



Fertility Pearls for the Family Physician

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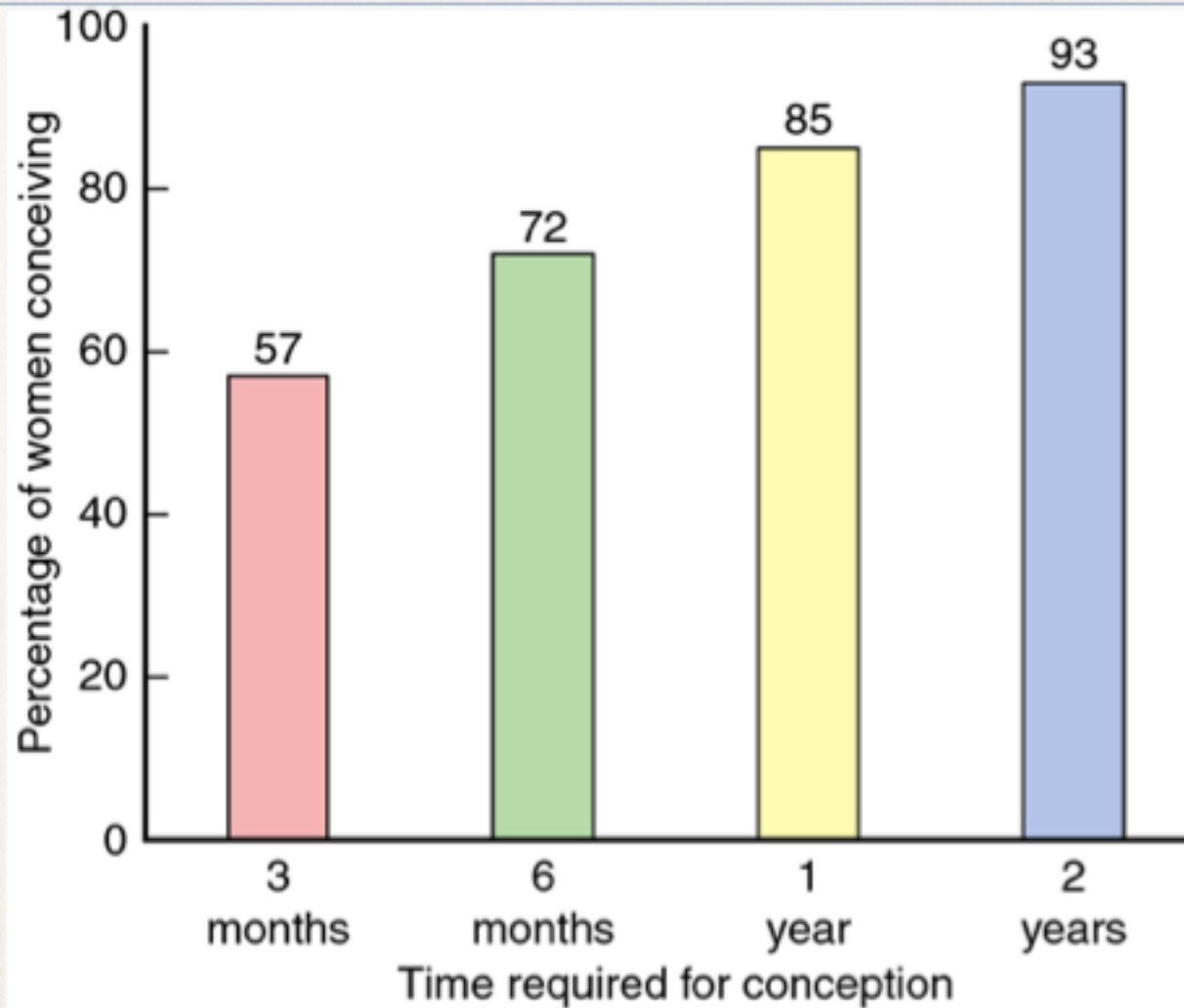
Disclosures

- ❖ Part time employment at Pacific Centre For Reproductive Medicine- Victoria Site

