

The Hormonal Treatment of Rheumatic Diseases

HormoneRestoration.com

Henry Lindner, MD

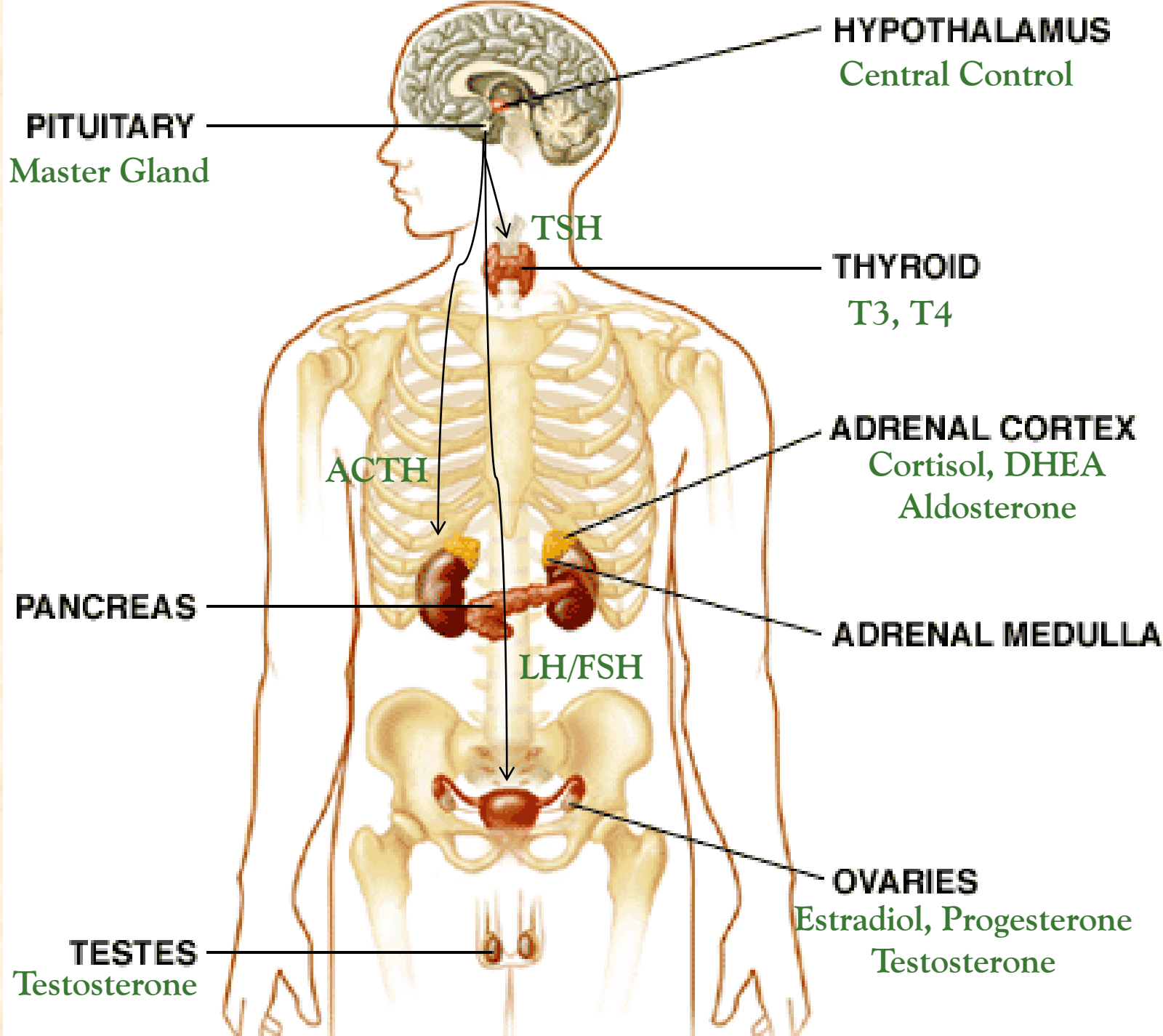
Relax: this presentation is available online

Topics

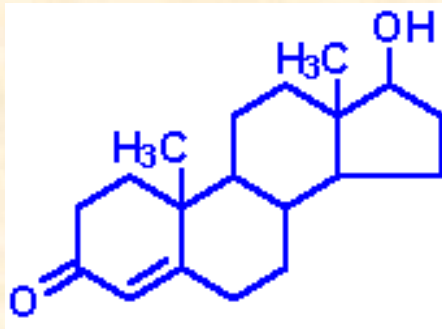
- ✦ **Bioidentical** Hormones are Best
- ✦ Hormone **Loss** with Age
- ✦ Restorative Endocrinology
- ✦ **Hypometabolism: Thyroid** and **Cortisol Deficiency**
- ✦ **Cortisol** and **DHEA** in **Rheumatic Diseases**
- ✦ **Hormone D** and Fish oil
- ✦ Sex hormone replacement for Women and Men

Hormones

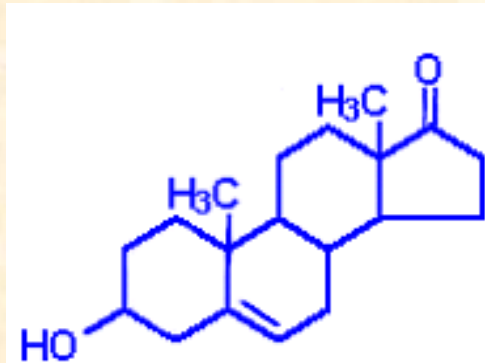
- ✦ Parts of our integrated neuro-endocrine-immune system
- ✦ Travel via blood to all cells
- ✦ **Control** cells' proliferation, differentiation, protein synthesis, metabolic rate, etc.
- ✦ The most **powerful** molecules in biology
- ✦ **Optimal** levels and effects are essential for **health** and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



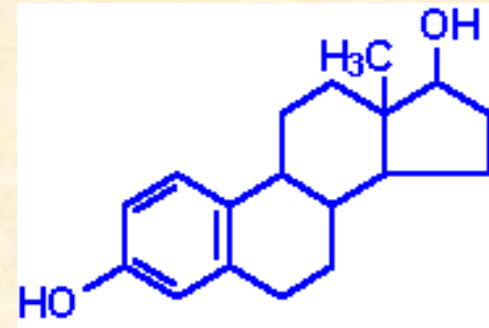
Human Steroid Hormones



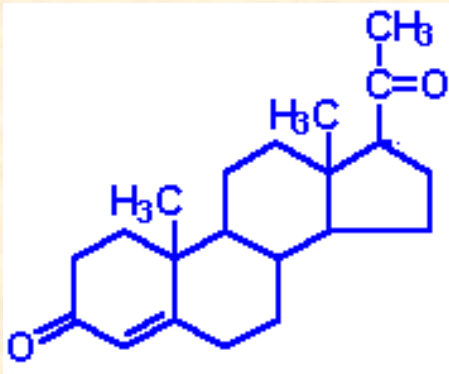
Testosterone



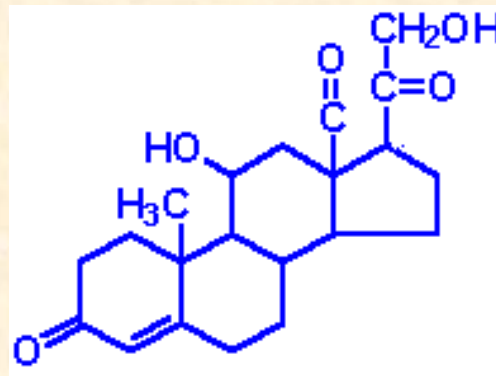
DHEA



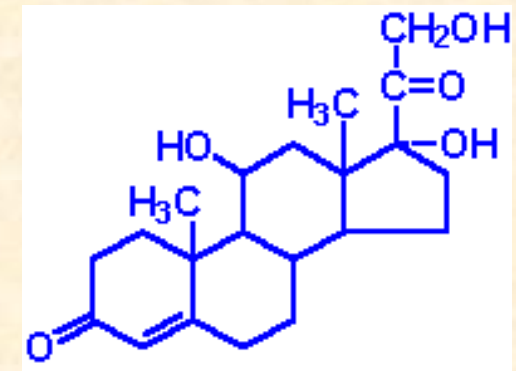
Estradiol



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
- ✦ **Non-toxic:**
 - ◆ No side effects, only effects
 - ◆ No interactions with drugs
 - ◆ No allergic reactions
- ✦ **Safe and Beneficial** in physiological levels/balance
- ✦ **Negative effects:** Due to **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!

