INFERTILITY SERVICES:
NATURAL CYCLE CLINICAL GUIDELINES

Purpose: To provide a consistent process to educate patients with respect to the menstrual cycle and ovulation so that they may perform intercourse in a timely manner in order to maximize the probability of conception.

Goal: To assist staff in understanding the intricacies of the menstrual cycle so that they may provide a clinical rationale and approach to teaching patients how to coordinate intercourse with ovulation in order to increase the chance of conception.

Detailed Steps/Screen Shots

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| 1. Background Information | • The likelihood of conception remains relatively stable from cycle to cycle (25%) within individuals, but is highest in the first months of unprotected intercourse declining gradually thereafter in the population as a whole.  
• Relative fertility is decreased by about 50% among women in their late 30s compared with women in their early 20s.  
• Evaluation is warranted if conception does not occur within 1 year for women under the age of 35, 6 months for women 35 and older.  
• The human egg is fertilizable for 24 hours after it is released from the ovary at ovulation  
• Sperm may survive in the female reproductive tract for several days  
• Ovulation is presumed to occur roughly 14 days prior to the onset of menstruation.  
  – For a 28 day cycle, ovulation occurs on day 14; for a 30 day cycle, on day 16, etc.  
  – The presumptive day of ovulation may be assessed through the use of basal body temperature charting, an ovulation predictor kit, or serial ultrasound examination of the ovaries.  
    – Ovulation predictor kits mark the LH surge and predict ovulation within the ensuing 48 hours.  
    – Cervical mucus secretion may increase due to increasing levels of estradiol as ovulation is approached and may be used as an inexpensive and private marker that ovulation is approaching.  
• The “fertile window” is defined as the 6 day period ending on the day of ovulation.  
  – Intercourse should be advised to occur at least 3 times within this time interval  
  – Daily intercourse does not decrease sperm count  
  – While reproductive efficiency increases with the frequency of intercourse and is highest when intercourse occurs every 1 -2 days, optimal frequency is best defined by personal preference so that the act of conception does not become mechanistic and devoid of pleasure.  
• Coital position does not affect the ability to conceive  
• Oil and water-based lubricants as well as saliva may adversely affect sperm motility  
  – Canola oil, mineral oil and hydroxyl-cellulose based products do not affect sperm motility  
• Smoking (cigarette and marijuana), alcohol (>2 drinks per day) and caffeine (>5 cups of coffee/day) may adversely affect fertility |
| Target Population   | • This guideline applies to patients seeking advice on how to optimize conception without medical intervention. They may wish to understand the timing of ovulation and the optimal time for intercourse to achieve conception. If this approach fails within a reasonable time frame, then they may seek evaluation and treatment of infertility. |
## Clinical Management

### 2. Evaluation
- Assessment of the menstrual cycle is appropriate. Cycles occurring on a regular basis, particularly if coupled with some degree of cramping at menses, with cycle lengths $\geq 25$ days and $\leq 35$ days are considered normal and are most likely, but not necessarily, ovulatory in nature.
- A semen analysis may be advisable early on to exclude a male infertility factor.
- A basal body temperature (BBT) chart may provide indirect evidence of ovulation (approximating the day) and also the duration of the luteal phase. (It has never been established though, that luteal phase defects cause infertility.)
- Any history of a STD should warrant a hysterosalpingogram to assess the fallopian tubes.
- Hypothyroidism and/or hyperprolactinemia should be treated with thyroid replacement or dopamine agonists, respectively. Correction of the hormone imbalance has shown to cause enhance fecundity. After normalization of hormone levels, the “natural cycle” methodology can be employed.

### 3. Medical Treatment and Surgery
- This process is unassociated with surgery. Medical treatment may only occur if hypothyroidism or hyperprolactinemia need to be addressed.
- Basal body temperature charting may begin within the first few days of the menstrual cycle.
- A basal body thermometer should be utilized
- Temperature should be measured prior to any other activity and should follow at least 4 hours of uninterrupted sleep.
- A subtle (a few tenths of a degree) maintained elevation of temperature is suggestive of ovulation.
- Ovulation is thought to occur anytime from 3 days prior to 3 days following the nadir of the temperature shift.
- The use of an ovulation predictor kit should begin approximately 4 days prior to the presumptive day of ovulation based upon cycle length (Cycle length – 14 days = ovulation day)
- The kit should be used at roughly the same time of day, each day.
- The detection of an LH surge signifies probable ovulation within the next 48 hours.

### 4. Best Practices
- Any suspicion of an existing infertility factor should prompt a proper infertility evaluation.
- If pregnancy does not ensue after repeated attempts via the “natural cycle” method as described above, then the fertility workup should proceed with a provider skilled in the treatment of infertility (preferably a reproductive endocrinologist and infertility specialist).
5. **Case Example**

A 34 year old member calls to inquire about “the best way to get pregnant.” A brief history indicates that she has regular 32 day cycles with mild cramping most months. Occasionally, she may have a longer cycle, up to 37 days. She has noted some weight gain which she has been unable to lose despite adequate exercise over the past year. Her husband has never fathered a child to the best of her knowledge. Neither she nor her husband has any known medical problems. She confesses that she and her husband have intercourse every other day on a fixed schedule starting on day 10 of her cycle. Sometimes, she is not sure her husband ejaculates, though he insists he does so every time.

While this member most likely has ovulatory cycles, the longer cycle lengths warrant a more detailed history. If the increased cycle length occurs more than twice per year, it may suggest some degree of ovulatory dysfunction. The fact that she has not been able to shed extra pounds of weight coupled with some possible menstrual irregularity is suspicious for hypothyroidism and should be investigated. The member should also be counseled as to the more likely time of her ovulation (cycle day 18) and advised that her fertile window begins roughly on her cycle day 12. While frequent intercourse is beneficial, adherence to a strict schedule may be detrimental in terms of sexual performance. Indeed, her concern that her partner may not be ejaculating may be a symptom of underperformance due to the pressures of performing “on demand.” This issue might need to be addressed further if it persists as a concern. The member may look to time intercourse based purely on her cycle length or may choose to be somewhat more proactive by charting her basal body temperature or by using an ovulation predictor kit. If using either of the latter two methods, she should be advised to do so for only a few cycles in order to gain a sense of when ovulation might be occurring. Endless use of charting and/or kits may prove stressful, expensive and is not needed once the regularity of presumptive ovulation has been documented. Should conception not occur within 6 months total, an infertility evaluation should be initiated.

6. **Bibliography**

- The practice committee of the American Society for Reproductive Medicine: Optimizing natural fertility. 2008