## NAPROTECHNOLOGY – PROGESTERONE IN PREGNANCY

Estrogen dominates the first half (pre-ovulation) of the female reproductive cycle and progesterone dominates the second half (post-ovulation) of the cycle. If a woman conceives a new baby, the follicle that released the egg to make a new baby becomes the corpus luteum and continues to produce progesterone to support the pregnancy until the placenta develops and takes over the majority of the progesterone supply (at about 10 weeks of gestation), for the remainder of the pregnancy. Dr. Hilgers, Ob/Gyn at the Pope Paul VI Institute in Omaha, Nebraska, has studied progesterone levels in pregnancy for the past 30 years and determined what the normal levels should be – in NaProTECHNOLOGY, we treat progesterone levels in pregnancy aggressively to prevent the following complications with pregnancy.

## **Reasons and Possible Complications to Supplement Progesterone in Pregnancy**

- history of low progesterone, i.e. needing post peak progesterone support pre-conception, etc.
- history of infertility
- previous miscarriage
- previous placental abruption
- previous stillbirth
- history of pregnancy-induced hypertension
- previous preterm labor and preterm delivery
- previous premature rupture of membranes
- previous or current intrauterine growth restriction (IUGR)
- hyper-irritability of the uterus
- congenital uterine anomaly
- cervical cerclage

## Progesterone Supplementation – Key Principles

- \* <u>NATURAL or BIOIDENTICAL</u> progesterone should be used
  - the woman's body only makes one type of progesterone ... plain progesterone, which is the <u>MOST</u>
    <u>EFFFECTIVE</u> at supplementing progesterone levels in pregnancy
  - many standard Ob/Gyn offices use 17-hydroxy progesterone, which is <u>ARTIFICIAL</u> progesterone and <u>CHEMICALLY DIFFERENT</u> than the plain progesterone the woman's body makes, therefore it is <u>NOT</u> as effective
- started as early as possible in the pregnancy, which is best achieved when patients are charting their cycles
- routes of administration: intramuscular, oral, vaginal
  - o intramuscular dosing is best absorbed and is recommended especially if levels are very low
  - progesterone blood levels checked every 2 weeks during the pregnancy
    - o levels determine the supplement dosing
    - progesterone levels should be checked a day or 2 before the next injection is due (in order to get accurate level)
    - if patient taking oral or vaginal capsules, do not take the night before or the morning of the progesterone level getting checked (in order to get accurate level)

## Side Effects/Safety

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- Generally well tolerated.
- > For intramuscular injections, there can sometimes be soreness or redness at the site of injection.
  - heating pad and gentle massage after injection is helpful in alleviating soreness
  - if itching/redness occurs, vitamin E oil can help or patients can take Benadryl and/or use hydrocortisone cream (or call our office for prescription strength steroid cream if more severe reaction)
- Some bottles of progesterone have package inserts warning of the possibility of birth defects with the use of this drug. This warning refers to ARTIFICIAL progesterone, not the natural bioidentical progesterone that is used in NaProTECHNOLOGY. Dr. Hilgers and the other physicians and researchers at the Pope Paul VI Institute feel very confident in the safety of this drug and have prescribed it for decades to many patients without problems.