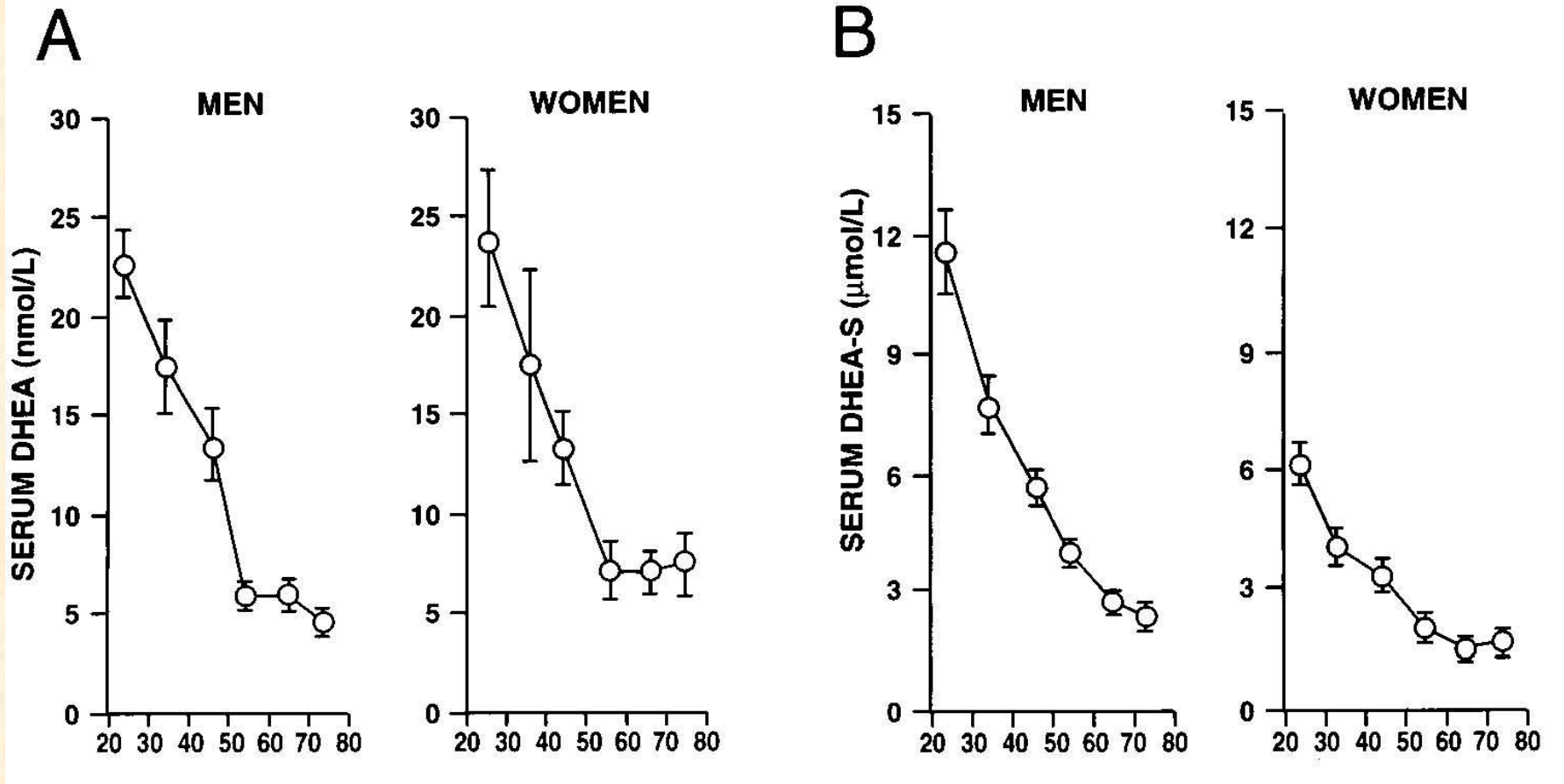
- ✦ Type 1 Diabetes: **bioidentical insulin**
- ✦ Hypothyroidism: **bioidentical T₄** (Synthroid, Levoxyl)
- ✦ Growth hormone deficiency: **bioidentical GH**
- ✦ Adrenal insufficiency: **cortisol** (hydrocortisone)
- ✦ **Non-bioidenticals:** Menopause, autoimmune dz, allergy

✦ The Controversies:

- ✦ How do we diagnose **deficiency**?
- ✦ How do we decide which dose is **right**?
- ✦ What do we do about **deficiencies** due to **aging**?

What about Losses due to Aging?

DHEA ↔ DHEA-S



Thyropause

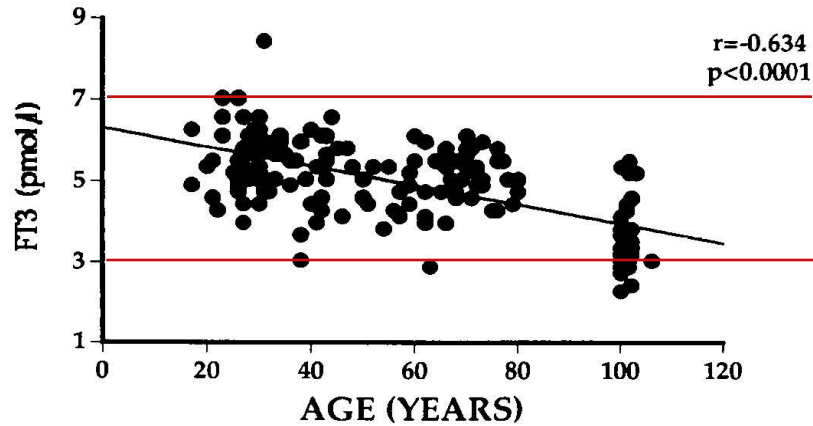


FIG. 7. Age-dependent variations in serum FT₃ concentration in healthy human subjects up to centenarians [Modified from S. Mariotti *et al.*: *J Clin Endocrinol Metab* 77:1130–1134, 1993 (147), with publisher's permission. © The Endocrine Society.]

