### LABS

Some insurance companies feel hormone replacement therapy is elective. It is advisable to check with your insurance company prior to completing a blood draw with Sonora Quest of Lab Corp to verify coverage. Labs can be very expensive if they are not covered, sometimes up to \$2000.00. We do offer an alternative to the insurance paid labs. Hormone panels through the alternative lab may average from \$179.00 to \$279.00 and must be paid for at time of draw in our office.

When calling your insurance company they will ask for a diagnosis code. For Hormone replacement therapy the **diagnosis code** is: **V07.4 (HRT), 627.6 (Symptomatic Menopause)** 

They will then ask for CPT codes. These are the 5 digit procedure codes. The most common we run in this office include:

Estrone	82627	Total Testosterone	84403	LH	83002
Estradiol	82670	Pregnenolone	84140	Vitamin D	82306
Progesterone	84144	DHEAS	82627	TSH	84443
Free Testosterone	84402	FSH	83001		

After running labs, if you do no hear from us after 2 WEEKS, PLEASE CALL US. We will contact the lab.

### PHARMACIES

Multiple compounding pharmacies are available to fill your hormone prescription. We recommend you call around if price is a major concern. The most commonly used are as follows:

Women's International Pharmacy	Youngtown AZ	623-214-7700	
The Apothecary Shop	Glendale AZ	602-942-8270	(many valley locations)
Potter's House	Peoria AZ	623-362-9322	
Belmar Pharmacy	Lakewood CO	303-763-5533	
Walgreen's Compounding	Sun City AZ	623-972-7868	
Advanced Compounding Pharmacy	Hollywood CA	800-769-6632	
Valley of the Sun Pharmacy	Phoenix AZ	602-896-0454	

#### APPLICATIONS OF CREAMS OR GELS

When beginning HRT, Dr Gentry often recommends using a cream or gel. APPLY this to the bend of your arms, the fat at the back of your upper arms, the inner thigh, the back of the knees, the abdomen, the buttocks, or to the vaginal labia. The larger the area of application the better absorption will be. RUB the cream in until it disappears. DO NOT mix the testosterone cream or layer it over the progesterone or estrogen creams. DO NOT bathe for 40 minutes after applying hormones. DO NOT exercise for 2 hours after applying hormones, doing so might cause you to sweat the hormones out of the fat base. Cover the area of application with clothing if you are in direct skin-to-skin contact with others until most of it is absorbed (1 hour). Use a separate hand towel than your housemates.

Dr Gentry normally writes the prescription as applying ½ gram, 1 to 4 times per day. Begin with the lowest dose. If your symptoms are resolved at this dose in a few weeks, then remain at this dose. If you still are symptomatic, increase your dose to 2 times per day. Continue to increase as necessary until a maximum dose of 4 times per day. If this dose does not relieve your symptoms, then a cream is likely not the best choice for you. We would recommend a return visit at that time. Please, use the lowest effective dose, as this is the safest dose with the lowest risk of side effects.

### **REPEAT TESTING AND FOLLOW UP CARE**

- After beginning hormone replacement therapy, we recommend follow up lab work for your safety.
- It is recommended that testing of hormones be repeated at 3 months, 6 months and then yearly or as needed.
- If you are a menstruating woman, then testing is completed on day 21 of you cycle assuming you have a 28-day cycle. (Day 1 is the first day of your menstrual cycle)
- A lab requisition is normally left in your chart to be picked up. Please complete the labs and then schedule a follow up visit for 2 weeks after the lab draw.
- On the day of testing it is recommended to test first thing in the morning before you apply hormones or 3-4 hours after hormone application.

Jennifer Gentry, NMD

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#### HOT FLASHES

Causes of hot flashes, especially in early to mid peri-menopause include:

- Low Progesterone Excessive Progesterone
- High or Low Cortisol
- Insulin resistance
- Low thyroid function
- Excessive estrogen
  - Endogenous level not balanced by progesterone
  - o Excessive exogenous and/or environmental estrogen
  - o exposure to pseudo-estrogens and xeno-estrogens
  - o Poor estrogen elimination

#### **RISK FACTORS**

Bio-identical hormones are considered safer than traditional synthetic hormones but still harbor risks and side effects especially if used in excess.

#### **TESTOSTERONE**

- Androgens may decrease blood glucose lowering insulin requirements in a diabetic patient as well as lowering blood pressure. Adjustments may need to be made in medications.
- Androgens increase hemoglobin and hematocrit increasing the risk of clotting. For this reason a CBC is repeated on follow-up lab work.
- Testosterone can change anti-coagulant therapy, so those monitoring their INR will need to check this more regularly.
- Symptoms that may result from Testosterone use include acne, clotting disorders, deepening of the voice, an enlarged clitoris, hair loss, hair growth on the face, changes in sex drive (normally an increase in sex drive), anger or hostility, shrinking in the size of the testicles, reduction in sperm production.

