

Estrogen Dominant Conditions Part I



Healthy
Hormones

Why So Many Conditions?

All estrogen dominant conditions have an imbalance of estrogen as part of the hormones issues the client has

Different conditions have different hormone relationships with other systems

And that is what makes it difficult

Also, this is why it is important to support all the players discussed in Module 1



PCOS

- Polycystic Ovarian Syndrome
- Affects 5-10% of women who are of reproduction age
- Affects fertility and increases chance of miscarriage
- Many women's hormones test normal
- Obesity is a considered a factor but as much as 50% of women with PCOS are thin
- First signs begin shortly after first period in most women



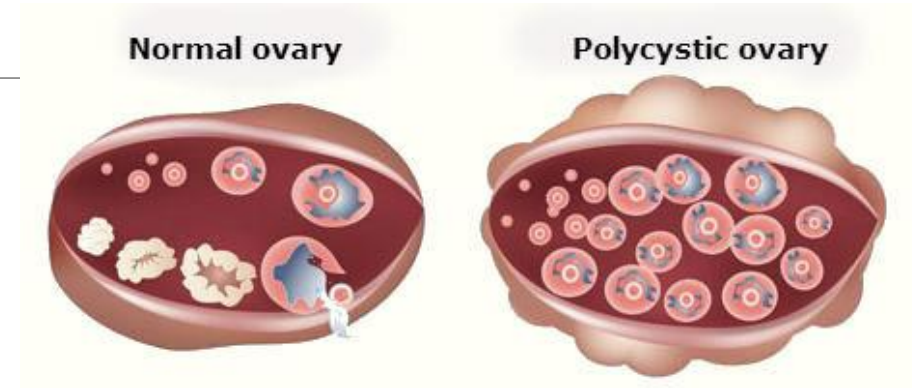
Diagnosis

- It is difficult
- Must have two of the following features:
 1. Lack of ovulation
 2. Signs of high androgens (acne, excess hair, male pattern balding, oily skin)
 3. Polycystic ovaries



Polycystic Ovaries

- Are they really cysts?
- Some experts say they just appear to look like cysts on a ultrasound
- Others say PCOS causes the ovaries to produce higher than normal levels of androgens
- This interferes with egg production and eggs normally produced by the ovaries develop into fluid-filled cysts
- If they are cysts, they are smaller than ovarian cysts



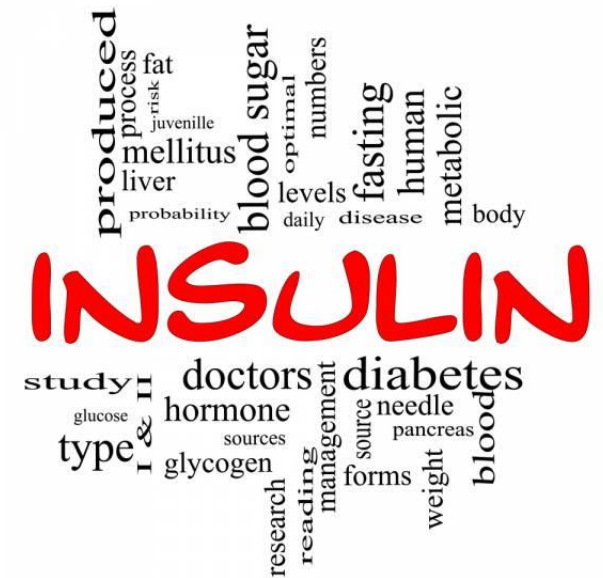
Adrenarche

- Adrenal puberty
- Occurs between 9-11 years of age
- Androgens such as DHEA increase at this time (from new development of the adrenal cortex)
- Not connected to cortisol increase and comes before sexual puberty
- Girls who are chubby at this time are at higher risk of developing PCOS later and diabetes



PCOS

- Dysglycemia is always present
- High insulin and insulin resistance is a consistent factor
- Many women have no periods or irregular periods
- Lack of periods could be due to premature menopause but in most cases, this is not the reason

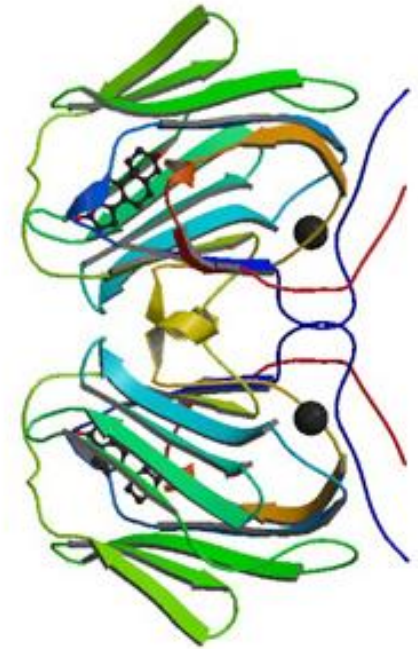


Types

1. Male hormone symptoms, infrequent periods and polycystic ovaries on ultrasound
2. Male hormone symptoms, normal periods and polycystic ovaries on ultrasound
3. No male hormone symptoms, irregular or no periods and polycystic ovaries on ultrasound
4. Male hormone symptoms, irregular or no periods and ovaries appear normal on ultrasound