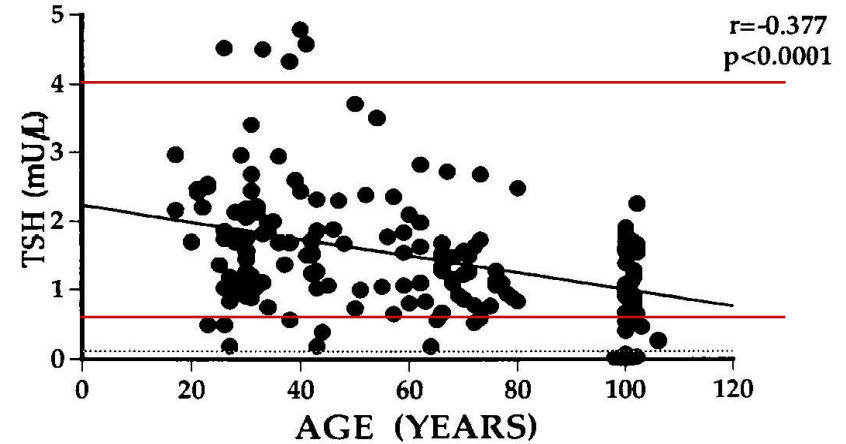
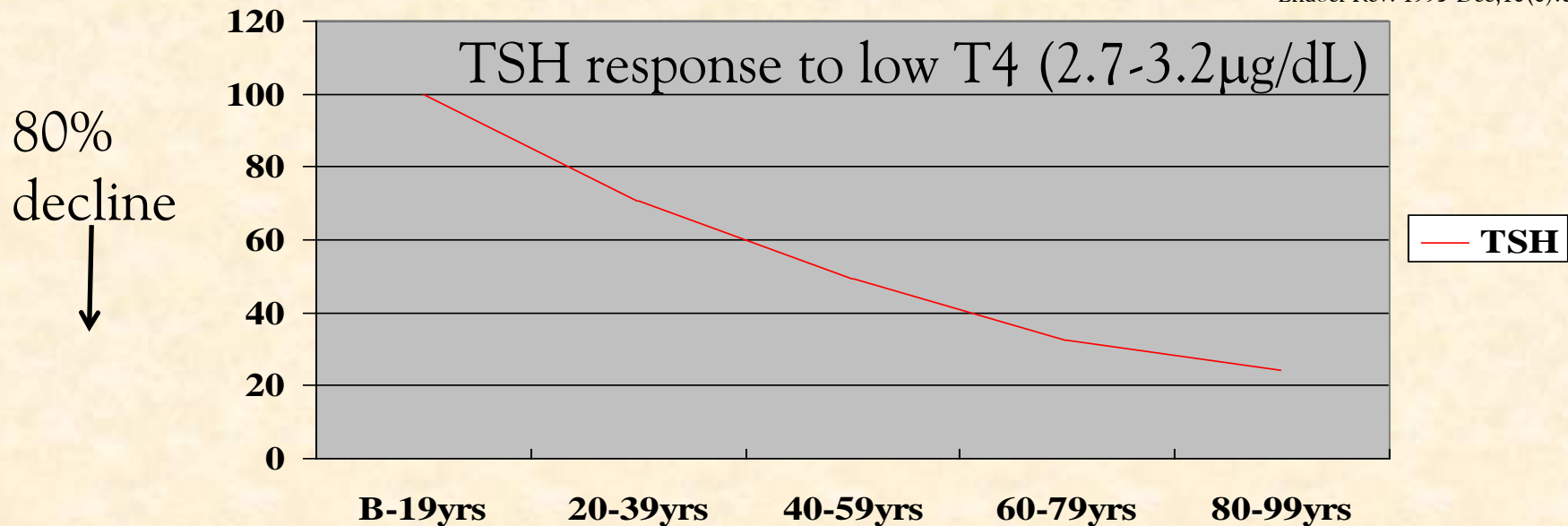
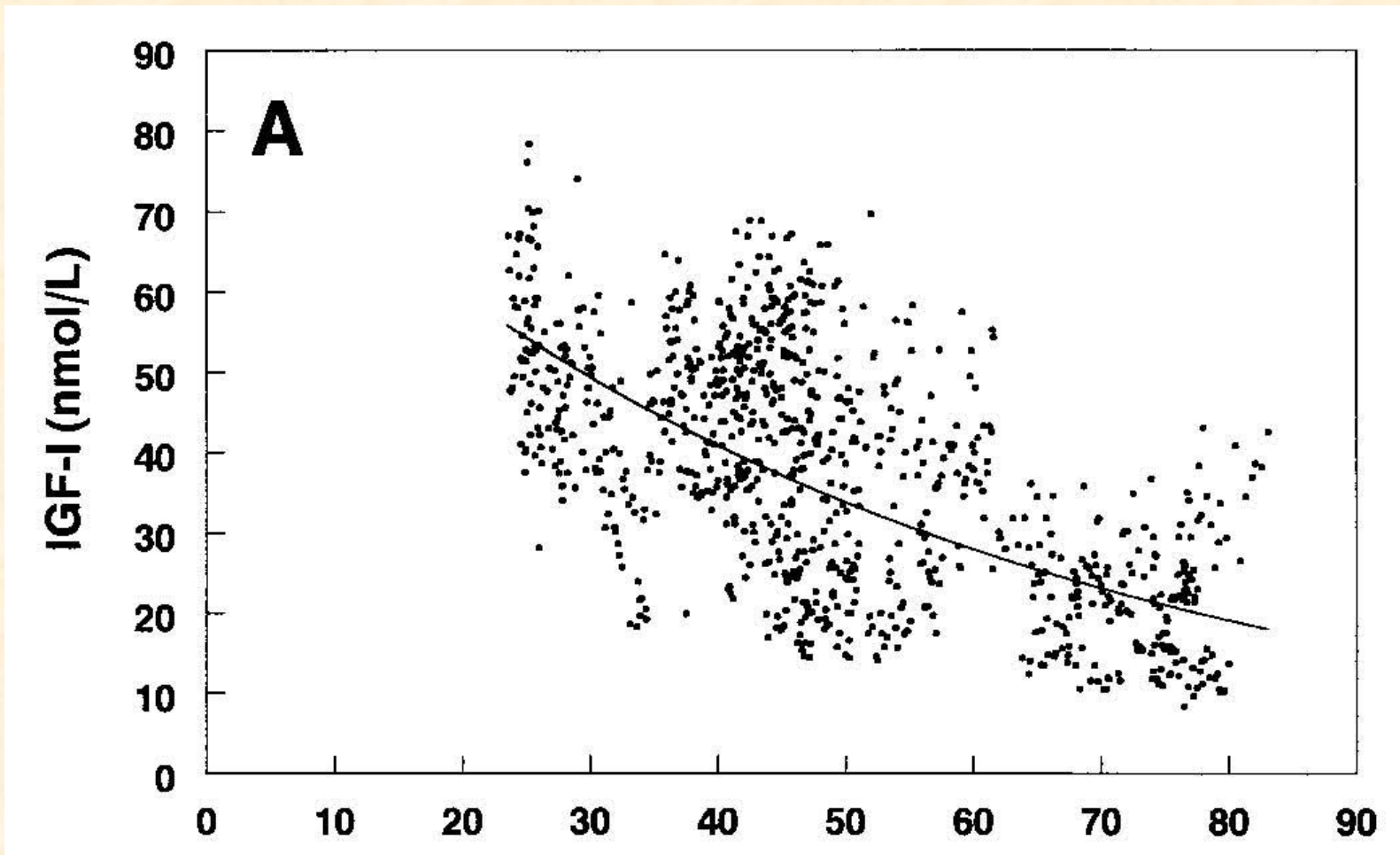


FIG. 8. Age-dependent variations in serum TSH concentration in healthy human subjects up to centenarians [Modified from S. Mariotti *et al.*: *J Clin Endocrinol Metab* 77:1130–1134, 1993 (147), with publisher's permission. © The Endocrine Society.]

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

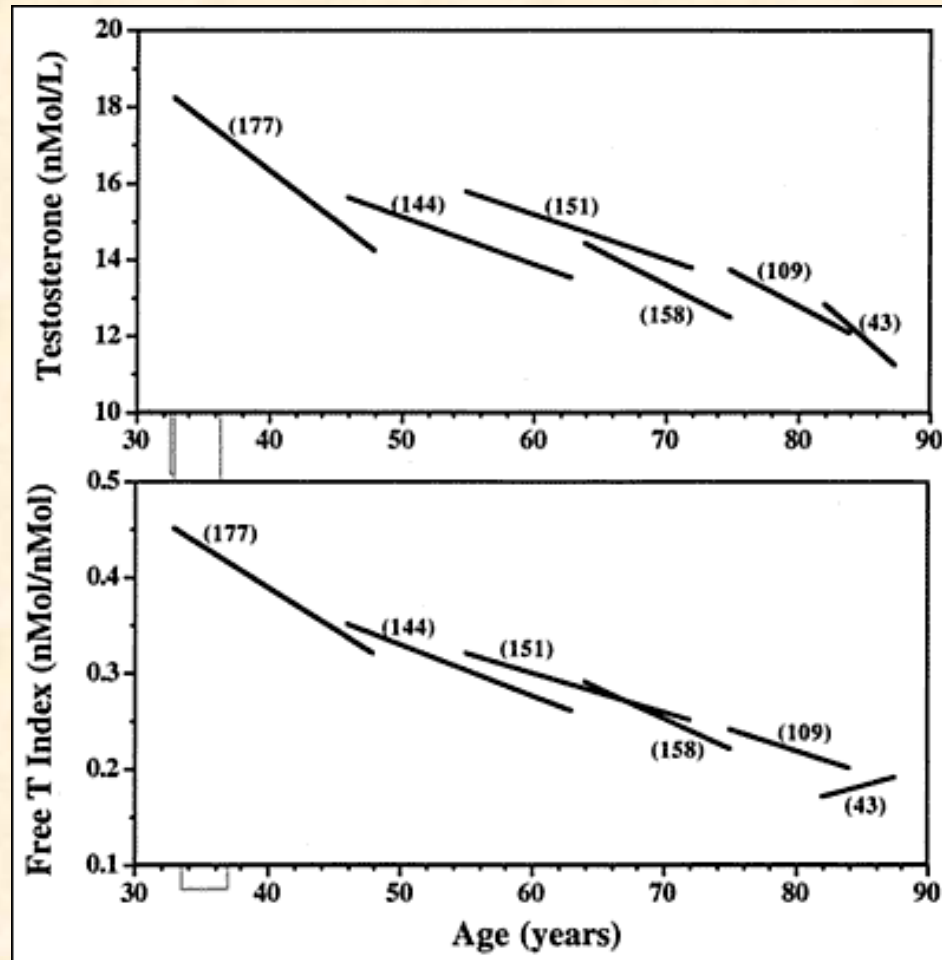


Somatopause Growth Hormone (GH)



