

# Infertility Information Sheet

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## Infertility Treatment Protocol

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Infertility affects many young couples (estimates are as high as ~ 1 in 6), and the prevalence is increasing. Data from the Centers for Disease Control and Prevention (CDC) National Survey of Family Growth done back in 1995 showed 6.1 million infertile women ages 15 to 44, 9.1 million using infertility services, and 2.1 million infertile married couples in the United States.<sup>1</sup> According to a press release from the National Fertility Association, the data from 2002 indicates an increase in the number of infertile people in the United States to 7.3 million.<sup>2</sup>

These numbers are continuing to rise as sperm counts drop worldwide and undiagnosed thyroid problems increase—so you are not alone. "It looks as if the amount of infertility in the Western world could double in the next decade," Prof. Bill Ledger, a fertility expert at Sheffield University in England, told a June 2005 meeting of the European Society of Human Reproduction and Embryology.

Various factors may be responsible for the inability to achieve a successful pregnancy. Despite research showing that fertility declines after age 30, women are delaying having children. Infertility may be caused by ovulatory, anatomic, immunologic, infectious, nutritional or hormonal factors on the woman's side. In men, abnormalities of semen parameters are the most common contributors. In 1940, the average sperm count was 113 million/ml. By 1990 this had dropped to 66 million sperm /ml and semen volume dropped ~ 20% from 3.4 to 2.75 cc. These represent an ~ 60% decrease in sperm per ejaculate over a 50-year period.<sup>3</sup> Treatments that improve cellular energy production may dramatically increase sperm motility (see below).

After a thorough work-up, treatment can sometimes be planned that aims to correct the problems identified. In many cases, however, the cause of the infertility remains unexplained. In this setting, the only option many couples are given is IVF (In Vitro Fertilization). IVF is given attention because it costs ~ \$30,000+, while research on inexpensive natural options has been ignored (not because doctors don't care, but simply because no one will pay to publicize the information).

The good news is that there are many natural ways to improve all steps of the reproductive process. A large number of studies have successfully explored the use of individual nutritional and hormonal therapies to do this—resulting in women with unexplained/untreatable infertility often getting pregnant!

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## Treatment for Women

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### Lifestyle Education

These are important things to avoid from now until after you are 3 months pregnant, as they can cause infertility. Just do the best you can with these guidelines—OK to not be “perfect” with them.

1. Avoid coffee and sodas <sup>5</sup> (tea is OK). Coffee and sodas inhibit fertility, often markedly. Especially avoid caffeine if your Prolactin blood test is LOW as it can lower it further.
2. Take melatonin 3 to 6 mg at bedtime (which is sometimes used to treat insomnia) as it can improve the effectiveness of IVF <sup>6</sup> and both male and female fertility
3. Avoid taking over 900 mg of supplemental vitamin C (causes reversible infertility). Taking 750 mg a day of vitamin C however helps infertility<sup>7</sup> so we will supply this amount. Do not take over 7,000 units of supplemental vitamin A (causes birth defects-beta carotene is OK) daily. The supplement we supply has 3,500 IU of vitamin A (the other 3,500 IU it contains is beta carotene).
4. Avoid hot tubbing (it increases birth defect risks). A hot bath, which is not over 100 degrees in temperature, is a safer way to relax. In a bath much of your upper body will remain out of the water, making you less likely to overheat. Additionally, the water in a bath begins to cool off, as opposed to a hot tub, further reducing any risk of overheating.<sup>8</sup> A hot tub is usually set at 102-104 degrees, which can overheat your body and can harm the baby.
5. Avoid a high protein/Atkins' diet <sup>9</sup>(an Atkins like diet in a rat study decreased fertility over 50%).
6. No alcohol if Prolactin levels are higher than 10 (and avoid in general as is convenient).<sup>10</sup>
7. Avoid vaginal lubricants such as FemGlide, Replens and Astroglide which can damage sperm. Pre-seed brand is OK.<sup>11</sup>
8. If you smoke, stop till after the baby is born. Smoking contributes to infertility in many ways.<sup>12</sup>

## **Lifestyle Approaches to Help You Get Pregnant**

1. It works best to have intercourse on the day you ovulate and up to 4 days before (otherwise “ad lib” whenever you feel like it). It is OK to have intercourse multiple times during this period. For purposes of getting pregnant, intercourse even 1 day after ovulation is unlikely to result in pregnancy-but OK to do anyway for its other benefits.
2. Enjoy milk products but use regular ones that have the normal amount of milk fat (e.g., whole milk) instead of low fat or fat free milk products. In a Harvard study, high intake of low-fat dairy foods was associated with an increased risk of infertility, while an increased intake of high-fat dairy foods was associated with a lower risk of infertility. Women consuming at least 2 servings of low-fat dairy foods per day showed an 85% increased risk of infertility. On the other hand, women consuming at least 1 serving of high-fat dairy foods per day showed a 27% reduced risk of infertility.<sup>13</sup> Whole milk products (instead of low-fat) also taste better ;-)