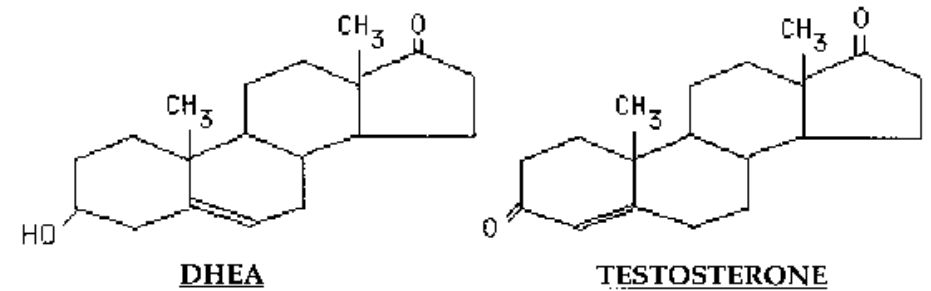
Hormone Issues

- Less SBHG – high insulin or insulin resistance in the blood causes the liver to make less SBHG
- This means less SBHG to bind to both estrogen and testosterone to help regulate both hormones
- Insulin also shifts the feedback mechanism between the ovaries and pituitary which causes low FSH and high LH (making it difficult to determine ovulation with a test as it will always be high –not just when ovulating)
- Low FSH means the egg will not be prepared for release, interfering with fertility
- High insulin causes the production of more testosterone



High Testosterone Caused By What?

- It has been assumed that it is the ovaries producing more testosterone due to excess insulin and is always involved with symptoms of PCOS
- Adrenal produces DHEA which in turn converts to testosterone
- Women who produce too much testosterone because of adrenal function can have the symptoms of PCOS with no cysts in the ovaries
- ACTH also increase DHEA and unlike cortisol there is not feedback loop so there is nothing to turn it off



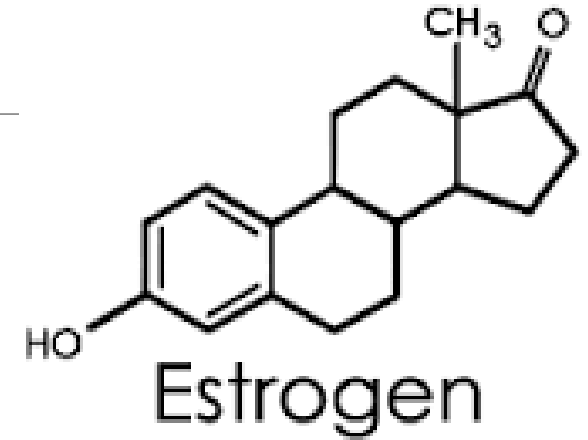
Chronic Stress

- Research shows that women who have chronic stress including those suffering from PTSD, have increased DHEA due to ACTH stimulation
- 20 to 30 percent of the elevated androgens seen in PCOS are due to the adrenal glands
- Androgens like DHEA and testosterone appear to play a protective role against the long-term effect of chronic stress and elevate cortisol and adrenaline



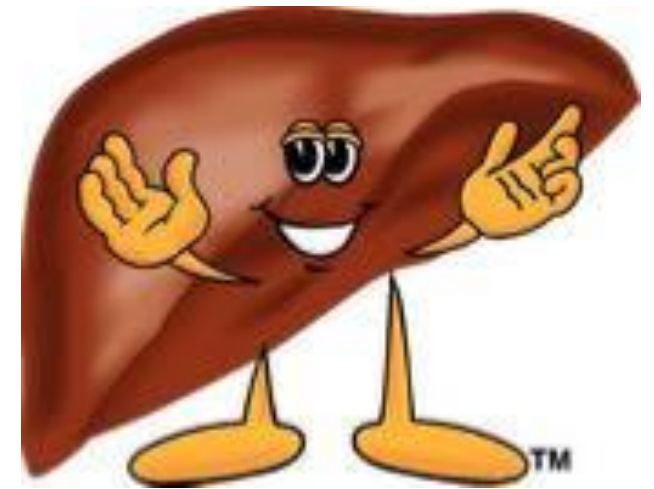
Estrogen and PCOS

- Since ovulation can be affected in PCOS, progesterone levels do not rise
- This means unopposed estrogen making this an estrogen dominant condition
- Also, long term unopposed estrogen increases the risk for hormone cancers
- Progesterone has an anti-cancer protective role which is why estrogen/progesterone ratio is important



Liver and PCOS

- ALT (alanine aminotransferase) is an enzyme released by the liver into the bloodstream when the liver is damaged
- Nearly a third of women with PCOS may have elevated ALT and are diagnosed with NAFLD
- The liver is essential for removing glucose from the blood to convert it to glycogen
- Liver becomes insulin-intolerant and over time damaged by excess insulin



