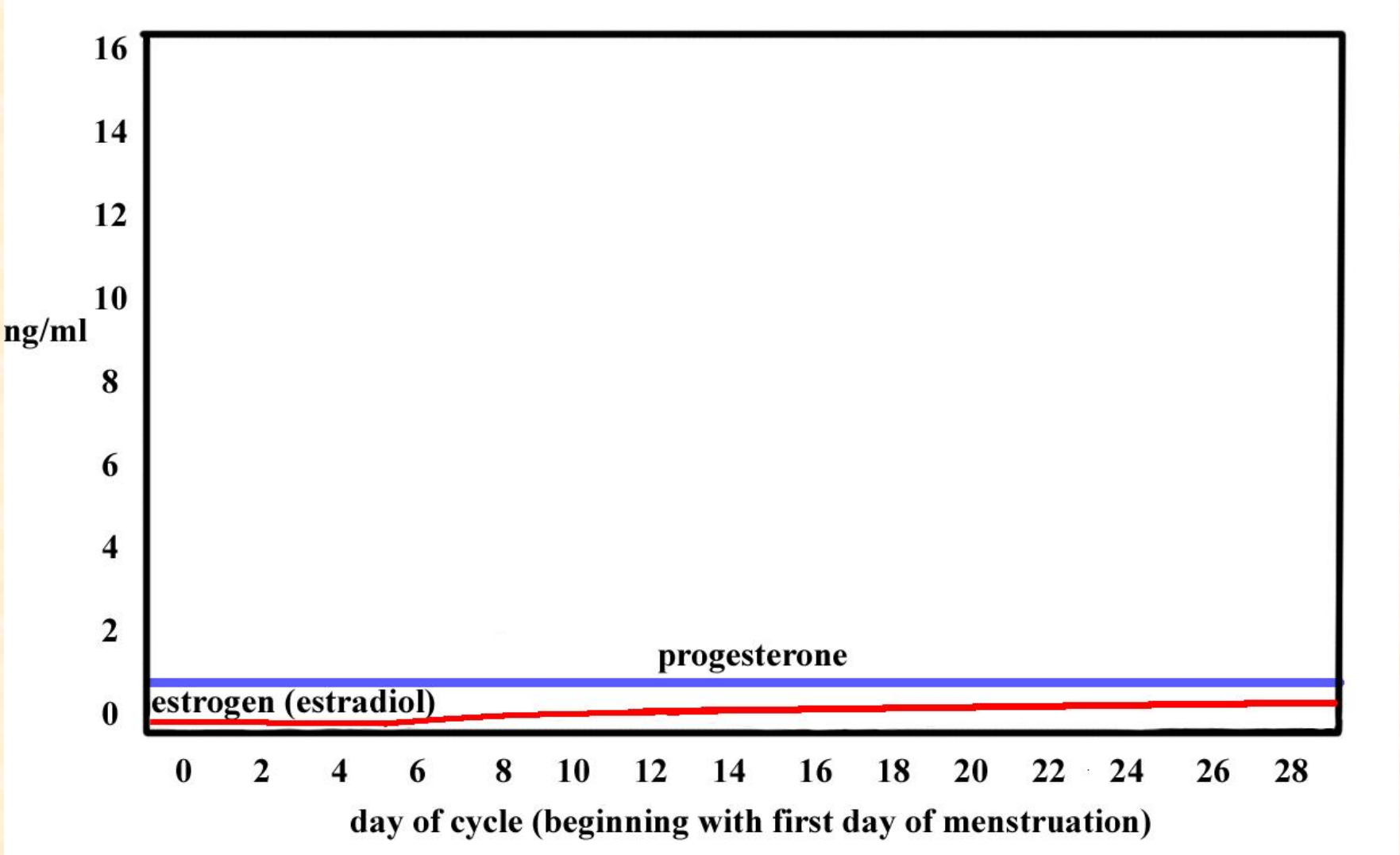
Luteal Insufficiency=Estrogen Dominance



Menstrual Cycle

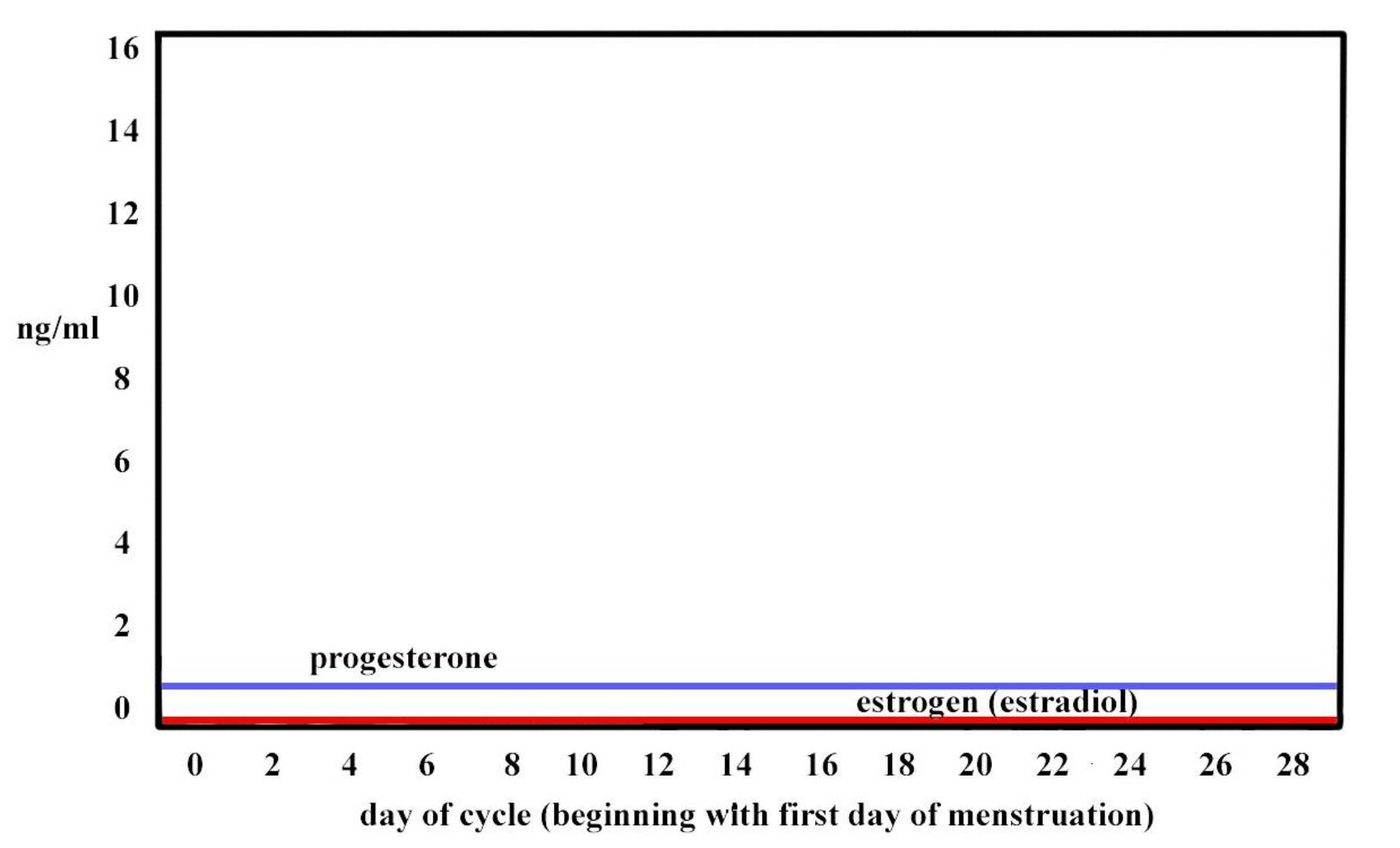
Perimenopause

Anovulation=Estrogen Dominance



Menstrual Cycle

Menopause



Estradiol and Progesterone Deficiency

What Causes Menopause?