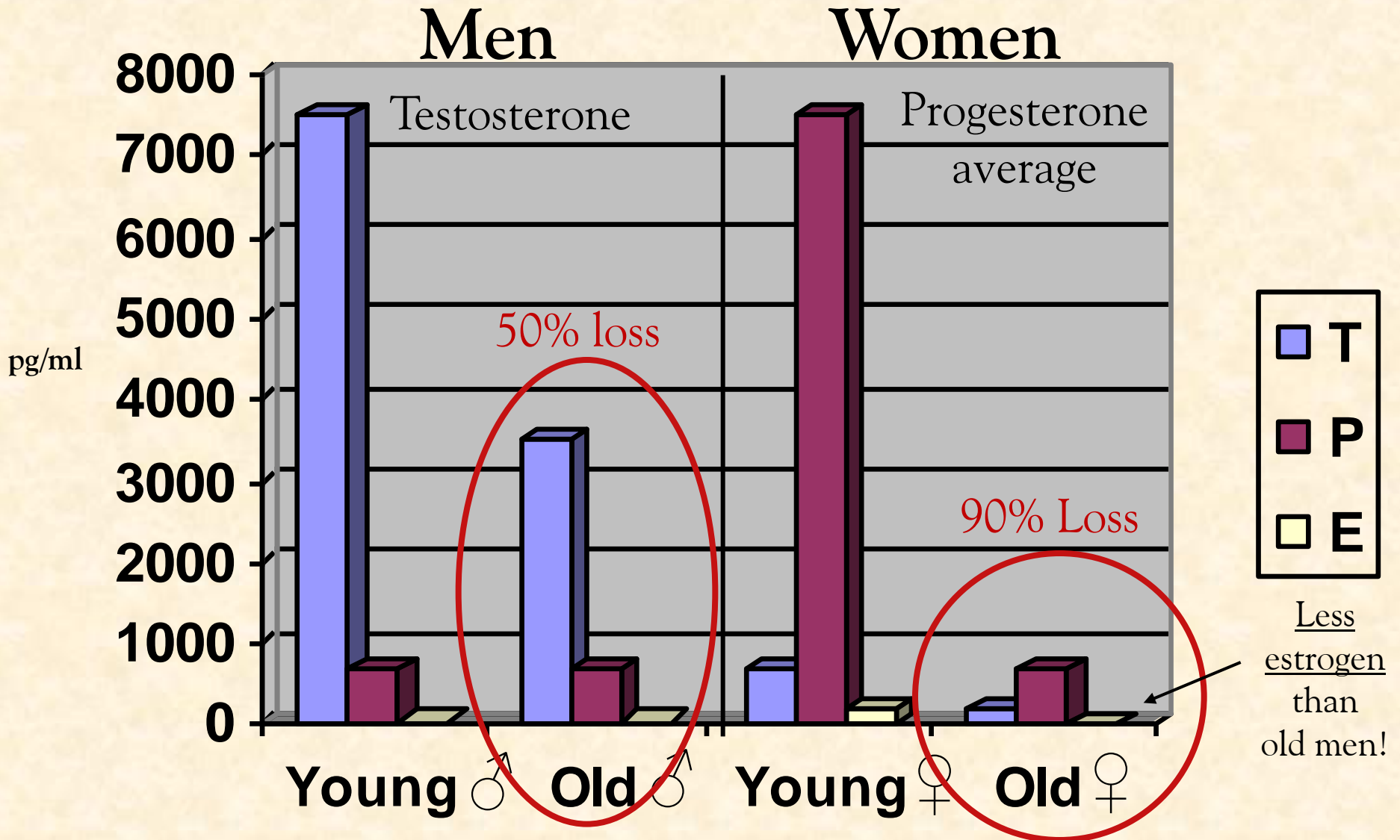
Andropause

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

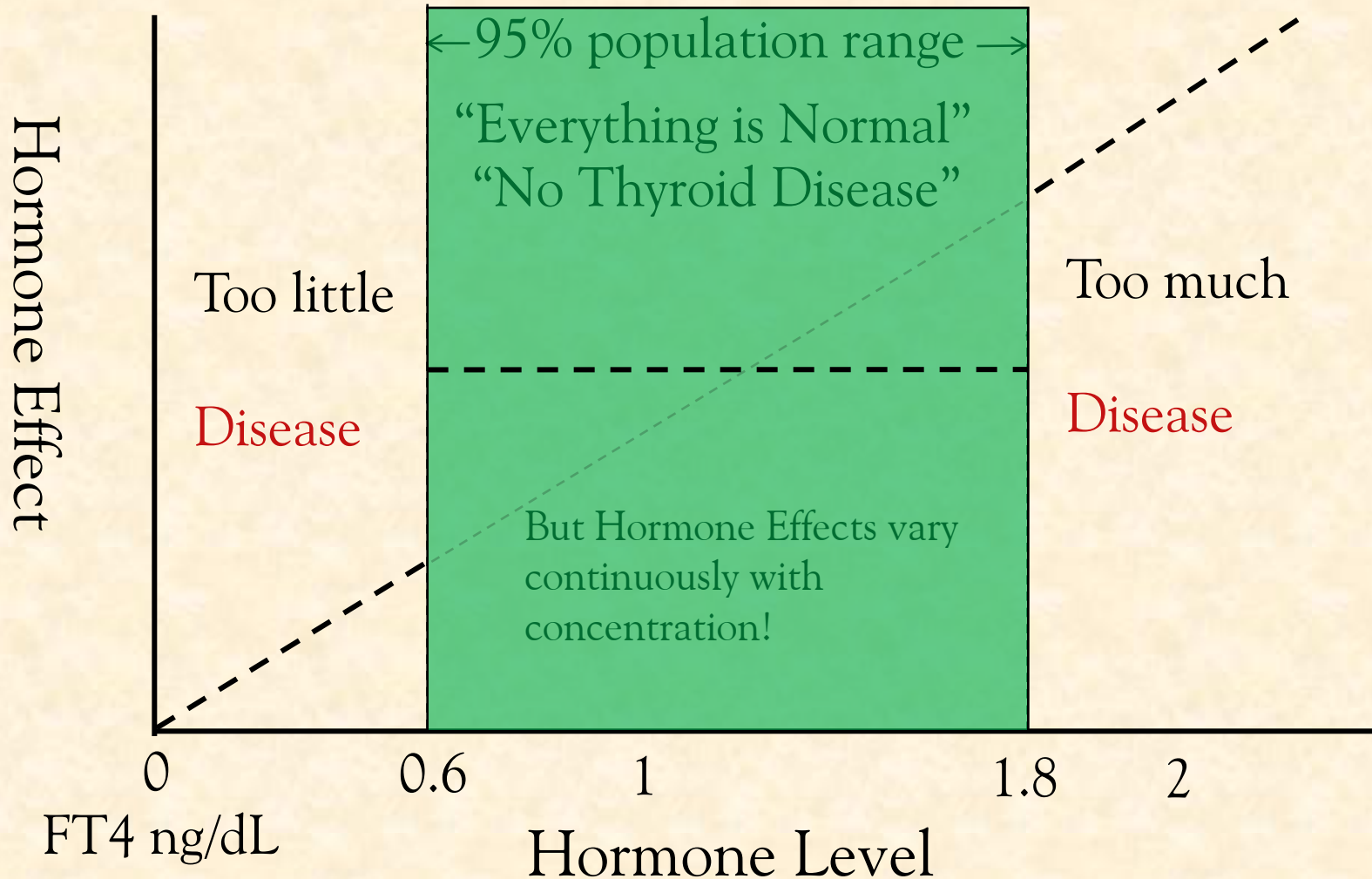
- ✦ **Aging** is a natural **self-destruct program** that kicks in around age 25 in humans
- ✦ Obesity, high blood pressure, diabetes, heart attacks, autoimmune diseases, and many **cancers increase** years after hormone **deficiencies** set in and occur more often in those with **lower** levels!
- ✦ **Aging** and the **loss** of hormones due to **aging** 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!!**

Why Docs Don't Get It:

