Infertility

- Inability to conceive
  - 10-15% of couples fail to conceive within 1 to 2 years of trying
- About 1 in 6 couples in US
  - 50% due to problems in woman
  - 30% due to problems in male
  - 20% due to fertility problems in both partners

Female Infertility

Female:
Includes (not an exclusive list):
- Blocking of fallopian tubes (oviducts)
- Uterine abnormalities
- Endometriosis,
- Polycystic ovary syndrome,
- Ovulation failure (absent or infrequent menstrual cycles), Ectopic pregnancy
- Unexplained infertility

Blocking of Fallopian Tubes

- Present in ~35% of infertility cases
- May lead to fluid build up- hydrosalpinx (Fig. 6)
- Blocks transport of oocyte or sperm
- Increased risk of ectopic pregnancy

Diagnosis:
- Laparoscopy
- Methylene blue infused into uterus
- Radio-opaque dye: Hysterosalpingography (HSG)
Varioceles, Obstructions and Undescended Testes

Varicocele
- Enlarged veins around testes
- Do not cause discomfort or impact on man's health in any way but they may increase temperature of testes
- Damages sperm production

Obstructions
- Can prevent sperm from being ejaculated
  - Scarring from infection, injury or surgery

Undescended testes
- One or both testes remain in abdomen
  - Surgery
    - If not corrected or surgery is overly delayed fertility may be affected

Semen Analysis: WHO criteria for 'NORMAL' and 'SUBFERTILE'

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>NORMAL</th>
<th>SUBFERTILE</th>
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<tbody>
<tr>
<td>Ejaculate volume/cm³</td>
<td>2-5</td>
<td></td>
</tr>
<tr>
<td>Sperm concentration/mL</td>
<td>&gt; 50 MILLION</td>
<td>&lt; 20 MILLION</td>
</tr>
<tr>
<td>Total sperm number</td>
<td>100-700 MILLION</td>
<td>50 MILLION</td>
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<tr>
<td>Sperm swimming forward vigorously</td>
<td>&gt; 60%</td>
<td>&lt; 40%</td>
</tr>
<tr>
<td>Abnormal sperm/%</td>
<td>&lt; 30%</td>
<td>&gt; 60%</td>
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<tr>
<td>Viscosity after liquefaction</td>
<td>LOW</td>
<td>HIGH</td>
</tr>
<tr>
<td>Cellular debris</td>
<td>LOW BUT VARIABLE</td>
<td>HIGH</td>
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