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## USE OF PROGESTERONE IN PREGNANCY

**Progesterone** is a key female hormone which is present during the **post-ovulatory phase of a woman's cycle** and which gradually rises over the course of a normal pregnancy. Early in the pregnancy it is produced by the ovary. At about 10 weeks of gestation, the placenta assumes the production. Progesterone support is important in those pregnancies where the progesterone production is sub-optimal during the luteal phase at the beginning of a pregnancy and during the course of the pregnancy. Progesterone can be taken by several routes; intramuscularly, vaginally or orally. Intramuscular dosing provides the best absorption and is generally recommended.

### INDICATIONS FOR USE

Studies have shown that progesterone support can be helpful in those patients with **previous infertility or miscarriage**. In addition, individuals who can be considered candidates for progesterone evaluation and subsequent supplementation would also be those who have had a **previous abruptio placentae, previous stillbirth, pregnancy induced hypertension, previous prematurity, previous premature**

**rupture of the membranes, previous or current intrauterine growth retardation, hyperirritability of the uterus, congenital uterine anomaly** or patients with **cervical cerclage**.

Key principles to the use of progesterone in pregnancy are that **natural progesterone** be used and that it be **started as early as possible in the pregnancy**. This is best accomplished in those women who are charting their cycles using the **CREIGHTON MODEL FertilityCare™ System**. In fact, when the woman reaches **Peak + 16**, a pregnancy test can be done. If necessary the patient is then started on progesterone support.

During the course of the pregnancy, progesterone levels are drawn every two weeks and progesterone is supplemented **based upon the progesterone level**. The level of progesterone is always drawn on the day in which the progesterone injection is given so that a baseline progesterone level can be obtained showing what the ovary or placenta is actually producing. Intramuscular progesterone is absorbed fairly rapidly and 72 to 96 hours after injection will only be present in trace amounts. If the woman is taking progesterone vaginal or oral capsules, she should not take the capsule the night before or in the morning when she gets her progesterone level drawn. In this fashion, with the monitoring of the progesterone levels every two weeks, an accurate assessment of the dose of progesterone can be obtained.

### LABORATORY SERVICES

The **Pope Paul VI Institute** has, as one of its departments, a **National Hormone Laboratory**. A serum progesterone curve in normal pregnancy has been developed at this laboratory. There can be considerable variation from one laboratory to another with regard to the measurement of progesterone. Therefore it is recommended that patients who are having their progesterone levels monitored by an Institute physician have these levels run at this laboratory.

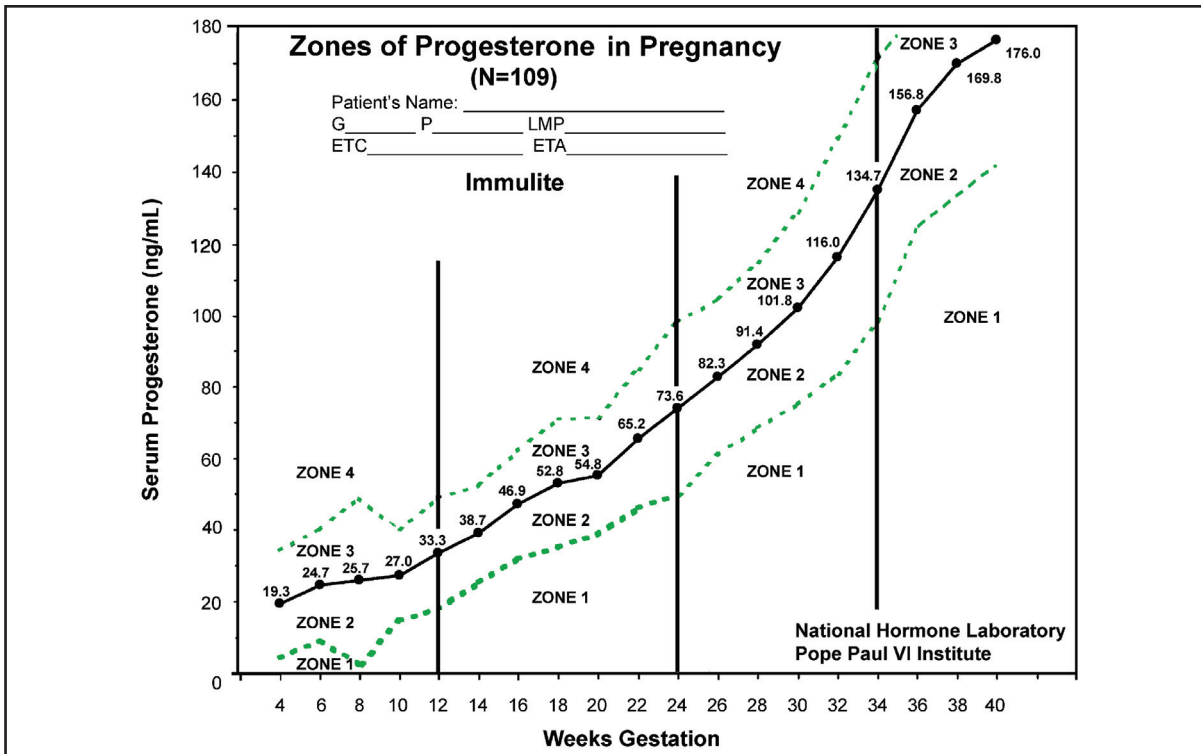
### FEW SIDE EFFECTS

Progesterone is generally well tolerated with few side effects. There may be some **soreness** at the site of injection. This may be soothed by warm tub soaks or a heating pad and massage. **Itching** at the injection site can be relieved with Vitamin E oil.

### SAFETY

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 substitute - **not the pure progesterone** which is prescribed. The physicians at Pope Paul VI Institute feel very confident in the safety of this drug and have prescribed it for many years to many patients without problems.

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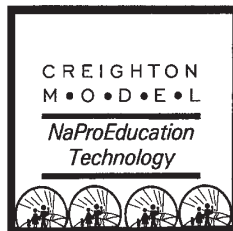


*This graph shows the average level of serum progesterone during the course of pregnancy. It also shows the four zones that have been developed through research done at the Pope Paul VI Institute.*

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