

Counseling Your Patients about the Importance of Preconception Health to Optimize Chances of Conception

Everywhere you turn, patients are being flooded with health advice or tempted with the next new diet fad or fitness craze. In order to help patients sift through the noise and achieve a healthy pregnancy faster, SGF physicians share these three tried and true basics that are worthy of sharing with your patients.

1 CHOOSE PRENATAL VITAMINS WISELY

Not All Vitamins are Created Equal: Preconception vs. Prenatal Vitamins

Effectively preparing a woman's body for treatment may optimize her chances of conception. SGF physicians recommend that women start taking a preconception supplement while trying to conceive and then transition to a traditional prenatal vitamin around 10 weeks of gestation.

Vitamins for a Healthy Pregnancy

Women who are planning to be pregnant, undergoing fertility treatment, or are currently pregnant should be taking preconception or prenatal vitamins. Because the early days and weeks of pregnancy are critically influential in the health and development of the baby, doctors recommend women prepare their bodies with necessary nutrients and vitamins to ensure a healthy pregnancy.



HEALTHY PREGNANCY VITAMIN INDICATIONS & BENEFITS

FOLIC ACID *When to Take It: Before pregnancy and continued until 6-12 weeks gestation*

Key Benefit: Reduces spinal cord defects

Spinal cord defects, otherwise known as neural tube defects, affect 0.1-0.2 percent of pregnancies.

All women who could become pregnant should take 400mcg of folic acid supplementation to help reduce risk by nearly 75 percent.

DHA *When to Take It: During pregnancy*

Key Benefit: Healthy brain development

While there are conflicting studies on DHA's preconception benefits, it is theorized that DHA supplementation may aid in fetal brain development while increasing the length of gestation and increasing birthweight.

VITAMIN D *When to Take It: Before and during pregnancy*

Key Benefit: Suggests higher success rates for fertility treatment and live birth rates

Not only does achieving a normal vitamin D level seem to positively impact fertility, it may also improve the odds of having a healthy pregnancy. Studies have linked vitamin D deficiency during pregnancy with an increased risk of preterm birth, gestational diabetes, preeclampsia, and bacterial vaginosis.

According to SGF's Chief Medical Officer, Eric A. Widra, M.D., "The data on vitamin D and natural fertility as well as success during fertility treatment is mixed. There are some studies showing that being vitamin D replete improves success rates in both in vitro fertilization (IVF) as well as transfer of frozen donor egg embryos. Other studies have not demonstrated that connection."



2 MAINTAIN A HEALTHY WEIGHT

How BMI Can Hinder Family Building

Weight is a sensitive subject, but often found at the top of New Year's resolutions lists. While maintaining a healthy weight is important for many medical conditions such as diabetes, hyperthyroidism, and hypertension, it's also important to consider when trying to conceive and during infertility treatment.



IMPACT OF OBESITY AND FERTILITY OUTCOMES (BMI >40)

OBESITY & FERTILITY TREATMENT

Poor response to fertility medication
Increased chance of immature eggs and cycle cancellation rates
Decreased conception and pregnancy rates
Increased risk of miscarriage - even of euploid embryos

OBESITY & PREGNANCY

Pregnancy complications including high blood pressure, gestational diabetes, C-section, preterm delivery, and blood clot formation
Prematurity, stillbirth, birth defects, or excessively large babies
Birth related injuries (shoulder dystocia)

"For women struggling with infertility, time is a sensitive hurdle," explains SGF Pennsylvania physician, Matthew Connell, D.O. "For women with a BMI >35, the time to conception increases two-fold, which can add stress to the process. Losing as little as 5-10% of body weight when BMI >25 can dramatically improve outcomes."

There is only up to a 15-20% chance of natural pregnancy each ovulation cycle for even the healthiest couples. When factoring that probability of natural conception drops 4% for women with a BMI >29.2, a healthy weight is significant to successful outcomes.

"The most important catalyst for weight loss is a healthy diet," explains Dr. Connell. "A patient can drink a can of

soda, but then it would take 50 minutes of exercise on the treadmill to burn it off. It's easier to remove these food and beverage items from one's diet all together, rather than netting even."

Awareness regarding the importance of a healthy BMI applies to underweight patients (BMI <18.5) just as much as obese (BMI 30-39.9) and extremely obese patients (BMI >40). Weight gain during pregnancy will not eliminate risks and must be addressed prior to pregnancy.