Issues of PCOS

- Infrequent or no periods
- Excess bleeding during periods
- Excess facial and body hair and thinning scalp
- Weight gain (especially around the middle)
- High blood sugar and insulin
- Elevated cortisol
- Higher risk of hormone cancers
- Recurrent miscarriage
- High prolactin
- Hyper-pigmentation of the skin
- High risk of diabetes and heart disease
- High triglycerides, low HDL, high LDL
- Higher risk of fibrocystic breast disease
- Liver disease risk

Conventional Treatment

- Diet and lifestyle changes are recommended similar to conventional recommendations for diabetes type 2
- Metformin – can be prescribed to aid insulin sensitivity and may play a role in preventing heart disease and cancer
- It bypasses insulin-liver communication and communicates directly to the liver to regulate blood sugar (mimics a liver-pancreas signal)
- Side effects nausea, stomach pain, vomiting, diarrhea, irregular heartbeats, muscle weakness, numbness or cold in the hands and feet, dizziness, weakness and fatigue – considered well tolerated



Conventional Treatment

- Birth control pills or patches (both progestin and estrogen together) could also be recommended to help regulate the menstrual cycle
- Another alternative is to take progesterone for 10-14 days (luteal phase) every 1-2 months
- Clomiphene helps ovulation by inhibiting estrogen and stimulating FSH – can be combined with Metformin which helps with LH
- Side effects: Mood swings, hot flashes, abdominal pain and cramps, visual issues, ovarian cysts, nausea, thinning of the uterine endometrial lining, reduced production of cervical mucous (can lower fertility)



Protocol

- Two key elements: Manage insulin levels and liver health
- Determine how long the client has had PCOS
- The length of time will determine how difficult it will be to reverse the insulin issues
- Whole foods, small meals more often, reducing caffeine may not be enough especially if client is already insulin insensitive
- Blood sugar supplements will be needed
- The liver will need hepatic repair – milk thistle



Supplements

- Probiotics to help with insulin insensitivity – L. Acidophilus NCFM and L. Rhamosus GG both have shown ability to improve insulin insensitivity
- Cinnamon (Ceylon) slows the rate of glucose into the blood by slowing the rate the stomach empties
- Berberine: A meta-analysis of 14 studies involving 1,068 participants found berberine performed just as well as metformin, glipizide and rosiglitazone
- Turmeric (Curcumin) effective at preventing diabetes and is more effective than Metformin in increasing glucose uptake



Supplements

- In study of 70 women found that maitake mushrooms decreased insulin resistance and increase ovulation
- Vitex to improve menstrual cycle, fertility and supports the pituitary to produce LH (which stimulates progesterone production)
- EFAs help support cell membranes, keeping them healthy and more flexible with more insulin receptors
- Other supplements of note: Alpha-lipoic-acid, fenugreek, bitter melon, gymnema sylvestre



Supplements

- Ginger root: In double blind placebo study 1 g ginger root capsule lowered insulin insensitivity and fasting blood glucose by 10.5 %. Placebo group increased fasting glucose levels by 21%
- Olive Leaf Extract: In a double blind placebo study with 45 overweight men, insulin sensitivity increased by 15% after 12 weeks
- Spirulina: In a randomized study, 17 insulin-resistant patients received 19 grams of spirulina a day for eight weeks and increased their insulin sensitivity by 224.7%
- In the same study, 16 patients fed 19 g of soy increased their insulin sensitivity by 60%.



Foods

- Whole food diet – many contain phytonutrients that lower blood sugar
- Berries lower blood sugar spikes after a meal and the need for insulin when consumed with a meal
- Legumes lowers blood sugar both in the meal where consumed and the following meal
- Black seed (*nigella sativa*) (also know as black cumin or black caraway) 2 grams per day lowered blood sugar and insulin
- Apple Vinegar – 1-2 tbsp in 4 oz water, 2 minutes before a meal lowers blood sugar



Protocol

- Pick one blood sugar/insulin supplement –could be one ingredient or a formula
- Recommend milk thistle
- Recommend probiotics
- If stress an issue – consider adrenals support
- Multi with chromium and vanadium (plus Bs)



Protocol

- Small meals more often with fiber – protein is also helpful
- Low-glycemic sweeteners – honey, coconut sweetener, sucanat, maple syrup, stevia
- Whole grains and legumes
- Fermented foods and prebiotic foods
- Good quality protein sources



Protocol

- Steps to good digestion
- Exercise – some form of low intensity aerobic – will vary depending on fitness level of client
- Lower stress
- Get good quality sleep – just one night of partial sleep can increase insulin insensitivity
- Later:
- Consider a liver cleanse
- Consider and look for dysbiosis/candidiasis



Carbs

- Many assume that excess carbohydrates play a role in PCOS
- Refined carbs – yes, especially in overeaters who are overweight
- In thin PCOS women – lack of carbohydrates may be playing a role
- Low carb-diet has a negative effect on PCOS symptoms if eating too little carbs and/or too little calories



In Conclusion...

- This is probably the most complex of hormone issues
- Because the high insulin make it a condition that constantly progresses and this is going to change the protocol
- It will take time but the long term consequences of not helping the hormone imbalances are serious
- There are lots of options for both foods and supplements so work with the client to develop a plan they can live with