- Females born with a **fixed** no. of oocytes which are continually lost
- With aging, oocytes of lower quality are left→reduced estradiol and progesterone production beginning as early as **age 30**
- Eventually no functional eggs are left
- **Perimenopause**=infrequent ovulation, low progesterone
- **Menopause**=Ovarian Failure

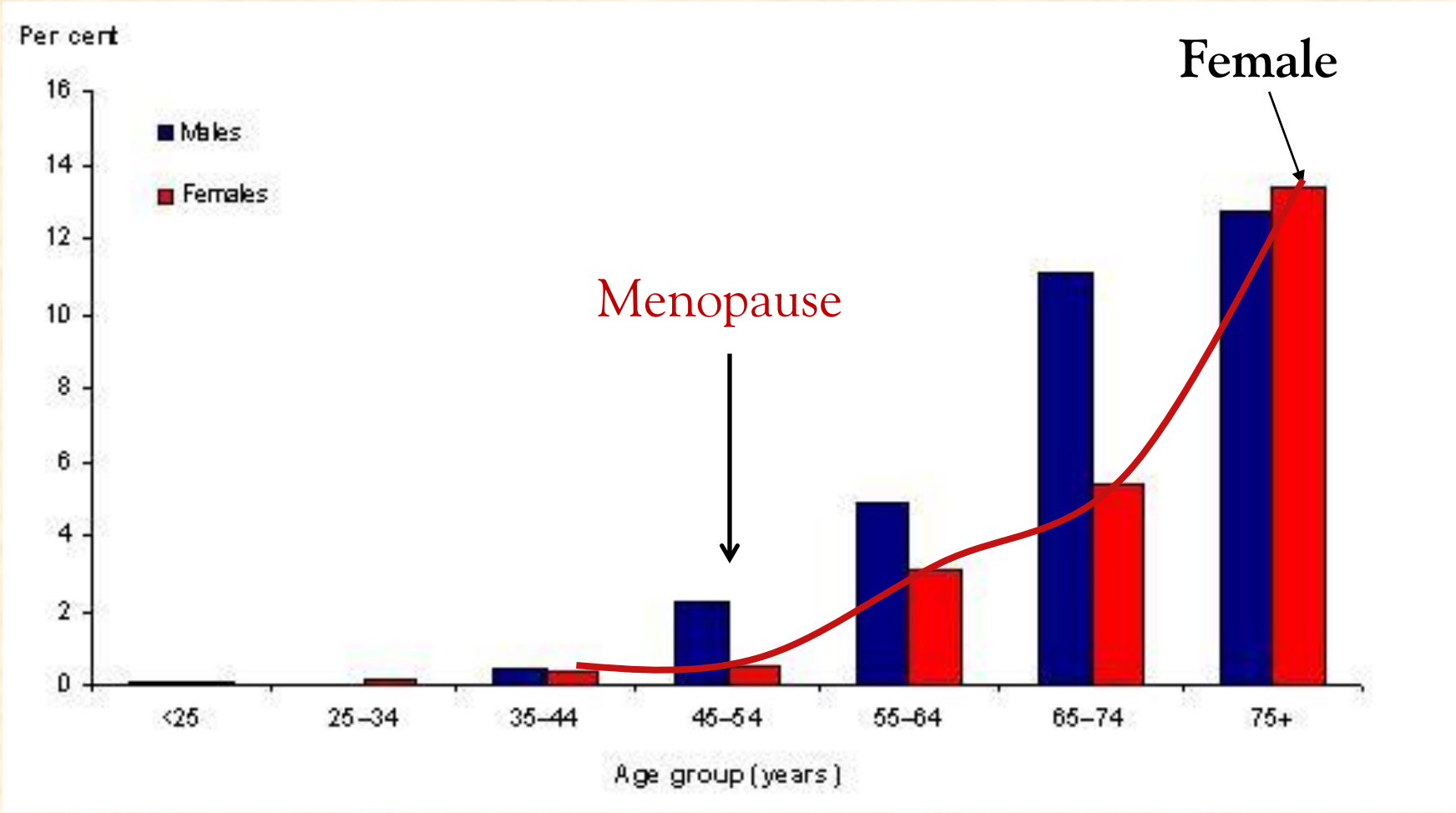
Women Killers and Hormones

- Cardiovascular disease (CVD), osteoporosis, dementia and breast cancer are all **rare** before menopause.
- The first 3 are clearly related to estradiol deficiency ; breast cancer is related to progesterone deficiency.
- Early removal of ovaries increases risk of heart disease, osteoporosis, and dementia.

Parker WH, Womens Health (Lond Engl). 2009 Sep;5(5):565-76

- **Youthful hormone levels protect** women from these diseases.

Coronary Heart Disease vs. Age

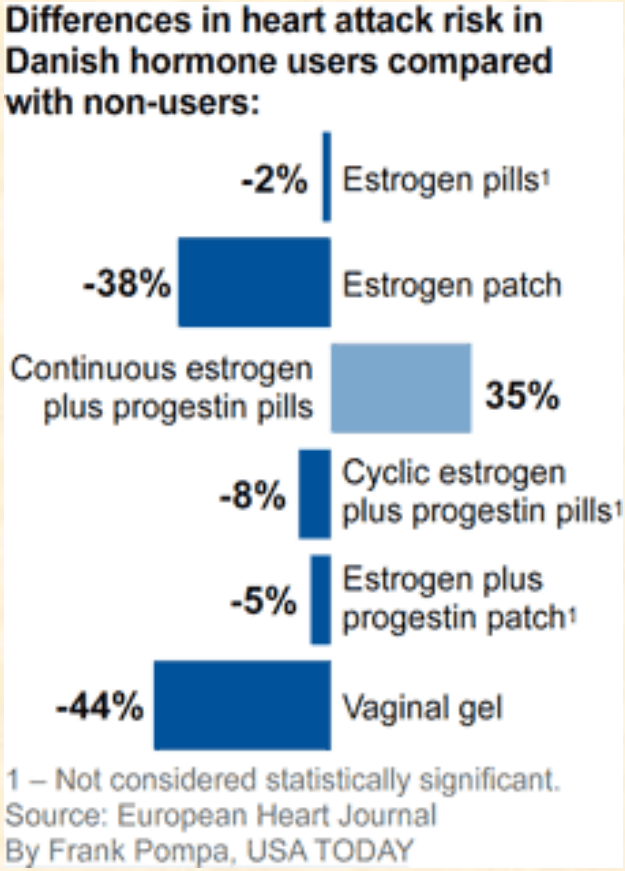


AIHW Heart, stroke and vascular diseases - Australian facts 2004.

Estradiol vs. Cardiovascular Disease

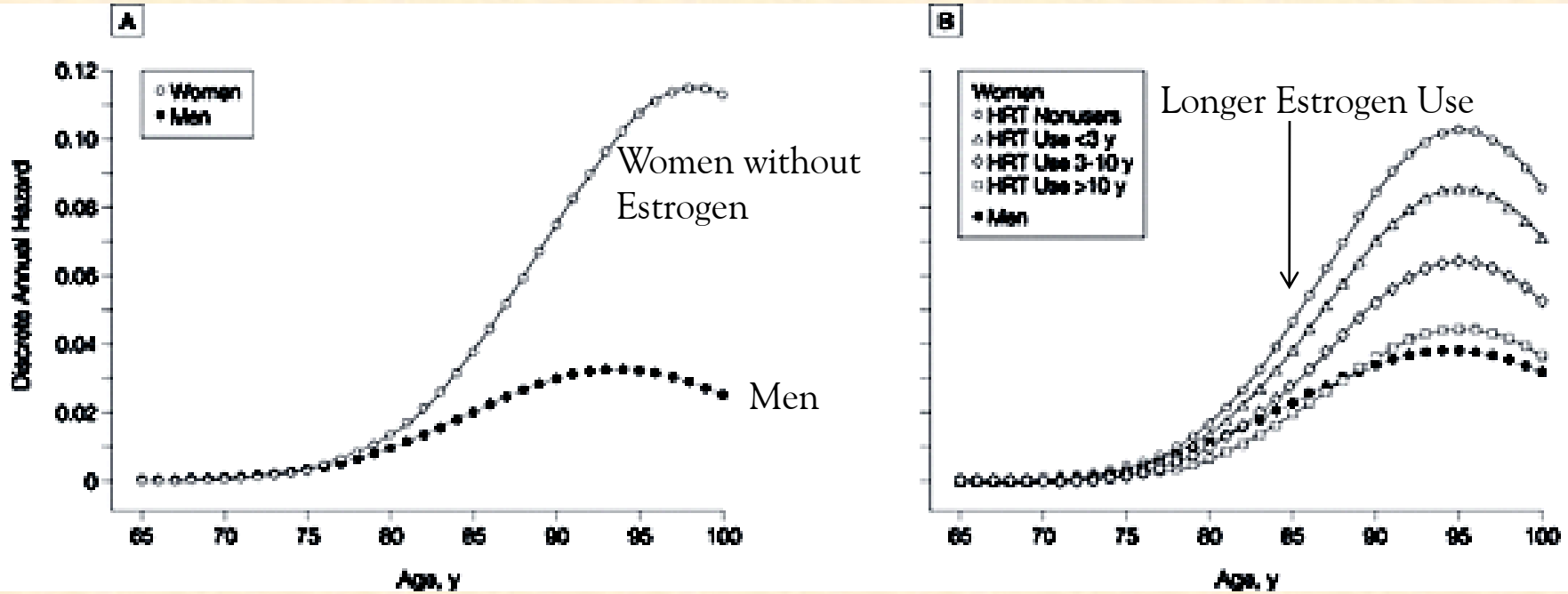
- Prevents the oxidation of LDL
- Improves lipid profile
- Reduces lipoprotein (a)
- Reduces blood pressure
- Improves endothelial function
- Reduces plaque formation
- Improves insulin sensitivity