Reference Range Endocrinology

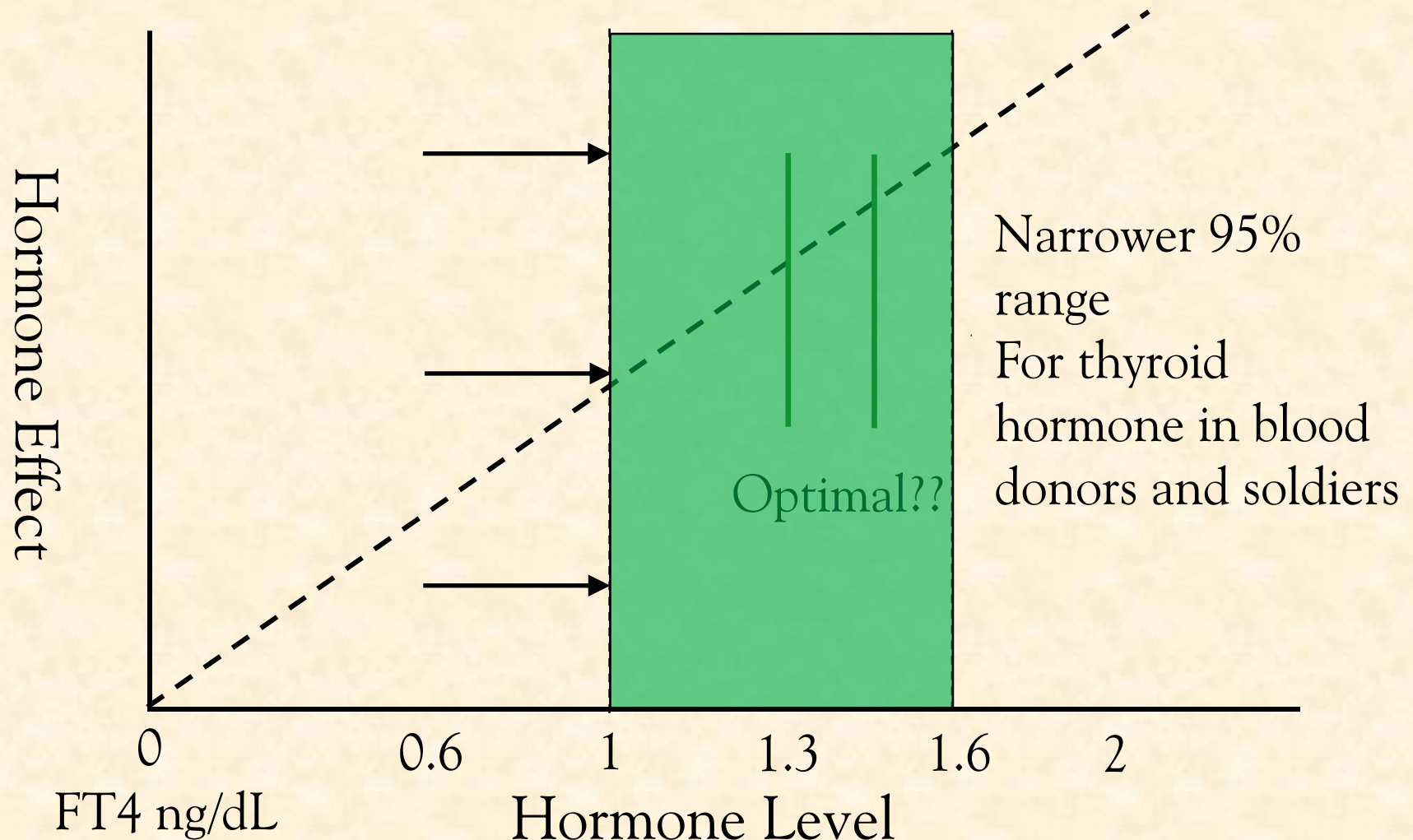
- ✦ “Normal” ranges are **not** optimal ranges!
 - ◆ Include **95%** of tested persons of **same decade in age**
 - ◆ Subjects **not** screened for ideal health
 - ◆ Only some are **diagnostic** ranges (glucose, cholesterol)
- ✦ Docs assume that all ranges are **diagnostic**, but
 - ◆ Male free testosterone: 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



New Paradigm: Restorative Endocrinology

- ✦ Endocrine glands **and** hypothalamic-pituitary control systems **deteriorate** with age.
- ✦ Our bodies **cease** to regulate our hormones for **optimal health**.
- ✦ Partial hormone **deficiencies** are **harmful**.
- ✦ The restoration of youthful/optimal 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.)

Hypothyroidism

- ✦ Mental fog, poor concentration, depression
- ✦ Fatigue, need for excessive sleep
- ✦ Cold extremities, always feels cold
- ✦ Aches and pains
- ✦ Hair loss; dry, coarse scalp hair
- ✦ Weight gain
- ✦ Constipation
- ✦ Ankle swelling, facial puffiness
- ✦ High cholesterol, increased **atherosclerosis**

Diagnosing Hypothyroidism

- ✦ **First:** symptoms and physical signs
- ✦ **Second:** low free T_4 and free T_3 levels—even if **within** the 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
- ✦ Pharmaceutical 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, 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

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

Cortisol Deficiency

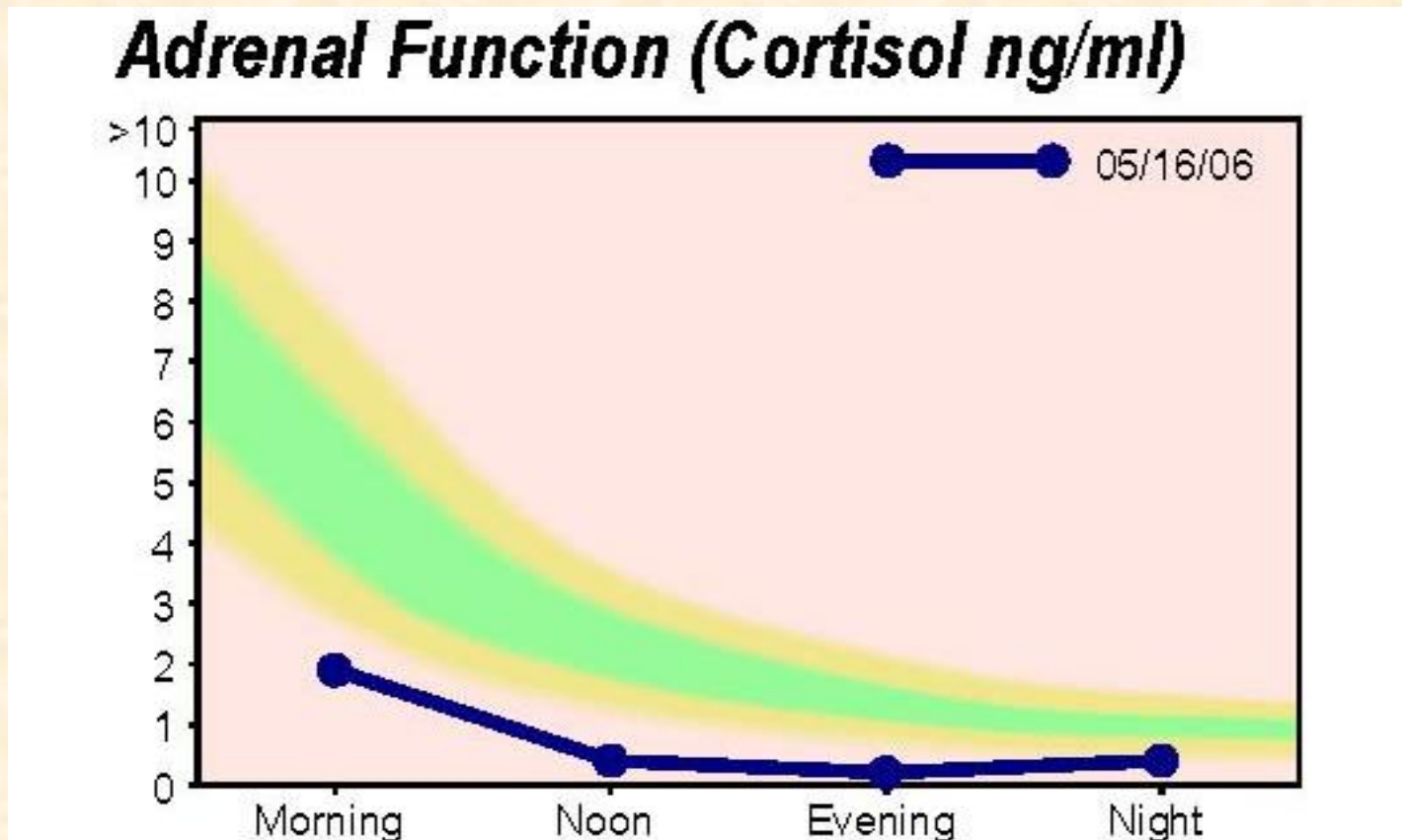
- ✦ Serum cortisol and ACTH stimulation tests are **insensitive**

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 of Cortisol Deficiency

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, muscle weakness, etc.
- ✦ Must maintain **thyroid/cortisol balance**.
- ✦ Must optimize sex hormones

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
- ✦ Reduces pain and inflammation
- ✦ Improves immune system function
- ✦ Improves fertility and sexual function in women

DHEA Restoration

- ✦ **Improves** blood sugar control, **lowers** insulin levels, and **counteracts** negative effects of diabetes Brignardello E, Diabetes Care. 2007 Nov;30(11):2922-7. Dhatariya K, Diabetes. 2005 Mar;54(3):765-9. Lasco A, Eur J Endocrinol. 2001 Oct;145(4):457-61.
- ✦ 25mg/day improves mood, fatigue and joint pain in elderly men. Genazzani AR, Aging Male. 2004 Jun;7(2):133-43.
- ✦ **Improves sexuality** in postmenopausal women. Hackbert L, J Womens Health Gend Based Med. 2002 Mar;11(2):155-62.
- ✦ **Alleviates depression** Bloch M, Biol Psychiatry. 1999 Jun 15;45(12):1533-41. Rabkin JG, Am J Psychiatry. 2006 Jan;163(1):59-66. Schmidt PJ, Arch Gen Psychiatry. 2005 Feb;62(2):154-62.
- ✦ **Reduces pain**—restores natural **endorphins** Stomati M, Gynecol Endocrinol. 1999 Feb;13(1):15-25.