## **Treatments**

1. Supply overall nutritional support with the “Energy Revitalization System” vitamin powder by Enzymatic Therapy and a healthy, well-balanced diet.<sup>14-17</sup> As noted above, dieting and high protein/low carbohydrate diets are to be avoided.<sup>18-19</sup> Stay on these when you get pregnant and through breast feeding.
2. Add prescription Armour Thyroid 30 mg adjusted to dose that feels best (to a maximum of 90 mg) or Synthroid 25- 75 mcg <sup>19A&B</sup> while keeping Free T4 < 75% of the upper limit of normal. Take it in the morning. **DO NOT TAKE IRON OR CALCIUM SUPPLEMENTS WITHIN 6 HOURS OF THE THYROID DOSE, OR THE THYROID WILL NOT BE ABSORBED.** Take your calcium at dinner and bedtime. If you get shaky or hyper or racing heart, lower the thyroid dose (or stop it) and let’s discuss. Stay on the thyroid through your pregnancy (it supports a healthy pregnancy).
3. Optimize iron levels. If the ferritin blood test is under 80 or iron percent saturation under 25%, treat with an iron tablet 1 a day after 2 pm on an empty stomach.<sup>20-21</sup> Continue the iron through your pregnancy.
4. If PCOS (Poly Cystic Ovary Syndrome) is present (often present when testosterone or DHEA-S levels are elevated), research shows that treatment with the medication metformin 1500-2000 mg/day not only increased fertility, but also decreased the risk of serious birth defects considerably.<sup>22-26</sup>
5. If the Prolactin level is over 10, alcohol and melatonin (which can raise Prolactin) are to be strictly avoided. Vitamin B6 100 mg or as needed to bring Prolactin within the normal range (but not greater than 200 mg of B6) will be added. Stop the extra B6 (except for what is in the B complex) around 7 months into the pregnancy (otherwise it can suppress breast milk).

6. If folic acid levels are low (lowest 20% of normal range) a blood test looking for wheat allergies will be recommended, and a gluten free diet instituted if positive. Also, Folic Acid 5 mg BID will then be added.<sup>27</sup>

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## For Men

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### **Lifestyle education**

These are important things to avoid from now until after your wife gets pregnant, as they can cause infertility. Just do the best you can with these guidelines—OK to not be “perfect” with them.

1. When convenient, avoid meat with Estrogen (i.e., get your meat from a natural-foods store)
2. Avoid Soy based foods (e.g., tofu, tempeh, soy cheese and milk, etc.). Even modest intakes drop sperm counts by 40%.<sup>28</sup>
3. Avoid Melatonin, Testosterone, Verapamil and Nifedipine (latter 2 are heart/blood pressure medications) which can cause reversible infertility.
4. Avoid alcohol when convenient<sup>29</sup> and tobacco.<sup>30</sup>
5. Sperm do poorly at temperatures over 96 (which is why the testes hang below the rest of the body to stay cooler). Avoid elevated scrotal temperatures by wearing boxer shorts. Do NOT wear briefs, tight fitting underwear or jeans. Avoid hot tubs. Avoid rowing/ski machines, treadmills or jogging unless the testes can hang free.
6. Avoid aspirin, Motrin or similar medications which block the hormone prostaglandin (Prostaglandins in the seminal fluid may assist sperm). Tylenol is OK in moderation.
7. Increase liquid vegetable oils and avoid cottonseed (may contain gossypol which inhibit sperm function),<sup>31</sup> palm or coconut oils or trans, hydrogenated or saturated fats as comfortably able.

### **Treatments**

All of these can be taken together in the morning (or split up or taken any time of day).

1. Supply overall nutritional support with the “Energy Revitalization System” vitamin powder (contains > 50 nutrients including 750 mg of vitamin C and 100 IU of vitamin E<sup>32-35</sup> by Enzymatic Therapy. It also supplies folic acid<sup>36-37</sup> and antioxidants.<sup>38</sup>
2. Coenzyme Q10 (chewable tablets that contains 400 IU of vitamin E as well) 200 mg/day.<sup>38</sup>
3. L-Arginine 4 gm/day.<sup>39</sup>

4. Acetyl-L Carnitine 1,000 mg/day and Carnitine 1,000 mg/day markedly improves sperm motility and the sperms defenses against attack.<sup>40-42</sup>
5. Zinc 15 mg/day.<sup>43</sup>
6. Ribose 5 gm twice a day (can use like sugar and mix in food or drinks or use the chewable tablets). In many studies this increases energy production, which may also help sperm motility. The second dose can be taken any time during the day.
7. Clomiphene (Rx) 25 mg a night (or Monday, Wednesday, Friday nights) can increase sperm counts (more than doubles sperm count and motility).<sup>44</sup>
8. Take KSM Ashwagandha 300 mg 2x day. Research showed this increased sperm count 167%, and sperm motility by 57%. The ribose and the proper form and dose of Ashwagandha can be found in a product called “Smart Energy System™” one scoop twice a day.<sup>45</sup>
9. Take melatonin 5 mg at bedtime as this can increase sperm motility.<sup>46</sup>

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## References and Footnotes

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