Transdermal Estradiol Prevents Heart Attacks



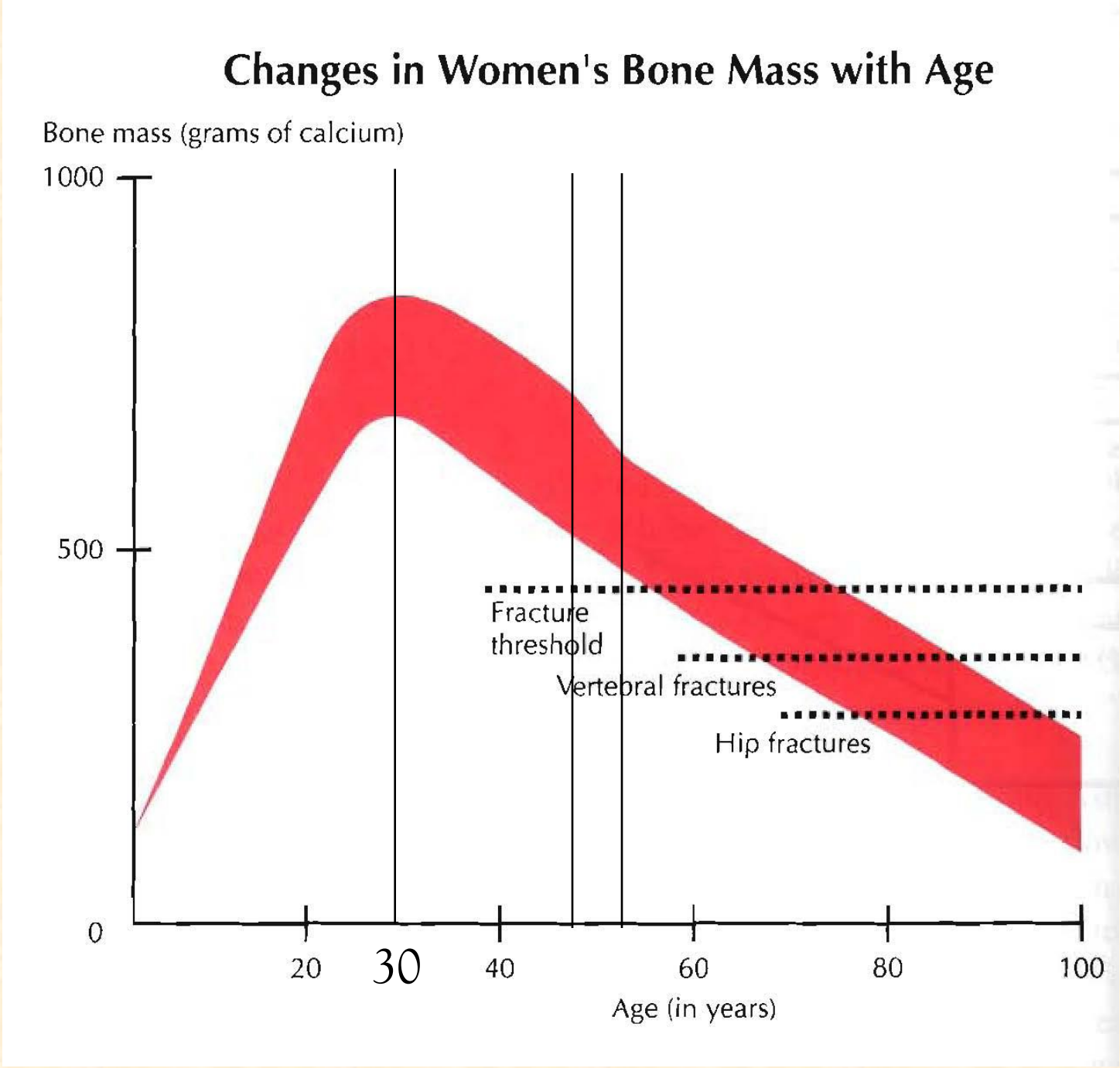
Løkkegaard E, Eur Heart J. 2008 Nov;29(21):2660-8.

Estrogen Replacement Prevents Alzheimer's Disease



72% used Premarin® only

Zandi PP, et al., Cache County Study. JAMA. 2002 Nov 6;288(17):2123-9.
RR 0.46 in Kawas C, The Baltimore Longitudinal Study of Aging. Neurology 1997;48:1517-1521
RR 0.65 Paganini-Hill A, Arch Intern Med 1996;156:2213-2217.
RR 0.4, Tang M-X, Lancet 1996;348:429-432.



Speroff L, Fritz M Clinical Gynecologic Endocrinology and Fertility, 7th Ed.

Osteoporosis

- In menopause 5% bone loss each year for first 5 years=25%—due to loss of estrogen!
- 20 yrs. post menopause—50% reduction in trabecular bone, 30% in cortical bone
- 50% of women >65 yrs. old have spinal compression fractures

Speroff L, Fritz M Clinical Gynecologic Endocrinology and Fertility, 7th Ed.

Osteoporosis
Prevention and Treatment

- **A hormone deficiency** disease—the proper prevention and treatment is **hormone restoration.**
- Estradiol prevents resorption of old bone while testosterone, DHEA and GH build new bone.

Raisz LG, J Clin Endo Metab. 1996; 81:37-43
Barrett-Connor E, J Reprod Med. 1999 Dec;44(12):1012-20

- Bisphosphonates (Fosamax®, Actonel®, Boniva®) stop bone remodeling, suppress bone formation→non-traumatic **fractures** after >5yrs, and "rotting jaw" syndrome
- **Hormone restoration** including Vit. D increases bone density better than bisphosphonates **and** preserves normal bone remodeling

Estradiol Restoration

- Protects against heart disease, dementia and osteoporosis.
- Improves insulin sensitivity—prevents diabetes
- Eliminates hot flashes, restores sleep
- Restores cognitive function and mood
- Maintains thickness, fullness of skin and hair
- Maintains genital/pelvic health-helps with vaginal lubrication, incontinence, bladder infections
- Protects against colon cancer and macular degeneration

Q: OK, estradiol has many benefits, but doesn't it increase my risk of breast cancer?