Objectives

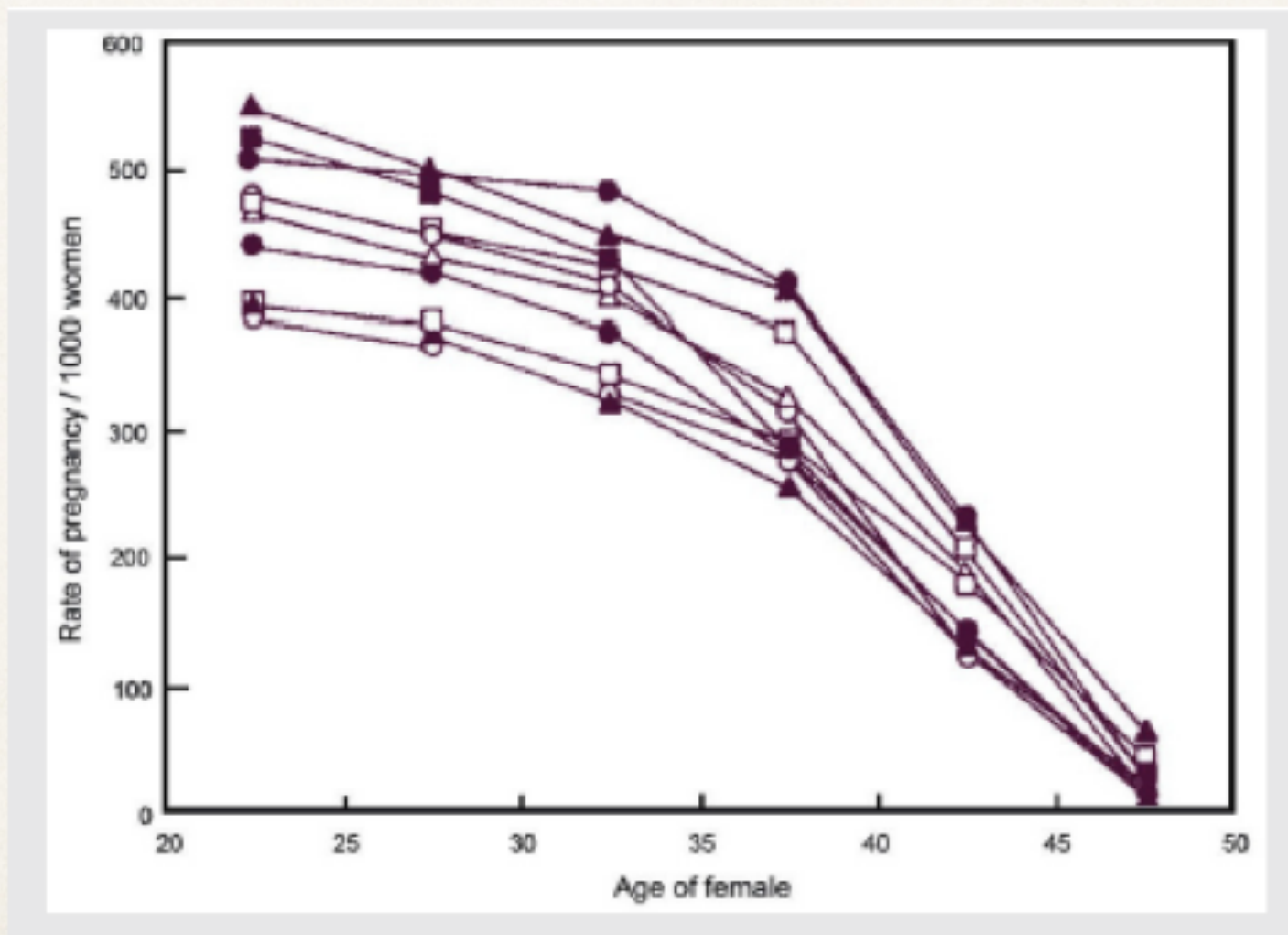
- ❖ *What is normal?*
- ❖ *Maximizing natural fertility*
- ❖ *When to refer*

