MEN’S HEALTH AFTER CANCER
WHAT YOU NEED TO KNOW: INFERTILITY

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At the conclusion of this presentation, you should be able to:

Elaborate on the state of Men’s Health

1. Key facts about male infertility & the effects of cancer
2. Describe the basic male evaluation
3. Know where to get an evaluation
## STATE OF MEN’S HEALTH

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>High cholesterol</td>
<td>25%</td>
<td>28%</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>23%</td>
<td>25%</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>10%</td>
<td>11%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Obesity</td>
<td>20%</td>
<td>25%</td>
<td>29%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Infertility may be a surrogate for other health issues

Centers for Disease Control 2012 statistics
Men have weaker ties to clinicians

Share of men and women reporting the following:

- **Total Men**
- **Less than 200% FPL**
- **Uninsured**
- **Total Women**

| Have a regular clinician they go to when sick or need health advice | 68%* | 55% | 35% | 81% |
| Have seen a health care provider in the past two years | 75%* | 64% | 50% | 91% |

NOTE: Among women and men ages 18-64. * Indicates a statistically significant difference from Total Women, p<.05.

Team of providers and staff to evaluate and treat the health issues for men

- Urinary issues
- Erectile Dysfunction
- Male Infertility
- Male hormones
- Peyronie’s Disease (curvature of penis)
INFERTILITY

The inability to conceive after 12 months of regular, unprotected intercourse (10-15% of couples)\(^1\)

20% male factor only
40% male and female factors\(^2\)

MICHAEL PHELPS
MULTIPLE CANCERS WITH LOW SPERM COUNTS

Decreased at time of diagnosis:

- Divert energy to fight cancer

Treatment:

- Radiation
- Chemotherapy
- Surgery effects
- Stress
- Psychological effects
INFERTILITY IS A **COUPLE** PROBLEM

- Female Age

- Monthly Fecundity

- 0%
- 5%
- 10%
- 15%
- 20%
- 25%
- 30%
- 35%
- 40%
- 45%

- 20-25
- 26-30
- 31-35
- 36-40
- 41-45

**UW Medicine**
MALE INFERTILITY EVALUATION

- Medical History
  - Testicular insults
- Physical Examination
- Semen Analysis
- Additional laboratory testing depending….

Why?

① Identify opportunities to optimize reproductive potential
② Identify associated health problems
# SEMEN ANALYSIS - BASICS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ejaculate volume</td>
<td>Amount of fluid</td>
</tr>
<tr>
<td>Sperm concentration</td>
<td># of sperm in 1 mL</td>
</tr>
<tr>
<td>Motility</td>
<td>Movement of sperm</td>
</tr>
<tr>
<td>Morphology</td>
<td>How sperm look</td>
</tr>
</tbody>
</table>

**2-5 days sexual abstinence reduces variability**

**What is an abnormal semen analysis?**
- One of the above is not met on 2 occasions
### SEMEN ANALYSIS - WHO NORMAL VALUES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ejaculate volume</td>
<td>1.5 - 5.5 mL</td>
</tr>
<tr>
<td>Sperm concentration</td>
<td>&gt;15 million sperm/mL</td>
</tr>
<tr>
<td>Motility</td>
<td>&gt;40%</td>
</tr>
<tr>
<td>Morphology</td>
<td>&gt;4% normal forms</td>
</tr>
</tbody>
</table>

**Total Motile Sperm Count:**
- $\text{Ejaculate volume} \times \text{sperm concentration} \times \text{motility}$
Combinations of:
- Low concentration
- Low motility
- Poor morphology

Synergistically decrease the chance of fertility

**Table 3. Odds Ratios for Infertility for Combinations of Sperm Measurements.***

<table>
<thead>
<tr>
<th>Morphologic Features</th>
<th>Motility</th>
<th>Concentration</th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertile</td>
<td>Fertile</td>
<td>Fertile</td>
<td>1.0</td>
</tr>
<tr>
<td>Subfertile</td>
<td>Fertile</td>
<td>Fertile</td>
<td>2.9 (2.2–3.7)</td>
</tr>
<tr>
<td>Fertile</td>
<td>Subfertile</td>
<td>Fertile</td>
<td>2.5 (1.6–4.2)</td>
</tr>
<tr>
<td>Fertile</td>
<td>Fertile</td>
<td>Subfertile</td>
<td>2.2 (1.3–3.6)</td>
</tr>
<tr>
<td>Subfertile</td>
<td>Subfertile</td>
<td>Fertile</td>
<td>7.2 (4.3–12.2)</td>
</tr>
<tr>
<td>Subfertile</td>
<td>Fertile</td>
<td>Subfertile</td>
<td>6.3 (3.8–10.3)</td>
</tr>
<tr>
<td>Fertile</td>
<td>Subfertile</td>
<td>Subfertile</td>
<td>5.5 (3.0–10.2)</td>
</tr>
<tr>
<td>Subfertile</td>
<td>Subfertile</td>
<td>Subfertile</td>
<td>15.8 (8.7–29.0)</td>
</tr>
</tbody>
</table>

*Guzick et al. NEJM, 2001;345:1388*
WAYS TO GET PREGNANT

- Natural Pregnancy

- IUI - 5 to 10 million motile sperm
  - AKA – Turkey Baster Method

- IVF/ICSI - 1 sperm
- Ideally before cancer treatment

- Cryopreserve sperm for future use

- Often sperm will return after cancer treatment but not guaranteed
WHAT CAN I DO?

- Diet and lifestyle
- Exercise/weight loss
- Smoking cessation
- Cell phone & laptops
- Hot tubs & jacuzzis
- Multivitamin
Danish study - >45,000 couples
Compared BMI with time to pregnancy (TTP) > 1 year

Odds Ratio (TTP >1yr)

<table>
<thead>
<tr>
<th>Male BMI</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.5</td>
<td></td>
</tr>
<tr>
<td>18.5-25</td>
<td>1.2</td>
</tr>
<tr>
<td>25-30</td>
<td>1.6</td>
</tr>
<tr>
<td>&gt;30</td>
<td></td>
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</tbody>
</table>

Multiple reports showing decreased semen quality during:

- Examination periods\textsuperscript{11}
- Times of war\textsuperscript{12}
- Self reported life stress\textsuperscript{13,14}
- Work stress\textsuperscript{13,14}
- Death of family member\textsuperscript{13,14}

HOW DO I GET A SEMEN ANALYSIS?

Male Fertility Lab at the Men’s Health Center

- Men's Health Center, 3rd floor of UWMC - Roosevelt
  4245 Roosevelt Way NE
  Seattle, WA 98105

Phone:
- Appointments: 206-598-6358
- New appointments also call: UW Medicine Pre-
  registration: 206-598-4388
Need to treat ED

Premature ejaculation
  - Topical treatments
  - Oral medication

Post-radiation or surgery effects
  - Retrograde ejaculation
  - No ejaculate (still make sperm in testicles)
Delayed ejaculation
  - Medications can help
  - Herbal supplement yohimbine can help
  - Can be difficult to treat
WHAT ARE MY NEXT STEPS?

• If interested in fertility get a semen analysis

• Schedule appointment at Men’s Health Center to discuss your issues
WHERE CAN I FIND HELP?

• Men's Health Center
• 3rd floor of UWMC - Roosevelt
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THANK YOU
QUESTIONS???

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