A: Only if progesterone is deficient

Estradiol

- **Angel of Life**—stimulates growth of female organs necessary for reproduction; maintains female health and quality of life
- **Angel of Death**—promotes cancer and other medical disorders– ***if not*** **balanced** with **progesterone** and **androgens**

Estrogen Dominance

- Allergies
- Autoimmune diseases
- Anxiety, moodiness
- PMS
- Bloating, fluid retention
- Fibrocystic breasts
- Heavy periods
- Endometriosis
- Breast cancer
- Ovarian cancer
- Uterine cancer
- Gallstones

Progesterone is the only effective treatment for estrogen dominance

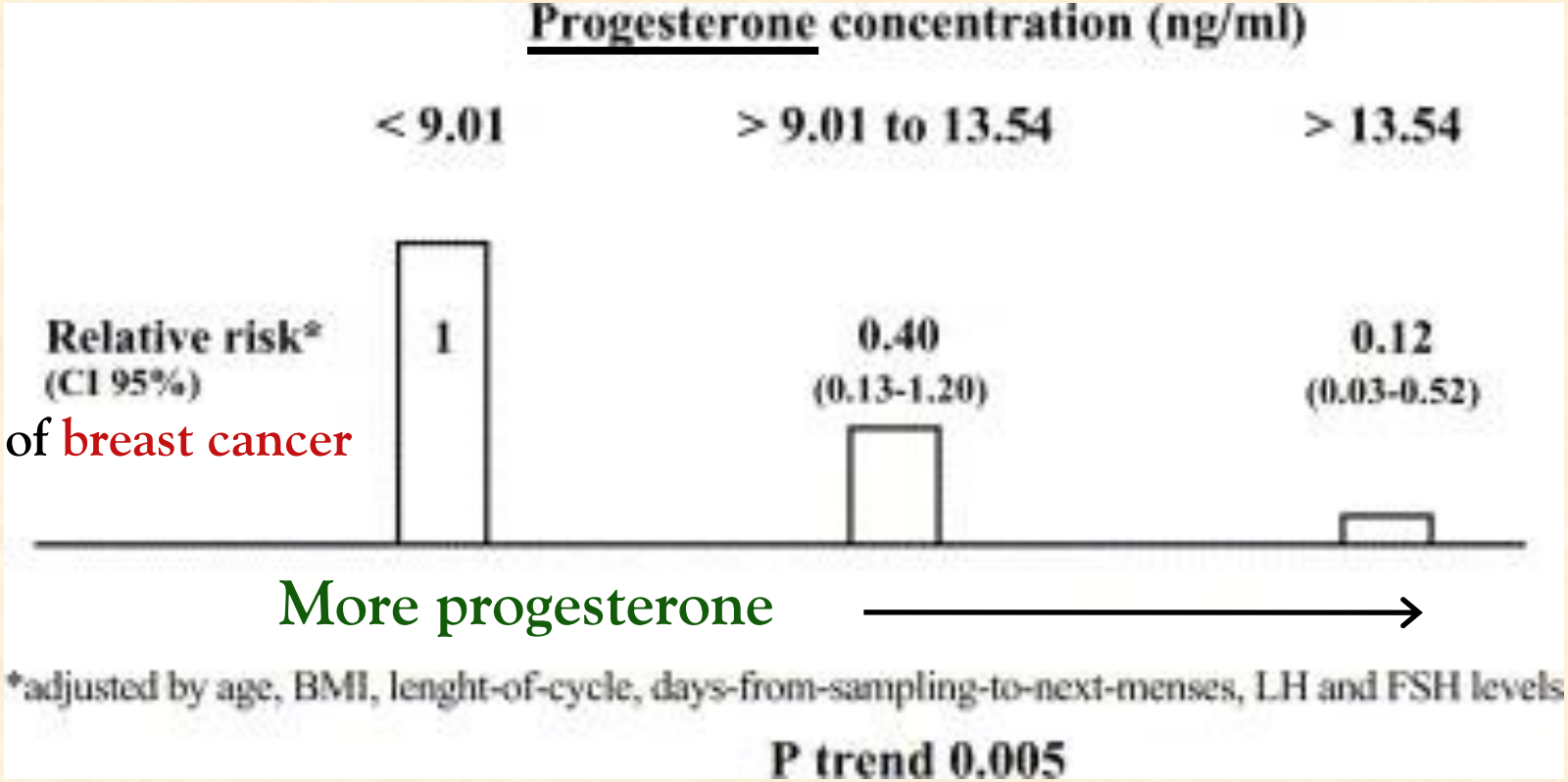
Estradiol—Progesterone Complementarity

- Estradiol (human estrogen) promotes breast/uterine proliferation and growth.
- Progesterone stops proliferation and promotes maturation and differentiation.
- Differentiated cells can't become cancers.
- High progesterone/estradiol ratio suppresses proliferation and prevents cancers
- Progesterone is well-known to prevent uterine cancer, what about breast cancer?

Ordet Study: Int. J. Cancer **112** (2004) (2), pp. 312–318.

Progesterone vs. Breast Cancer in menstruating women

6,000 women
5 yr. F/U



Higher progesterone=lower risk of breast cancer

Progesterone's Anti-Estrogenic Actions in Uterus and Breast

- Interferes with estradiol's binding to receptors.

  Di Carlo F, Tumori. 1975 Nov-Dec;61(6):501-8

- Decreases synthesis of estradiol receptors
- Increases conversion of estradiol to estrone (weak estrogen) by inducing 17β-hydroxysteroid dehydrogenase Type 2
- Reduces conversion of estrone to estradiol by inhibiting 17β-HSD Type 1
- Increases sulfation (inactivation) of estrogens

  Williams Text. of Endocrinology, 10th Ed., p. 612

Progesterone vs. Breast Cancer

- Progesterone cream applied to the breast reduces proliferation.

  Chang KJ, Fertil Steril 1995; 63:785-91
  Barrat J, J Gynecol Obstet Biol Reprod (Paris). 1990;19(3):269-74
  Foidart JM, Fertil Steril. 1998 May;69(5):963-9

- Estradiol is carcinogenic in breast cell cultures **unless** progesterone is present.

  Russo J, J Steroid Biochem Mol Biol. 2003 Oct;87(1):1-25

- Normal breast cells proliferate after E2 treatment, but become quiescent when P is added.

  Malet C, J Steroid Biochem Mol Biol. 2000 Jun;73(3-4):171-81
  Foidart JM, Fertil Steril.1998 May;69(5):963-9

- Estradiol upregulates cancer-promoting gene bcl-2, progesterone downregulates it.

  Formby B, Ann Clin Lab Sci. 1998 Nov-Dec;28(6):360-9

Progesterone vs. Breast Cancer

- Premenopausal women with low progesterone levels had 5.4x risk of early breast and other cancers

  Cowan LD, Am J Epidem 1981;114:209-17

- Breast cancer victims have progesterone resistance

  Simpson HW, Br J Obstet Gynaecol. 1998 Mar;105(3):345-51

- BRCA1 gene causes progesterone resistance.

  Ma Y, Mol Endocrinol. 2006 Jan;20(1):14-34

- Progesterone decreases proliferation and induces apoptosis in breast cancer cell lines.

  Ansquer Y, Anticancer Res. 2005 Jan-Feb;25(1A):243-8
  Groshong SD, Mol Endocrinol. 1997 Oct;11(11):1593-607

- Progesterone receptor positivity predicts better long-term survival with breast cancer

  Costa SD, Eur J Cancer. 2002 Jul;38(10):1329-34
  Lamy PJ, Breast Cancer Res Treat. 2002 Nov;76(1):65-71

Key to Breast Cancer: Hormones within the Breasts

- Compared to the premenopausal breast, postmenopausal breast nipple aspirate fluid has:
  - **Same estradiol** concentration (youthful serum conc.)
  - **Much lower progesterone** concentration