#### **ESTROGEN**

No long-term studies on the use of bio-identical hormone replacement therapy are available. Risks are based on studies of synthetic conjugated estrogens. However, since these are the only studies we have, Dr Gentry want you to be aware of potential risks. HRT has been associated most frequently with the following medical problems:

- Cancer of the uterus may be slightly increased. Using estrogen alone causes the lining of the uterus to grow and can increase the risk of endometrial cancer. To reduce this risk, Doctor Gentry prescribes progesterone. Do not confuse this with Progestin, which has multiple serious side effects. Most studies with serious side effects were conducted using Progestins.
- Development of blood clots is slightly increased. When blood clots form in blood vessels, the blood clots can cut off blood flow to organs like the lung or brain and lead to severe damage of these organs.
- Breast cancer may be increased. Some research studies suggest that the use of HRT may increase the risk of breast cancer. However, other research studies suggest there is not association. No definitive statements can be made about these issues. The use of Estriol (E3) and Progesterone with Estradiol (E2) is believed to reduce this risk.
- The risk for ovarian cancer is slightly increased. Researchers calculated that for every 8,300 women, hormone therapy would result in one extra case of ovarian cancer a year. These studies again, were concluded with the use of Progestins. The use of Estriol (E3) and Progesterone with Estradiol (E2) is believed to reduce this risk.

#### PROGESTERONE

Recent research suggests a relationship between Progestin and Cancer. Progestin is a synthetic Progesterone and is not the same as natural Progesterone. There has been no research to support the relationship between natural Progesterone and cancer.

## **Female Symptoms**

## **Estrogen Deficiency**

- Hot flashes Night sweats Sleep disturbances Vaginal dryness/atrophy Dry skin Headaches
- Foggy thinking Memory lapses Heart palpitations Yeast infections Painful intercourse
- Depression Low libido Bone loss

## **Estrogen Excess**

- Water retention Heavy, irregular menses Breast swelling and tenderness Fatigue
- Craving for sweets Weight gain Fibrocystic breasts Mood swings Uterine fibroids
- Low thyroid symptoms Nervousness/anxiety/irritability

### **Progesterone Deficiency**

Many of the symptoms of Estrogen Excess, including:

- Swollen breasts Weight gain Headaches Low libido Anxiety Mood swings Irregular menses
- Depression Cramping PMS Infertility Fuzzy thinking Acne Joint pain

### **Progesterone Excess**

- Somnolence Gastrointestinal bloating Mild depression Breast swelling Candida exacerbations
- Exacerbates symptoms of estrogen deficiency

### **Testosterone Deficiency**

- Fatigue, prolonged Mental fuzziness Memory problems Depression Decreased libido
- Blunted motivation Muscle weakness Diminished feeling of well being Heart palpitations
- Thinning skin Bone loss Vaginal dryness Incontinence General aches/pains

### **Testosterone Excess**

- Acne Male-pattern hair growth Deepening of voice Clitoral enlargement
- Irritability/moodiness Insomnia Loss of scalp hair

## Low Cortisol

- Fatigue Allergies Cravings for sweets Irritability Chemical sensitivities
- Symptoms of hypothyroidism Symptoms of low progesterone

## **High Cortisol**

Same symptoms as low cortisol, including

- Bone loss Anxiety Sleep disturbances Depression Low libido Hair loss Anxiety
- Elevated triglycerides

## **Low Thyroid Function**

- Fatigue (especially evening) Low stamina Cold extremities Low body temperature
- Low libido Headaches Dry skin Intolerance to cold General aches and pains Weight gain
- Depression Anxiety Scalp hair loss Swollen, puffy eyes Brittle nails Decreased swelling
- Low pulse rate/blood pressure Poor concentration Memory lapses High cholesterol

• Heart palpitations • Infertility • Constipation • Fibromyalgia

## **Male Symptoms**

## **Basic Hormone Imbalance**

- Burned out feeling
- Irritable
- Decreased mental sharpness
- Night sweats
- Sleep disturbances/ Insomnia
- Hot flashes
- Decreased stamina
- Weight gain waist
- Erectile dysfunction, Decreased erections
- Infertility problems
- Decreased libido
- Increased urinary urge /Decreased urine flow/ Prostate problems
- Oily Skin
- Decreased muscle mass

## **Adrenal Hormone Imbalance**

- Aches and pain/Fibromyalgia
- Morning fatigue/Evening fatigue
- Susceptibility to infections
- Sleep disturbances
- Depression/Anxiety
- Lack of motivation
- Bone loss
- Weight gain waist
- Prostate problems
- Decreased erections
- Infertility
- Blood sugar imbalance
- Elevated triglycerides
- Allergic conditions
- Autoimmune illness
- Chronic illness
- Stress

## **Thyroid Hormone Imbalance**

- Low libido
- Depression
- Cold body temperature
- Decreased erections
- Foggy thinking
- Infertility
- Headaches
- Sleep disturbances
- Constipation
- Fatigue
- Lack of motivation
- Inability to lose weight