Rheumatic Diseases

- ✦ **Autoimmune**—the body attacks its own tissues as if they are foreign invaders.
- ✦ Excessive **inflammation** in various tissues
- ✦ The body needs **higher-than-normal cortisol** levels to combat **inflammation**, reduce **immune hyperactivity**, and control the **disease**.

Adrenal Hormones and Rheumatic Diseases

- ✦ **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
- ✦ Cortisol receptor isoforms and polymorphisms assoc. with **autoimmune disease**. Tait AS J Leukoc Biol. 2008 Oct;84(4):924-31
- ✦ Low **DHEAS** found years before onset of **RA**, and in **all rheumatic diseases**. Masi AT, Ann N Y Acad Sci. 1999 Jun 22;876:53-62; disc.62-3
- ✦ **Stress** is a trigger of **autoimmune disease**. Stojanovich L, Autoimmun Rev. 2008 Jan;7(3):209-13
- ✦ Low **cortisol** levels in **fibromyalgia** , **chronic pain**. Gur A, Ann Rheum Dis. 2004 Nov;63(11):1504-6. McBeth J, Arthritis Res Ther. 2005;7(5):R992-R1000

The Female Dilemma

✦ Female/Male ratios:

- ✦ Autoimmune: RA 3:1, SLE 9:1, PMR 2:1, Sjögrens 18:1, Hashimotos /Graves thyroiditis 5:1, Mult. Sclerosis 3:1,
- ✦ Non-immune: Chronic fatigue 4:1, Depression 2:1, Anxiety 3:2, Fibromyalgia 8:1

✦ Women make 1/2 as much **cortisol** as men.

Vierhapper H, Metabolism. 1998 Aug;47(8):974-6

✦ Women release **less cortisol** under stress

Takai N, Ann N Y Acad Sci. 2007 Mar;1098:510-5

✦ **Estradiol** lowers **cortisol** levels and **opposes cortisol** throughout the body.

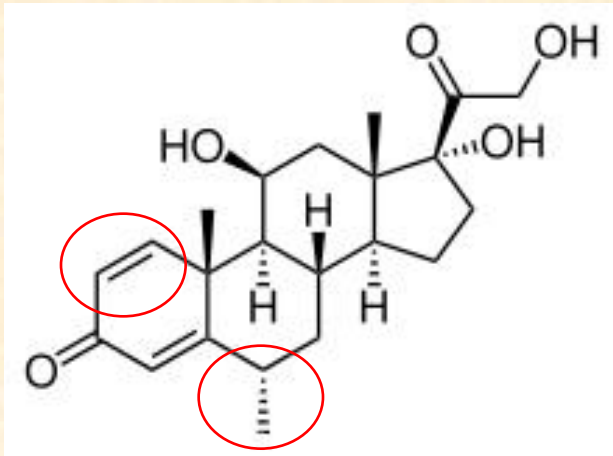
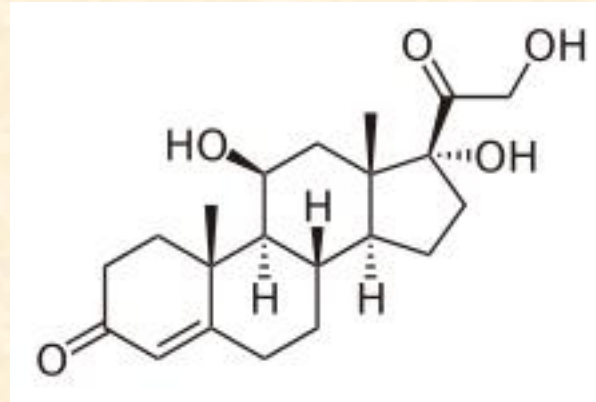
Kerdelhué B, Neuro Endocrinol Lett. 2006 Oct;27(5):659-64
Ligeiro de Oliveira AP, Neuroimmunomodulation. 2004;11(1):20-7

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

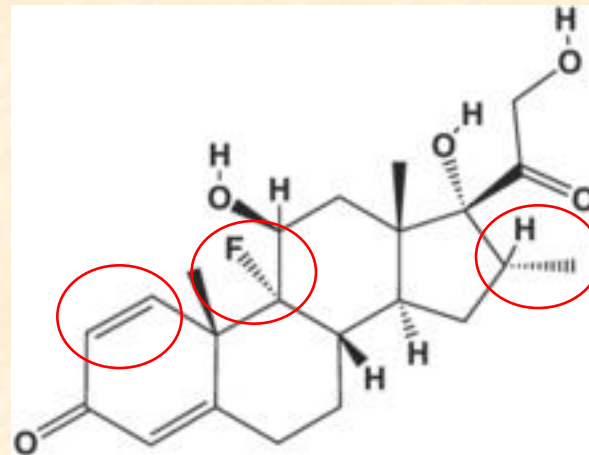
Sagud M, Neuropsychobiology. 2002;45(3):139-43

Glucocorticoids (“Steroids”)

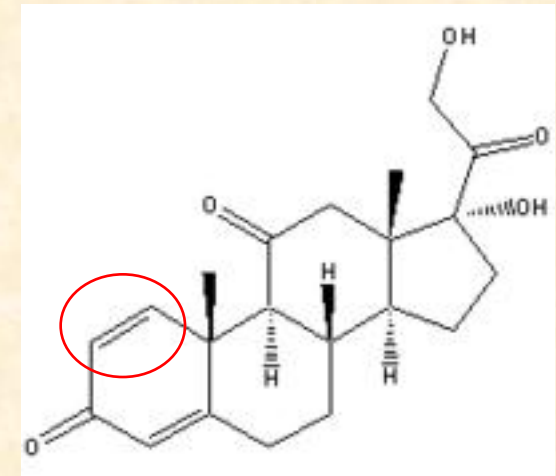
Cortisol (hydrocortisone)



Methylprednisolone (5x)
Medrol®



Dexamethasone (70x)
Decadron®



Prednisone (4x)

Steroid Treatment

- ✦ Docs don't realize that glucocorticoid treatment is a form of hormone replacement
- ✦ Docs **do not** check **cortisol** levels or replace **DHEA**
- ✦ Prednisone $\leq 7.5\text{mg}$, Medrol $\leq 6\text{mg}$ are replacement doses
- ✦ Low-dose prednisone ($\leq 7.5\text{mg/d}$) generally safe
Da Silva JA, Ann Rheum Dis. 2006 Mar;65(3):285-93
- ✦ **Excess steroid without DHEA** \rightarrow bone loss, infections, diabetes, weight gain, high blood pressure, moon face
- ✦ **Hydrocortisone** preferred; most benefits, least negative effects. Short-acting, long-acting tablets under development (Duocort[®])

DHEA for Rheumatic Diseases

- ✦ All patients on steroids should be given **DHEA**

Straub RH, Z Rheumatol. 2000;59 Suppl 2:II/108-18
Robinson B, Rheumatology (Oxford). 1999 Jun;38(6):488-95

- ✦ **Increases** bone density with ≤ 10 mg of prednisone

Mease PJ, J Rheumatol. 2005 Apr;32(4):616-21

- ✦ **Improves** mood and energy in patients on steroids

Hunt PJ, Clin Endocrinol Metab. 2000 Dec;85(12):4650-6

- ✦ **Increases** natural killer cell number and activity

Casson P, Am J. Obstet Gynecol 169: 1536-39

- ✦ **Reduces inflammatory** markers (IL-6, TNF- α)