Chatterton RT Clin Endocrinol Metab. 2005 Mar;90(3):1686-91

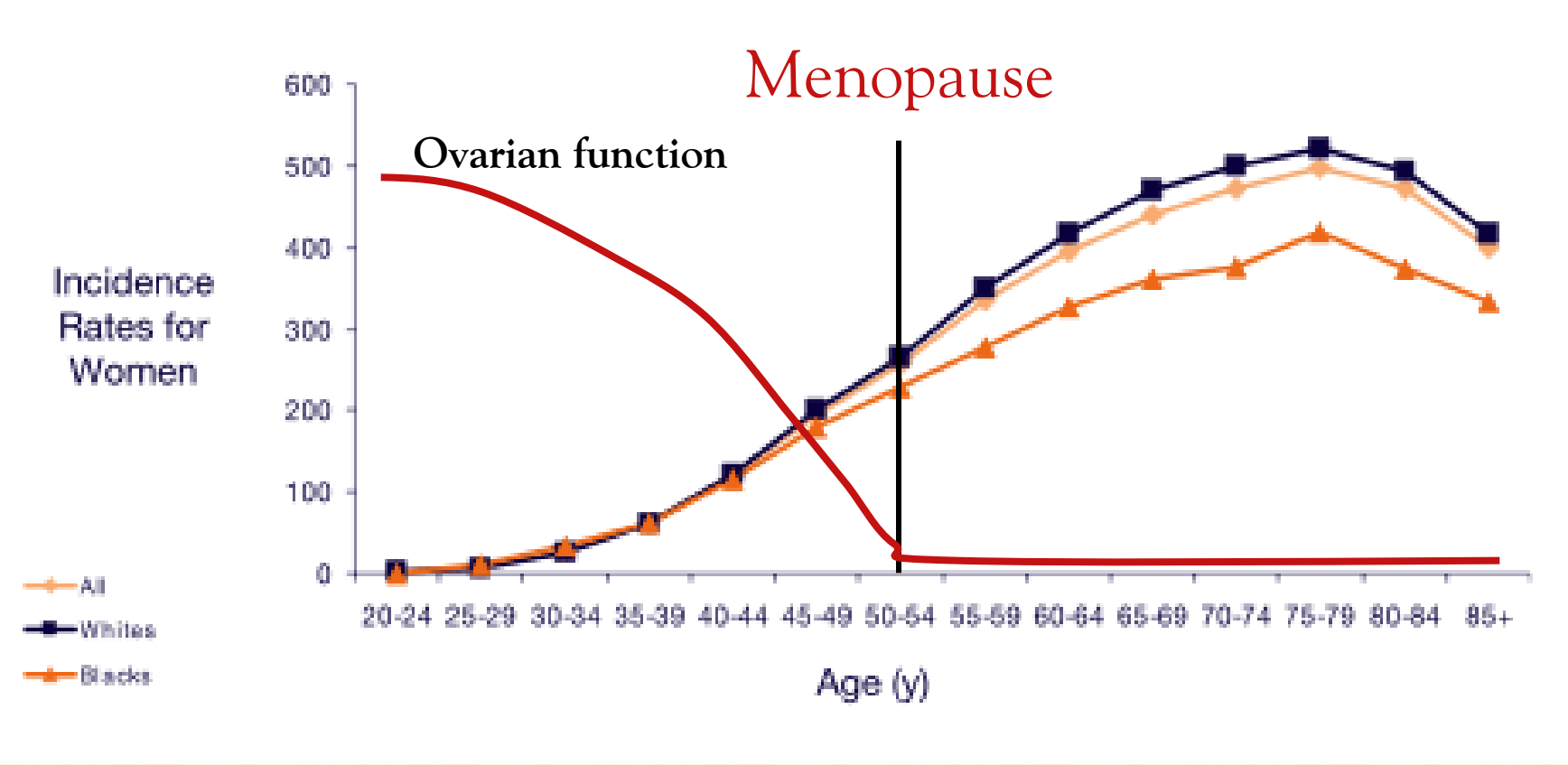
- Breasts make estradiol from adrenal androgens
- Breasts must get progesterone from the blood

Gann PH, Cancer Epidemiol Biomarkers Prev. 2006 Jan;15(1):39-44

- In peri-menopause/menopause: No progesterone→ estrogen dominance in the breasts→breast cancer

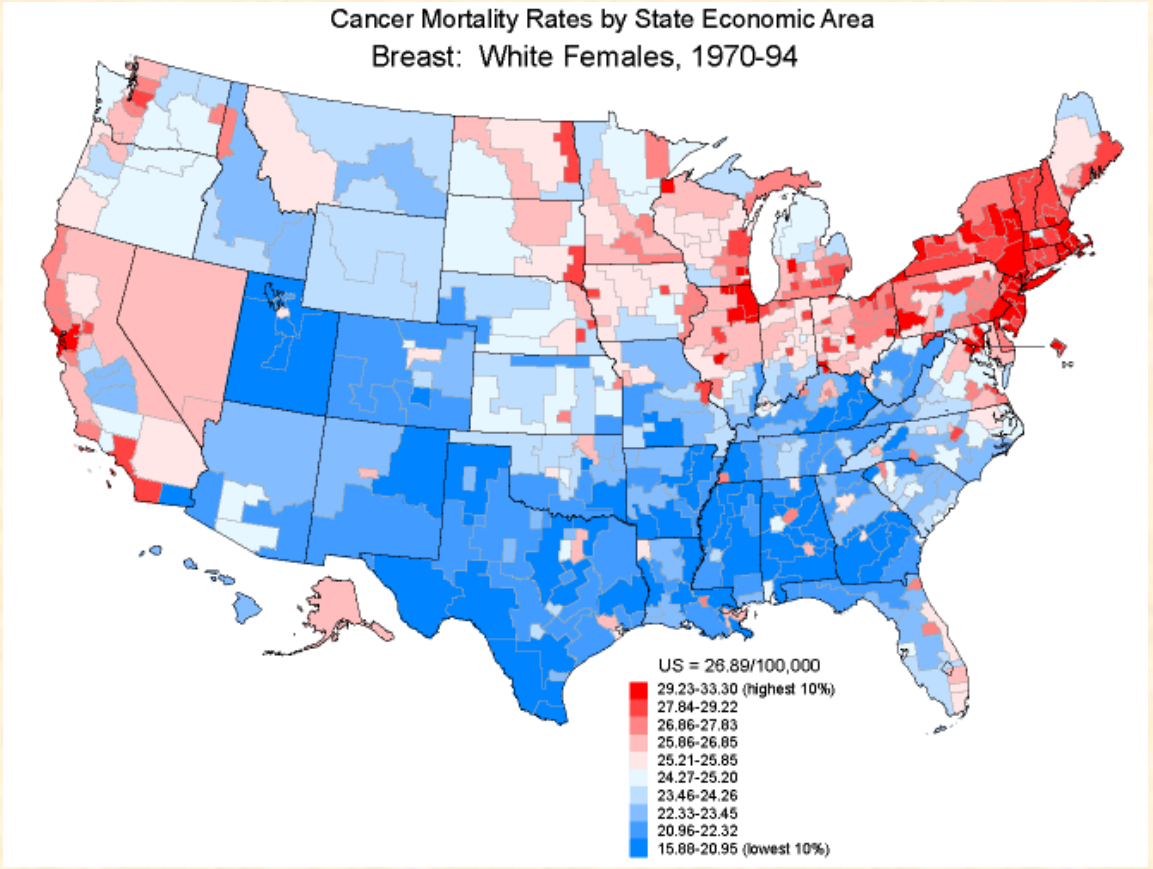
Breast Cancer Rate vs. Age

Loss of progesterone→higher risk of breast cancer

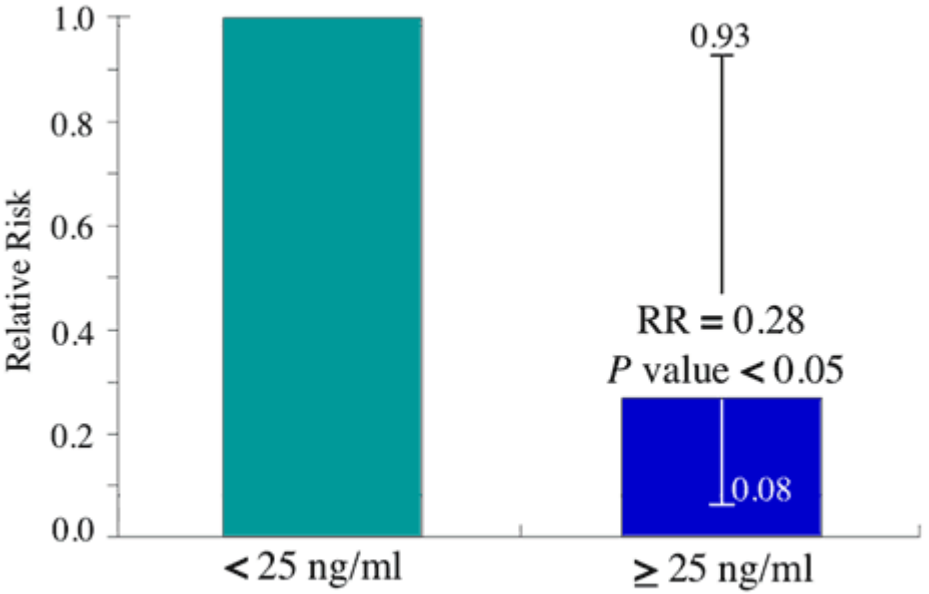


National Cancer Institute. *SEER cancer statistics review 1975-2002*. Table IV-3.