What is normal? — Time to conception



Source: Barbara L. Hoffman, John O. Schorge, Karen D. Bradshaw, Lisa M. Halvorson, Joseph L. Schaffer, Marlene M. Corton: *Williams Gynecology*, 3rd Edition: www.accessmedicine.com
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What is normal? — Female fertility across the lifespan



What is normal? — Male fertility across the lifespan

Semen parameters in men start to decline at age 35, but fertility does not decrease until age 45-50 (ASRM)

Maximizing natural fertility- Timing of intercourse

- ❖ **"Fertile window"** 6 day period ending on day of ovulation- highest 1-2 days before ovulation
- ❖ Timing can increase conception rates in first few months to 75%
- ❖ Intercourse 2-3 times / week for 2 weeks, starting after menses will generally catch this window

Wilcox NEJM 1995

Stanford Obstet Gynecol 2002

Maximizing natural fertility- Ovulation tracking

- * *Apps-* fertile days predicted by previous cycle data
 - * Glow ovulation, Fertility Friend
- * *Ovulation predictor kits*
 - * Detects LH surge in urine- ovulation 24-36h later
- * *Cervical mucus*
 - * High estrogen levels in fertile period, 'slippery egg white' mucus
- * *Basal body temperature changes*
 - * Luteal phase progesterone causes 0.5 F increase in temperature

Maximizing natural fertility-

Lifestyle changes

* *Quit smoking*

- * Infertility, conception delays, miscarriage, ectopic, diminished ovarian reserve
- * Reproductive effects imprinted on offspring as well
- * Preterm birth, growth restriction, SIDS

* *E-cigarettes/vaping*

- * Animal studies show reduced fertility, growth restriction in utero
- * Lack of reproductive studies in humans

Maximizing natural fertility-

Lifestyle changes

* *Limit/stop alcohol use*

- * Moderate (<2 drinks / day) use likely has little to no effect on fertility
- * No safe amount of alcohol in pregnancy
- * Heavy drinking in males associated with decreased sperm concentration, impotence, reduced testosterone levels

* *Marijuana use*

- * No strong data regarding negative effects of marijuana use on female fertility
- * Neurodevelopmental effect on fetus and newborn
- * In vitro studies suggest decreased sperm motility

Maximizing natural fertility- Lifestyle changes

* *Body weight/exercise*

- * Low (<18.5) and high (>25) associated with ovulatory dysfunction
- * Obesity also linked with higher miscarriage rates
- * Excessive exercise associated with infertility / ovulatory dysfunction in low BMI women
- * Moderate exercise increase fertility rates in high BMI

* *Supplements*

- * Women- Folic acid, Coenzyme Q10, Vitamin D
- * Men- Coenzyme Q10, Vit E, C, zinc, selenium, L carnitine (but weak evidence for all)

Maximizing natural fertility-

Intercourse mythbusters

- ❖ *Lubricants*- some lubricants inhibit sperm motility in vitro (KY products, astroglide, saliva, olive oil).
 - ❖ No difference in fecundability but consider 'sperm safe' lubricants if needed (pre-seed, mineral oil)
- ❖ *Coital positions during/after intercourse*- no impact on chance of conception
- ❖ *Female orgasm/arousal*- Sadly, no impact on chance of conception...

When to refer

- ✦ **Female age based**

- ✦ After 1 year of trying if <35 years old
- ✦ After 6 months age 35-39
- ✦ Immediately if ≥ 40 years old

- ✦ **Earlier if**

- ✦ Oligo or amenorrhea
- ✦ Known tubal/uterine disease
- ✦ Known severe endometriosis
- ✦ Risk factors for gonadal failure

- ✦ **Additional scenarios**

- ✦ Same sex female couples
- ✦ Single females
- ✦ Same sex male couples

Takeaway pearls

- ❖ Timing of intercourse around fertile window—> 5 days before and day of ovulation
- ❖ Ovulation tracking OR intercourse frequency at least 2-3 times per week
- ❖ Lifestyle changes —> healthy weight, stop smoking, marijuana, limit / stop alcohol
- ❖ If no risk factors can take up to 1 year trying

Questions?