Daynes RA, J Immunol 1993 Jun 15;150(12):5219-30

DHEA for SLE

- ✦ SLE patients have very low DHEAS levels
- ✦ Prasterone® is DHEA by prescription
- ✦ Increases IL-2 and reduces SLE disease activity
Petri MA, Arthritis Rheum. 2004 Sep;50(9):2858-68
- ✦ Suppresses IL-10 which increases autoantibody production in Lupus
Chang DM, Ann Rheum Dis. 2004 Dec;63(12):1623-6
- ✦ Allows reduction in steroid dose.
Petri MA, Arthritis Rheum. 2002 Jul;46(7):1820-9
- ✦ Improves well-being, sexuality, and cognition in women with Lupus or adrenal insufficiency
Arlt W, Endocr Res. 2000 Nov;26(4):505-11
Nordmark G, Autoimmunity. 2005 Nov;38(7):531-40

DHEA Replacement

- ✦ **Best taken sublingually 1-2x/day**
- ✦ **Life Extension dissolve-in-the-mouth 25mg tablets**
(www.lef.org)
- ✦ **12.5-25mg/day** for women
- ✦ **25 to 50mg/day** for men.
- ✦ **Women may experience pimples, oily skin initially**
- ✦ **Start with low dose and work up gradually**

TNF- α and Adrenal Hormones

- ✦ TNF- α is an **inflammatory** cytokine that is elevated in **autoimmune diseases**.
- ✦ TNF- α **suppresses** cortisol and DHEAS production \rightarrow more **inflammation**, vicious cycle
- ✦ Higher **cortisol** and **DHEAS** levels **suppress** TNF- α levels.
- ✦ Anti-TNF- α drugs (Enbrel, Remicade, Humira) increase **cortisol** and **DHEAS** levels.

Straub RH, Arthritis Rheum. 2008 Apr;58(4):976-84

Arthritis Rheum. 2003 Jun;48(6):1504-12

Ernestam S, J Rheumatol. 2007 Jul;34(7):1451-8

Vitamin D=Hormone D

- ✦ A powerful **hormone** with anti-inflammatory effects
- ✦ Vit. D levels are **low** in **SLE** patients, contributing to **inflammation**. Vit. D **improves** immune system abnormalities.

Cutolo M, Lupus 2008;17(1):6-10. Kamen D, Curr Opin Rheumatol. 2008 Sep;20(5):532-7

- ✦ **Higher** Vit. D levels assoc. with **lower** TNF- α .

Peterson CA, J Inflamm (Lond). 2008 Jul 24;5:10

- ✦ Levels must be $>30\text{ng/ml}$ for significant benefit
- ✦ **Optimal** levels **55-70ng/ml**, usually requires **4000IU** Vit. D3 daily from all sources
- ✦ **D3** much more effective than D2 (pharmaceutical)

Fish Oils—Omega-3 Fatty Acids

- ✦ **Decrease** the production of inflammatory eicosanoids, cytokines, and reactive oxygen species.

Calder PC. Am J Clin Nutr. 2006 Jun;83(6 Suppl):1505S-1519S

- ✦ **Reduce TNF- α** levels.

Fetterman JW Jr, Am J Health Syst Pharm. 2009 Jul 1;66(13):1169-79

- ✦ **Improve SLE** disease activity and have cardiovascular benefits.

Duffy EM, J Rheumatol. 2004 Aug;31(8):1551-6
Wright SA, Ann Rheum Dis. 2008 Jun;67(6):841-8

- ✦ Proven **beneficial** in **Rheumatoid Arthritis**. Proudman SM, Rheum Dis Clin North Am. 2008 May;34(2):469-79.

- ✦ **Dose: 1500 to 3000mg EPA +DHA daily**

Sex Hormones in Autoimmune Diseases

✦ Low testosterone and progesterone levels seen in men and women with **RA**.

✦ Testosterone and progesterone **immunosuppressive**

Wilder RL. J Rheumatol Suppl. 1996 Mar;44:10-2

Schust DJ, Hum Reprod. 1996 May;11(5):980-5

✦ **RA** and **MS** improve during pregnancy (high progesterone), worsen with breast feeding (low progesterone).

✦ Higher **testosterone** levels helpful in **autoimmune diseases** that affect women > men

✦ Estrogen and testosterone **beneficial** in MS.

Gold SM, Prog Brain Res. 2009;175:239-51

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)

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)**

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 increases** heart muscle size, strength

- ✦ **T decreases** fibrinogen levels—prevents blood clots

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

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

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

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

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

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

- ✦ 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 Morgenthaler

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

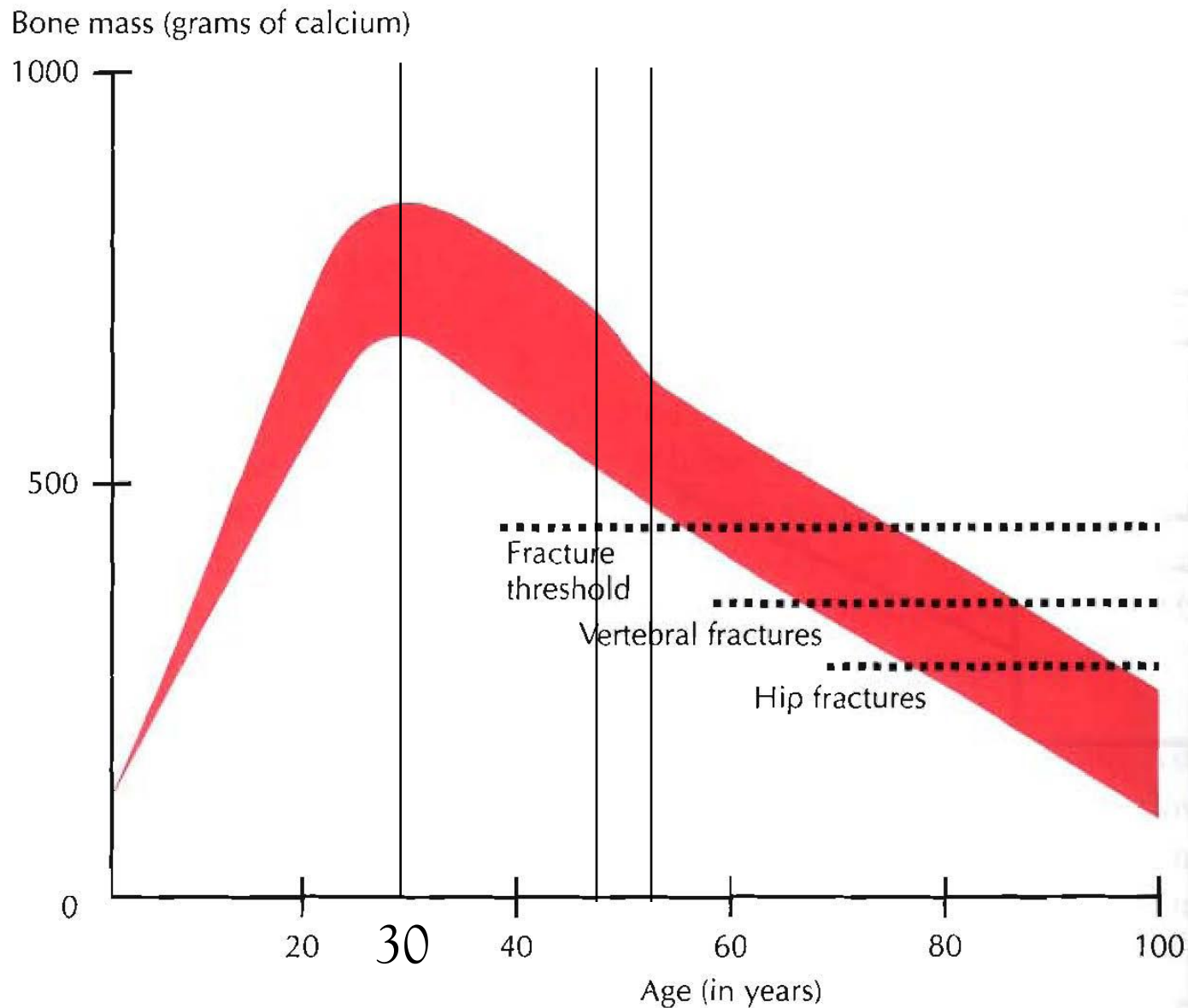
- ✦ Improves energy, mood, and mental function
- ✦ Improves sexual desire and sensation
- ✦ Increases muscle and tissue strength
- ✦ Opposes estradiol-induced breast stimulation and reduces risk of **breast cancer**

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

- ✦ With **estradiol**, increases bone density

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

Changes in Women's Bone Mass with Age



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**
- ✦ Steroids (prednisone, Medrol) **accelerate bone loss**

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
- ✦ **Hormone restoration** including **Vit. D** increases bone density **better** than **bisphosphonates** and preserves **normal** bone remodeling
- ✦ **Hormones build bone** even on 5-15mg prednisone!