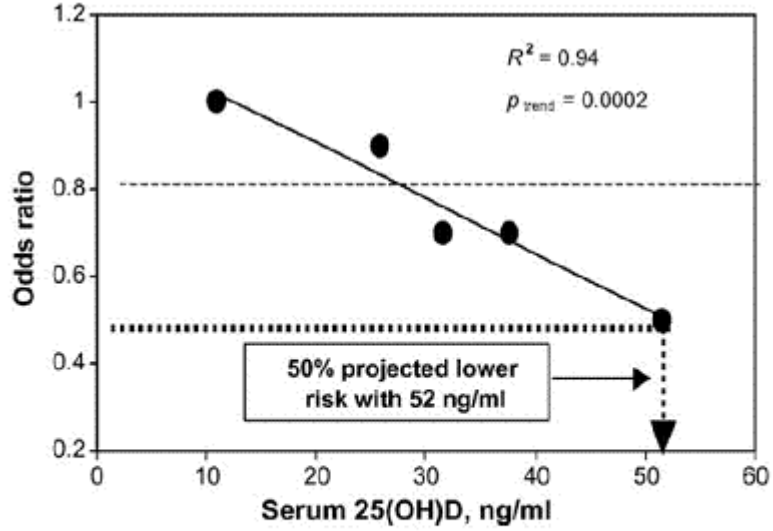
Sunlight, Vitamin D, and Breast Cancer Mortality in the U.S.



Vitamin D Prevents Breast Cancer



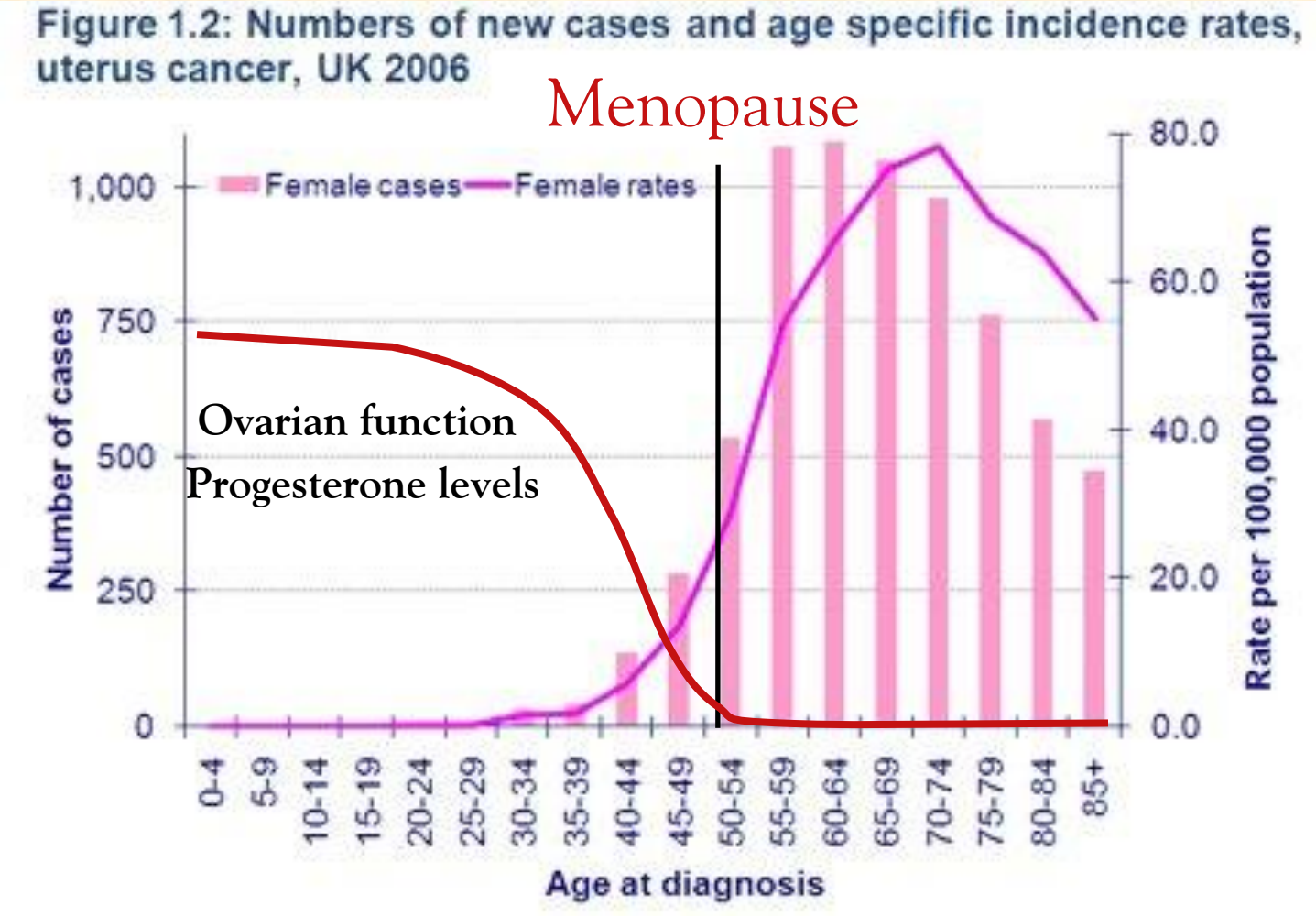
Relative risk of breast cancer mortality, by baseline serum 25-hydroxyvitamin D concentration, divided at the median, **NHANES III** cohort, 1988-2000



Dose–response gradient of risk of breast cancer according to serum 25-hydroxyvitamin D concentration, pooled analysis.

Source: Garland CF, et al. Vitamin D and prevention of breast cancer: Pooled analysis, J Steroid Biochem Mol Biol. 2007;103:708-11

Uterine Cancer Rate vs Age



Cancer Research UK 2006

Who Needs Progesterone Supplementation?

- Irregular menstrual cycles
- No periods—amenorrhea
- Heavy bleeding
- Fibrocystic breast disease
- Endometriosis/adenomyosis
- Every woman in menopause

So why are most doctors saying that female hormone replacement is dangerous?

Conventional HRT is really HST: Hormone Substitution Therapy!

- Estradiol substitutes: conjugated equine estrogens (CEE-Premarin®) and ethinyl estradiol (in birth control pills)—all are called "estrogen"
- Progesterone substitutes: medroxyprogesterone acetate (MPA-Provera®) and 30+ other "progestins"—all are called "progesterone"
- Testosterone substitute: methyltestosterone

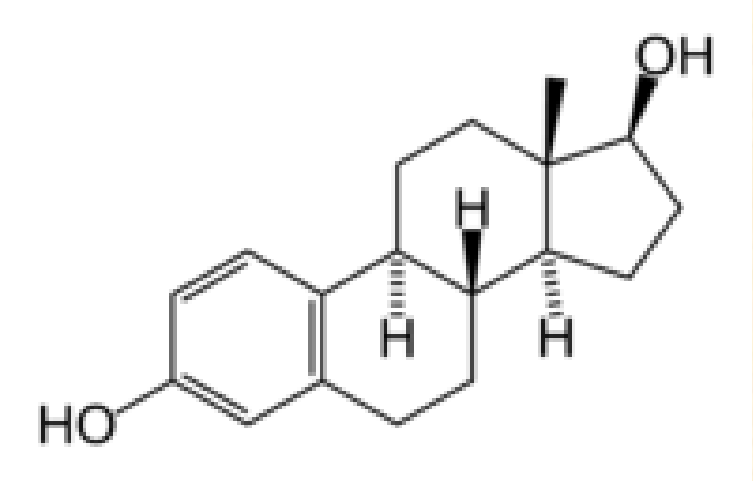
Patented drugs—not human hormones!

Most docs don't know the difference!

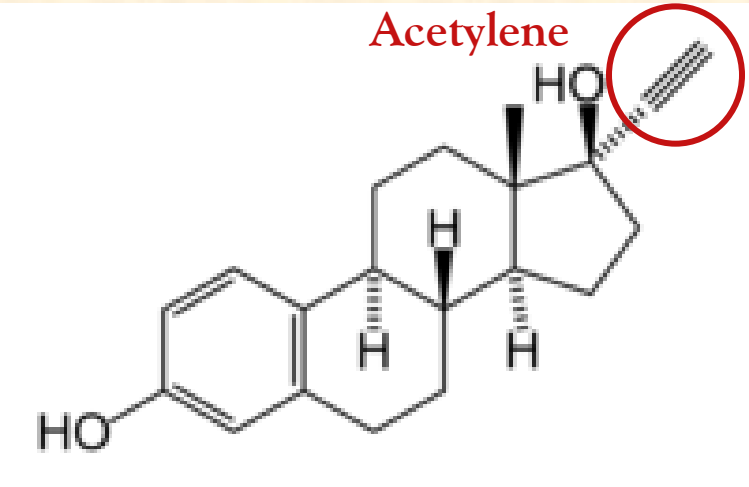
Human hormones cannot be patented, no profits

EE in Birth Control Pills

Estradiol



Ethinyl Estradiol



EE cannot be inactivated by normal oxidation!