A low BMI can lead to fertility complications including ovulatory dysfunction, poor response to fertility medication, and decreased conception and pregnancy rates. For maternal complications, patients may experience nutrient deficiencies, heart irregularities, and osteoporosis. It's important to increase BMI to the normal range (18.5-24.9) to minimize pregnancy and fetal complications, increased pre-term labor, low birthweight, and birth defects.



CLINICAL PRACTICE GUIDELINES FOR FEMALE PATIENT BMI

IVF BMI less than 40

IUI BMI less than 44



3 PRACTICE A FERTILITY-FRIENDLY LIFESTYLE

Understanding the Effects of Alcohol, Smoking, and Sleep

While living a healthy lifestyle provides an abundance of positive effects for men and women, how they address healthy habits like alcohol, smoking, and sleep can have numerous implications for fertility, too.



ALCOHOL'S EFFECT ON FERTILITY (5+ drinks/sitting)

WOMEN Diminished ovarian reserve
Changes in cycle regulation and ovulation
Increased birth defects
Increased chance of miscarriage

MEN Decrease in sperm and testosterone production
Erectile dysfunction

ALCOHOL While consuming alcohol will not necessarily make it harder for a woman to conceive, there is evidence to suggest that drinking—particularly in excess—could make conception more difficult.

According to SGF Pennsylvania physician, Ryan Martin, M.D., while "light" drinking (fewer than five drinks per week) is probably not detrimental, "heavy" drinking (two or more drinks per day) or binge drinking (five or more drinks at a time) can not only cause serious harm to a developing fetus but can also negatively impact a woman's chance of conception. For men, reducing the amount of alcohol consumed can quickly reverse the side effects.

SMOKING Compared to non-smokers, many smokers can experience up to a 54 percent higher chance that conception will take 1 year or longer. The American Society for Reproductive Medicine: Smoking and Infertility, 2014 study demonstrates that women who smoke have approximately twice the rate of infertility compared to women who don't smoke. Smoking has also been shown to increase the rate of miscarriage and is associated with menopause occurring 1-4 years earlier than expected.

For men, damage caused by smoking is not necessarily permanent and may vary by the quantity and length of smoking history. In general, a man's fertility rate can completely return to normal within 1 year of quitting smoking.

SLEEP Poor sleep and an altered sleep schedule can impact weight, stress, and sleep regulation all of which can affect fertility levels. This is because several hormones are influenced by sleep, including insulin, ghrelin, leptin, and cortisol. Cortisol can trigger the release of reproductive hormones, and a long-term lack of sleep can affect the hormone in charge of regulating a woman's menstrual cycle.



SLEEP'S EFFECT ON FERTILITY

WOMEN Contributes to obesity
Changes in cycle regulation
Suppression of reproductive hormones

MEN Contributes to obesity
Changes in estrogen and androgen levels

Poor sleep contributes to obesity, but obesity can further limit the body's ability to sleep. When the body gets less than 7 hours of sleep, it releases more hunger hormone and less satiety hormone. One study found that sleep-deprived participants choose snack foods with 50 percent more calories and twice the fat in comparison to when they were well rested.

Stress can get in the way of sleep, which sets the body up for a variety of issues that aren't conducive to fertility. Stress can change how key factors like the HPA axis functions. The HPA axis exerts a portion of control over reproduction hormones, follicle development, and menstruation.



SMOKING'S EFFECT ON FERTILITY

WOMEN Increased rate in follicular depletion
Reduced estrogen levels
Delay in conception
Early and premature menopause

MEN Poor sperm quality (count, shape, and movement)
Erectile dysfunction



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Lifestyle Lessons: How Health Affects Patients and Pregnancy Outcomes

The new year signifies rejuvenated energy for people focused on practicing healthy lifestyle habits, including patients trying to conceive. Look inside for SGF's physician recommendations on how patients can optimize chances of conception in 2021.

Preconception Health Tips

1

CHOOSE PRENATAL VITAMINS WISELY

Help your patients understand the difference between preconception and prenatal vitamins and when to take them for optimal outcomes.

2

MAINTAIN A HEALTHY WEIGHT

Explain to your patients the implications of weight, whether over or under, and its effect on fertility treatments.

3

PRACTICE A FERTILITY-FRIENDLY LIFESTYLE

Discuss how alcohol, smoking, and sleep patterns uniquely impact chances of conception for men and women.



[Learn more about the effects of preconception habits inside >>>](#)