Estradiol Restoration in Menopause

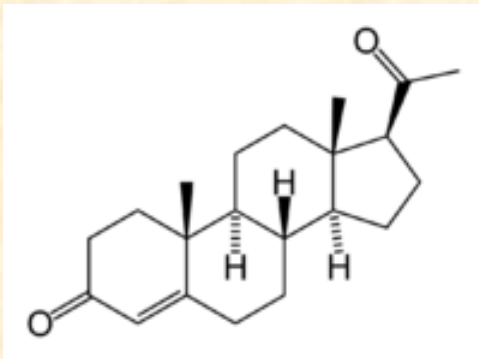
- ✦ Protects against heart disease, dementia and osteoporosis.
- ✦ Improves insulin sensitivity—prevents diabetes
- ✦ Eliminates hot flashes, restores sleep
- ✦ Restores cognitive function and mood
- ✦ Maintains thickness, fullness of skin and hair
- ✦ Maintains genital/pelvic health-helps with vaginal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

Female Hormone Replacement: Risks?

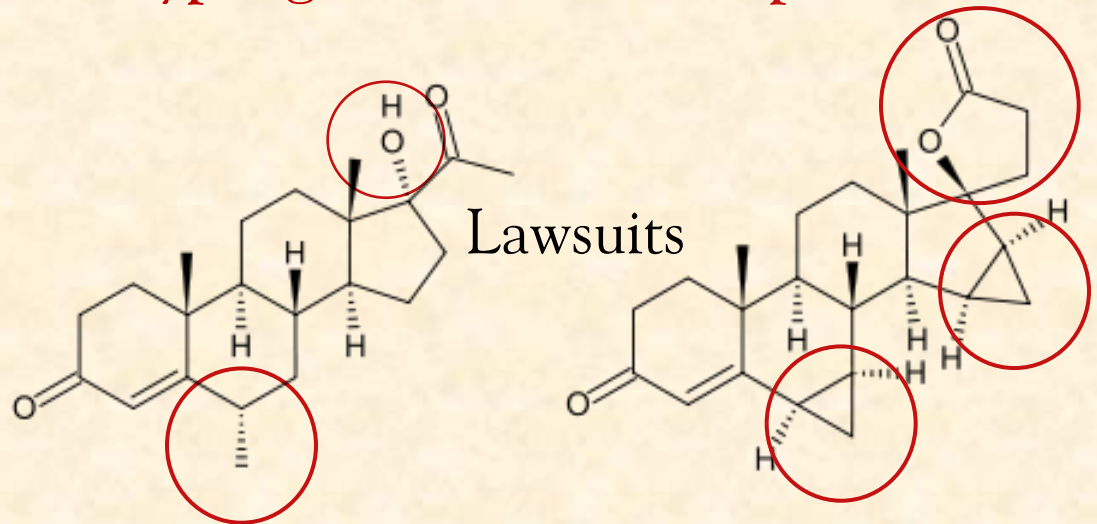
- ✦ Women's Health Initiative study (2002) showed that **Premarin[®]** and **Provera[®]** have **serious risks**—not **bioidentical** hormones.
- ✦ Only oral estrogens (Premarin[®], BCPs) increase **blood clotting** (DVT's, stroke), **transdermal estradiol** does not.
Canonico M, ESTHER study. Circulation. 2007 Feb 20;115(7):840-5
- ✦ **Provera[®]** increases **breast cancers** and **heart attacks**, **progesterone** does not.

Progestins \neq Progesterone

Progesterone \neq Medroxyprogesterone Drospirenone



\neq



Lawsuits

Provera[®] Prempro[®]

Yasmin[®]

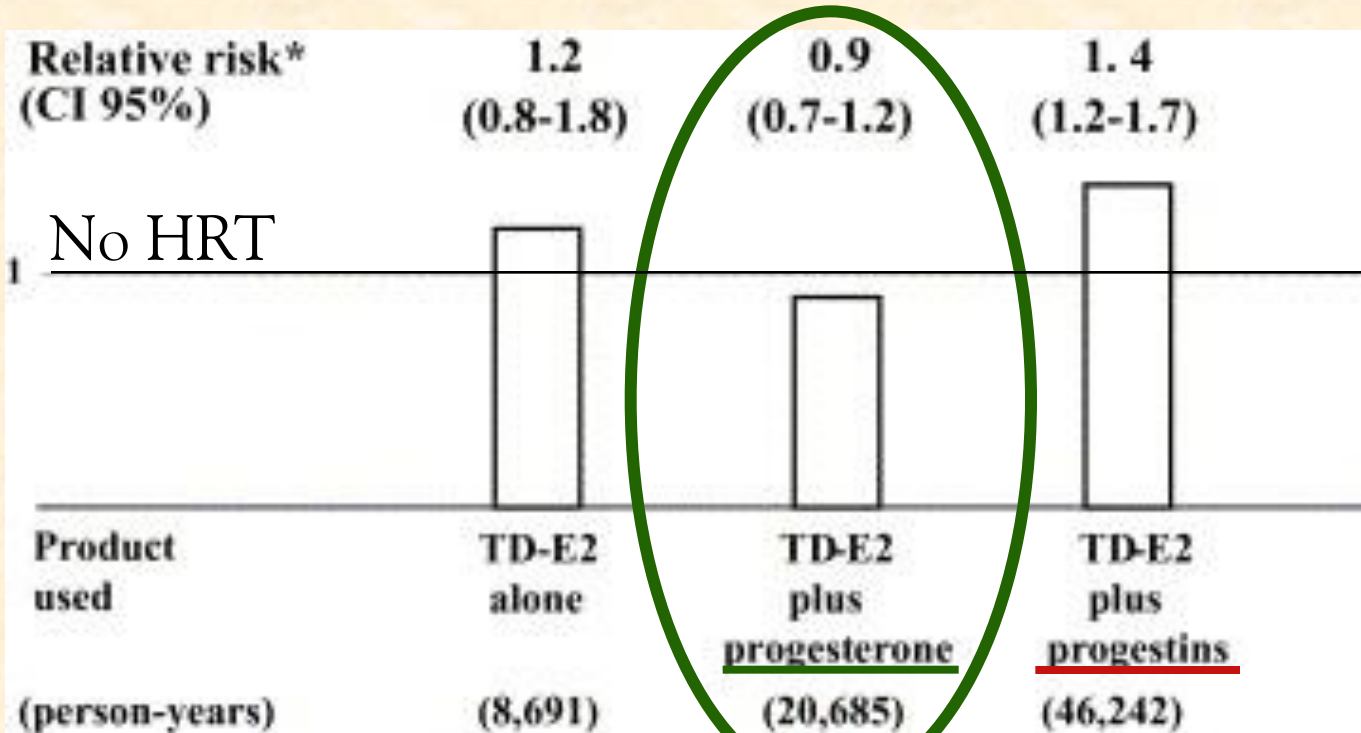
Confusion:

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

E3N-EPIC Study

TD-E2 = transdermal **estradiol**

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



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.

What Can Menopausal Women Do?

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

Natural Treatment of Rheumatic Diseases

- ✦ Diagnose and treat **cortisol deficiency**
- ✦ **Hydrocortisone is safe** long-term in physiologically necessary doses (20-50mg) IF given with **DHEA** and **sex hormone restoration**.
- ✦ **Prednisone** is the 2nd choice, may provide better anti-inflammatory effect.
- ✦ Optimize **Hormone D** levels and **fish oil** intake
- ✦ If necessary, **pharmaceuticals** in consultation with your rheumatologist

For More Information

- ✦ *The Hormone Solution—Stay Younger Longer*
Thierry Hertoghe, MD
- ✦ *The Miracle of Natural Hormones* David
Brownstein, MD
- ✦ *How to Achieve Healthy Aging—Look, Live, and Feel
Fantastic After 40* Neal Rouzier, MD
- ✦ Forms, information and hundreds of abstracts at
www.hormonerestoration.com
- ✦ Contact me: Henry@hormonerestoration.com
- ✦ Contact Carol: Carol@hormonerestoration.com
- ✦ Office Phone: 570-955-3495