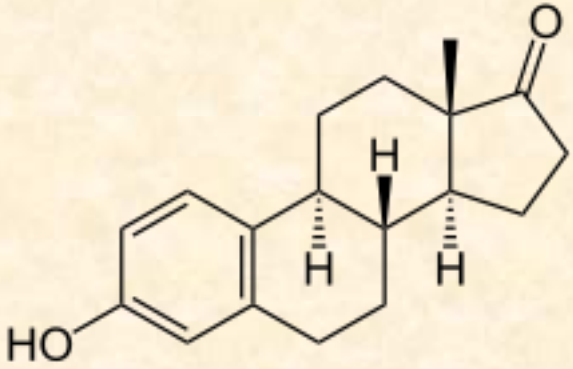
EE does not interact with estrogen receptor β!

EE is 12,000-60,000 times more potent by weight!

EE is thrombogenic→2x risk of DVTs, pulmonary emboli

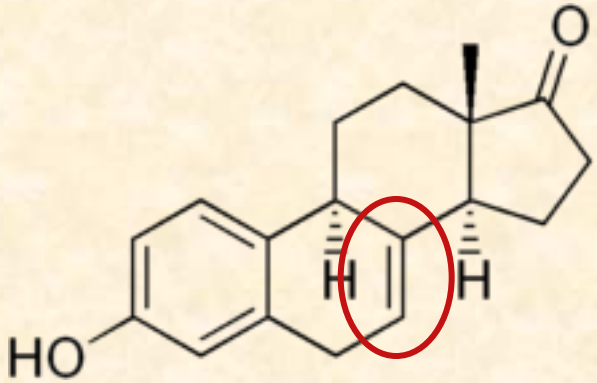
Premarin®
Conjugated Equine Estrogens

Human



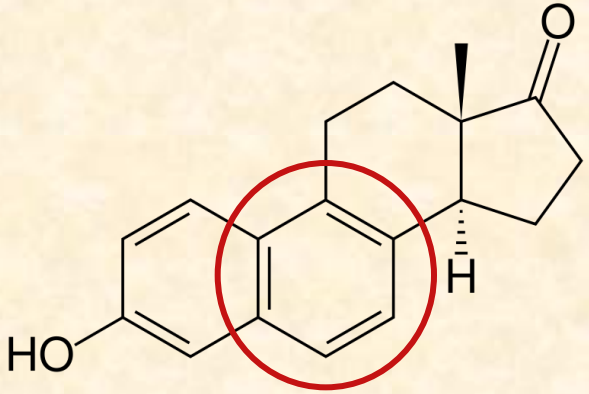
Estrone

Horse



Equilin

Horse



Equilenin

CEE contains at least 10 estrogens, only 3 are human; also contains horse androgens and progestins.

Klein R The Composition of Premarin. 1998 Int J Fertil 43:223

Oral Estrogens are Dangerous

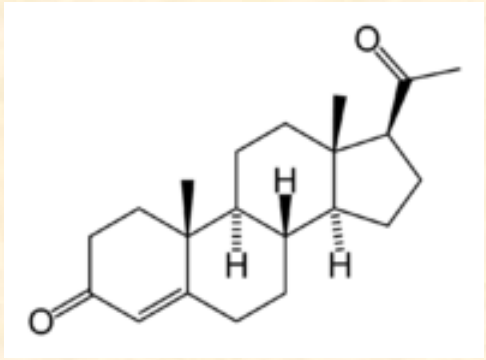
- First-pass effect on the liver→ ↑CRP, ↑clotting factors→ blood clots, strokes, heart attacks in the first year
- Transdermal estradiol mimics normal production and does not increase blood clotting!

"Oral but not transdermal estrogen is associated with an increased VTE risk."

Canonico M, ESTHER study. Circulation. 2007 Feb 20;115(7):840-5

Progestins ≠ Progesterone

Progesterone ≠ Medroxyprogesterone Drospirenone



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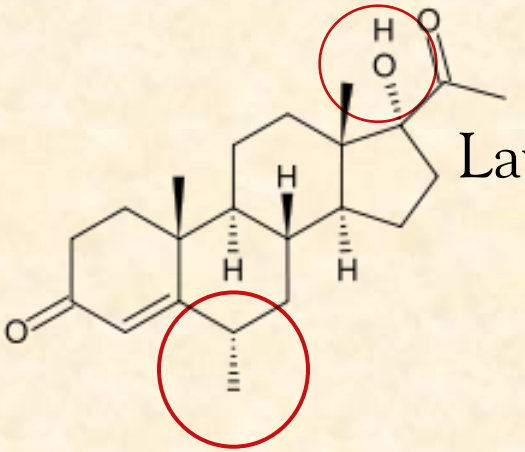
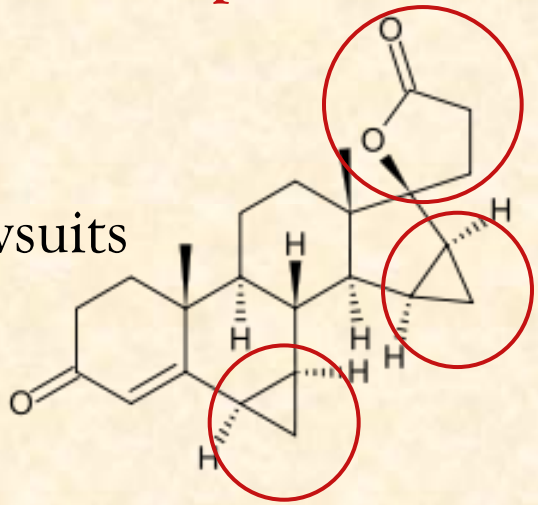


Lawsuits



Provera® Prempro®

Yasmin®

Confusion:

Progestins are often called "progesterone", in the media and in scientific papers!

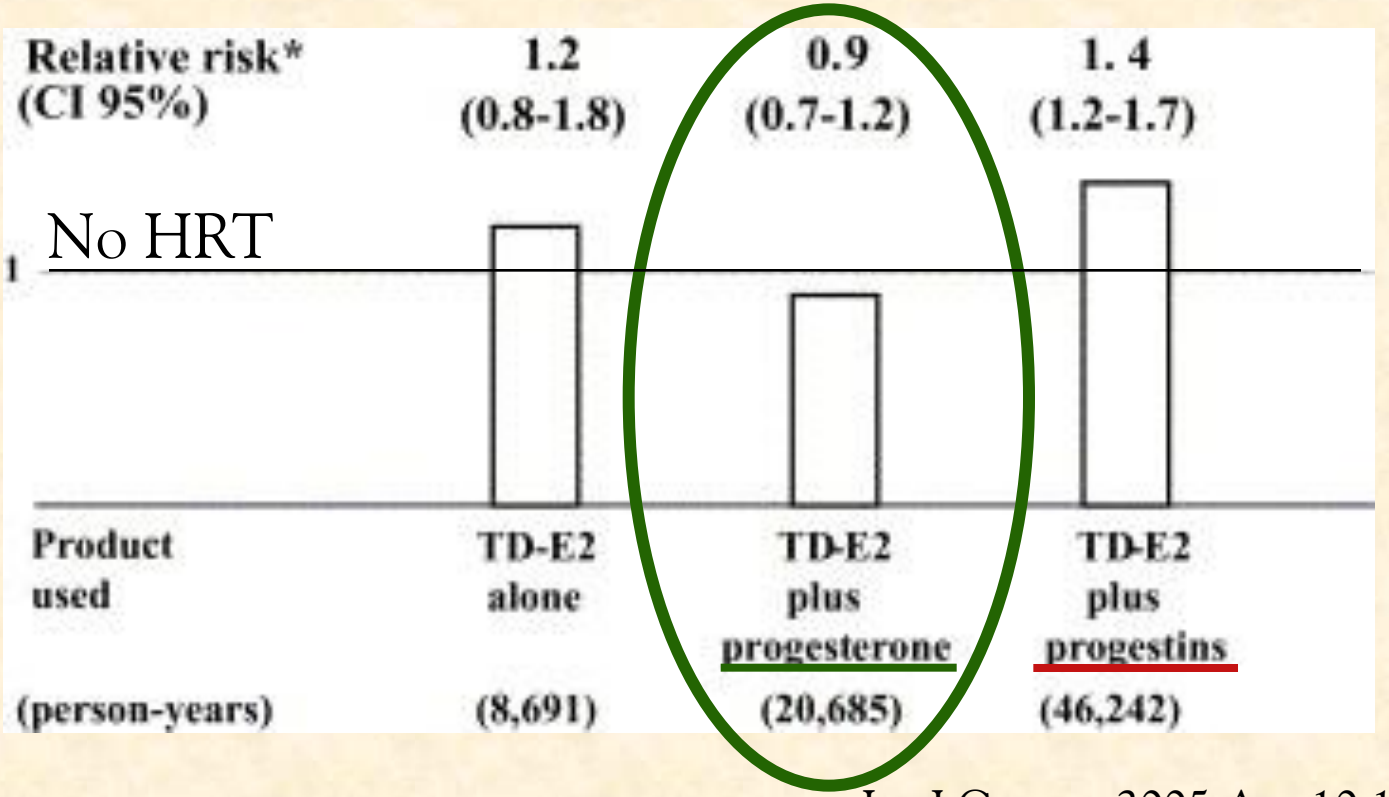
Scientific studies show that:

Provera®	≠	Progesterone
• Causes birth defects		• Maintains pregnancy
• Can cause depression		• Improves mood
• Insomnia, irritability		• Improves sleep
• Fluid retention		• Diuretic
• Raises blood sugar		• No effect on blood sugar
• Counteracts estrogen-induced arterial dilation		• Maintains estrogen-induced arterial dilation
• Worsens lipid profile		• Improves lipid profile
• Causes heart attacks		• No evidence of ↑ CVD
• Increases estrogenic stimulation of breasts		• Reduces estrogenic stimulation of breasts
• **Causes breast cancer**		• **Prevents breast cancer**

E3N-EPIC Study

Cohort study
55,000 women
8 years f/u
c/w WHI--
16,000, 6 yr. f/u

TD-E2 = transdermal **estradiol**



Int J Cancer. 2005 Apr 10;114(3):448-54

E2 plus progesterone: no increased risk of breast cancer!

Similar study: ***estradiol + progesterone 0.4;*** *estradiol + synthetic* ***progestin 0.94***

Espié, Gynecol Endocrinol. 2007 Jul;23(7):391-7.

Top European Researchers Agree!

"The hypothesis of progesterone …decreasing the proliferative effect of estradiol in the postmenopausal breast remains highly plausible and (progesterone) should be, until the coming of new evidences, the first choice for symptomatic postmenopausal women."

Modena MG, Sismondi P, Mueck AO, Kuttenn F, Lignieres B, Verhaeghe J, Foidart JM, Caufriez A, Genazzani AR; The TREAT. Maturitas. 2005 Sep 16;52(1):1-10.

2002 WHI Study—"HRT" is Dangerous!

- Premarin® alone given to older postmenopausal women caused adverse effects in the **first year** (strokes, blood clots)
  - **Oral estrogens cause blood clots, transdermal estradiol does not**
- Adding Provera® (Prempro®) caused more adverse effects (breast cancers, heart attacks, dementia)
  - **Provera increases breast cancer and vascular inflammation. Progesterone does neither.**
- Thousands of lawsuits pending; drug companies running a legal-protection propaganda campaign to paint all "hormones" as equally dangerous!

As Women Choose Bioidenticals: Docs Cave In to Pharma Pressure

ACOG October 31, 2005 "*…(compounded bioidentical hormones) should be considered to have the same safety issues as those hormone products that are approved by the FDA…* ***…hormone therapy does not belong to a class of drugs with an indication for individualized* dosing"** (????)

The Endocrine Society October 2006 "*…all estrogen-containing hormone therapies, "bioidentical" or "traditional," would be expected to carry essentially the* ***same risks and benefits*** (as those products used in the WHI study).

North American Menopause Society July 2008 "*…the generalized benefit-risk ratio data of commercially available HT products should apply equally to BHT.*"

ACOG, The Endocrine Society, and NAMS are all funded by pharmaceutical corps that make the hormone substitutes.

Doctors assume that these are unbiased experts!

Conventional Medicine is Pharmaceutical Medicine

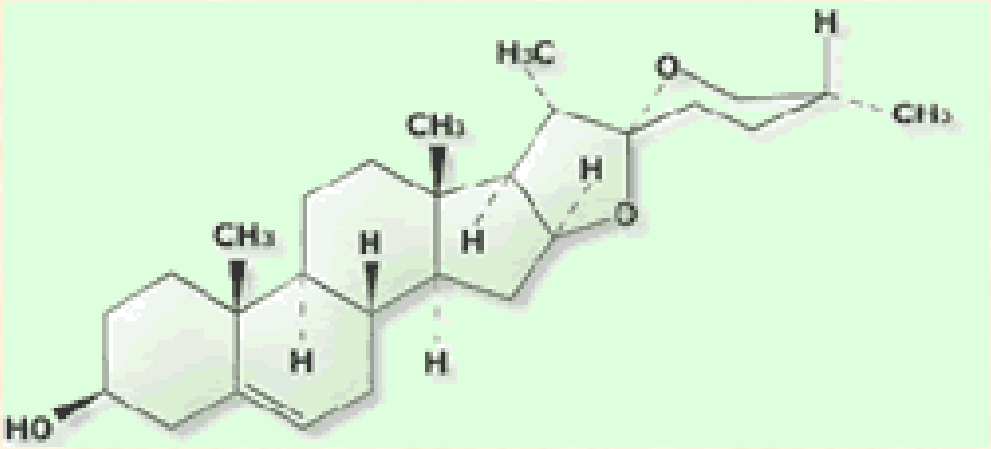
- Pharmaceutical corporations fund medical schools, journals, organizations, research—follow the money
- **Bioidentical molecules** cannot be patented
- **Pharma Agenda:** Sell more high-profit drugs
- **Pharma Influence:** Label hormone-related symptoms and disorders as **syndromes** to be treated with drugs (depression, fatigue, fibromyalgia, anxiety, impotence, PMS, osteoporosis, insomnia, etc.)
- Doctors follow pharma-funded org. guidelines
- Hormone and nutrient deficiencies **misunderstood**, **underdiagnosed** and **undertreated**

Menopausal Hormone Restoration

- Transdermal estradiol combined with sufficient progesterone (oral, sublingual, vaginal, transdermal).
- Daily use: No need to cycle and bleed—uterine lining remains thin.
- To cycle: Progesterone 2 weeks on, 2 weeks off.
- **Life-Long Restoration**—no reason to stop
- Include testosterone and DHEA for optimal results.

Where Do They Come From?

- All bioidentical steroid hormones (and substitutes too) are chemically synthesized from diosgenin (from wild Mexican yams and soy).



Avoid ambiguous terms: “natural”, “synthetic”

Compounding Pharmacies

- USP-certified **bioidentical** hormones mixed into creams, sublingual tablets, capsules, etc.
- Convenient, low cost, locally-made
- Individual preparations not studied, the hormones themselves are extremely well-studied.
- Dose adjusted by symptoms and blood levels
- Only a pharmaceutical corporation could hate compounded bioidentical hormone preparations!

What Can You Do?

- Self Help Book: *Natural Hormone Balance for Women* by Dr. Uzzi Reiss OB-GYN
  - Over-the-counter progesterone cream, highest dose
  - Progesterone 50 to 100mg capsules @ progest50.com

Ask your doctor to prescribe:

- From any drugstore : (FDA-approved bioidenticals):
  - **Estradiol** gel/patches (Estrogel ®, Climara ®, Vivelle Dot® etc.)
  - **Progesterone** Prometrium ® 100 or 200mg capsule orally or vaginally@bedtime
- From a compounding pharmacy:
  - **Estradiol** 1.5mg/0.5ml cream—apply to face and neck daily
  - **Progesterone** 100mg tabs sublingually/vaginally @bedtime

For More Information

- *The Hormone Solution—Stay Younger Longer* Thierry Hertoghe, MD
- *How to Achieve Healthy Aging—Look, Live, and Feel Fantastic After 40* Neal Rouzier, MD
- Life Extension Foundation (www.lef.org)
- Information, forms, and hundreds of scientific studies at www.hormonerestoration.com.