Sexuality and Contraception

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The motivation for people to become sexually active

Sexual Activity

- Wish to become pregnant
- Feeling like a woman, a man
- Feeling horny
- Feeling close, intimate

Wish for a child
Self expression/ Affirmation
Excitement/ Relaxation
Belonging to someone

Reproduction
Gender Identity
Pleasure
Attachment
The motivation for people to become sexually active

- Contraception
- Fear to become pregnant
- Wish for a child
- Reproduction
- Gender Identity
- Pleasure
- Attachment

Sexual Activity

- Feeling like a woman, a man
- Feeling hornny
- Feeling close, intimate
- Belonging to someone
- Self expression/Affirmation
- Excitement/Relaxation
Understanding female sexuality

The circular model (Basson et al 2003)

- Emotional and Physical Satisfaction
- Emotional Intimacy
- Seeking Out and Being Receptive to
- Sexual Stimuli
- Orgasm
- Spontaneous Sexual Drive
- Sexual Arousal
- Arousal and Sexual Desire
- Biologic
- Psychological
Classification of Sexual Disorders

- **Sexual Desire Disorders**
  - Hypoactive sexual desire disorder
  - Sexual aversion disorder

- **Sexual Arousal Disorder**

- **Orgasmic Disorder**

- **Sexual Pain Disorders**
  - Dyspareunia
  - Vaginismus

The impact of contraceptive methods on female and male sexual function
- Empirical finding
## COC and Vulvovestibulitis

<table>
<thead>
<tr>
<th>Study</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vulvar vestibulitis in the North of Sweden. An epidemiologic case-control study.</strong></td>
<td>32 women with VVS and 17 controls</td>
</tr>
<tr>
<td><strong>Sjoberg et al.; J. Reprod Med 1997</strong></td>
<td>Women with VVS had significantly more often a history of HPV infection and longer duration of OC use</td>
</tr>
<tr>
<td><strong>Vulvar pain, Sexual behavior and genital infections in a young population: a pilot study</strong></td>
<td>172 adolescents (between 12-26 years); Questionnaire</td>
</tr>
<tr>
<td><strong>Use of oral contraceptive pills and vulvar vestibulitis: a case control study.</strong></td>
<td>138 women presenting with VVS during previous 2 years compared to 309 controls</td>
</tr>
<tr>
<td><strong>Bouchard C. et al : Am J. Epidemiolog.2002</strong></td>
<td>4% of cases 17% of controls never used OCs. RR 6.6 (CI 2.5-17.4)</td>
</tr>
<tr>
<td><strong>If the use of OCs began before age 16, the RR for VVS was 9.3 (CI 3.2-27.2)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Decreased mechanical pain threshold in the vestibular mucosa of women using oral contraceptives - a contributing factor in vulvar vestibulitis</strong></td>
<td>39 women under OC, 18 controls</td>
</tr>
<tr>
<td><strong>The mechanical threshold was significantly lower in Oc users, but not the threshold for heat</strong></td>
<td></td>
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</table>
Oral contraceptives and Vulvovestibulitis

- **Hypothesis**
  - Steroids change the sensibility of the vestibule through the action of progestogen and androgen in predisposed young women

Still unproven
What are the etiological factors contributing to VVS

Infections

Positive Correlation between VVS and frequent vaginal infections

- *Candida albicans*
- Bacterial Vaginosis
- PID
- Trichomoniasis
- Vulvar Dysplasia
- HPV ? Controversial unlikely


<table>
<thead>
<tr>
<th>Condition</th>
<th>Ad OR</th>
<th>95% CI</th>
</tr>
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<tbody>
<tr>
<td>Chronic fatigue</td>
<td>3.19</td>
<td>0.88, 11.42</td>
</tr>
<tr>
<td>Fibromyalgie</td>
<td>3.84†</td>
<td>1.54, 9.55</td>
</tr>
<tr>
<td>Depression</td>
<td>1.46</td>
<td>0.79, 2.7</td>
</tr>
<tr>
<td>Irritable Bowel Syndrom</td>
<td>3.11†</td>
<td>1.6, 6.05</td>
</tr>
<tr>
<td>Sexually active last 6 months</td>
<td>0.49†</td>
<td>0.25, 0.97</td>
</tr>
<tr>
<td>History of PMS</td>
<td>1.14</td>
<td>0.63, 2.07</td>
</tr>
<tr>
<td>&gt; 3 UTI/ year</td>
<td>5.33†</td>
<td>2.44, 11.62</td>
</tr>
<tr>
<td>&gt; 3 Candidiasis / year</td>
<td>9.89†</td>
<td>5.23, 18.71</td>
</tr>
<tr>
<td>Previous COC use</td>
<td>0.83</td>
<td>0.43, 1.6</td>
</tr>
<tr>
<td>COC use &gt; 5 Jahre</td>
<td>0.49†</td>
<td>0.26, 0.95</td>
</tr>
</tbody>
</table>

†: p<0.05

Case control study
77 patient with vulvodynia vs 208 healthy controls
## COC and HSDD

<table>
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<tr>
<th>Category</th>
<th>Findings</th>
</tr>
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<tbody>
<tr>
<td><strong>Retrospective studies (14 studies)</strong></td>
<td>Large increase in desire to modest decrease</td>
</tr>
<tr>
<td>1959-1990</td>
<td>The majority experienced increase or no change</td>
</tr>
<tr>
<td><strong>Prospective uncontrolled studies (3 studies)</strong></td>
<td>The majority of COC users had no change in libido with much smaller proportions reporting increase and decrease;</td>
</tr>
<tr>
<td></td>
<td>Increase 17%; Decrease 39%; stable 44% (Sanders 2001)</td>
</tr>
<tr>
<td><strong>Prospective and cross sectional controlled studies (3 studies)</strong></td>
<td>Slight Decrease; More increase in OC users; The rate increase/decrease was higher in IUD users than in COC users</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Randomized pacebo-controlled trials (4 studies)</strong></td>
<td>In most women stable libido; same increase and decrease; COC decrease of libido, POP no decrease in Scottish women; no change in women from the Philippines</td>
</tr>
</tbody>
</table>

Davis AR, Castano PM 2006
OCs and Libido

Basic science studies:

- Ovulatory shifts in female sexual desire. Pillsworth et al J. Sex. Res 2004: Ovulatory peak in sexual desire, which is suppressed by COs?

- Menstrual cycle related changes in plasma oxytocin are relevant to normal sexual function in healthy women. Salonia et al Horm Behav 2005: Plasma Oxytocin fluctuates throughout the cycle and is related to vaginal lubrication. Ocs suppress this fluctuation

but

Many contradictory studies about menstrual cycle phases and female sexual behavior
OCs and Desire

- Basic science studies:
  - Impact of oral contraceptives on sex-hormone binding globulin and androgen levels: a retrospective study in women with sexual dysfunction. Panzer et al J Sex 2006;
  - SHBG levels in the „Discontinued Users“ did not decrease to values consistent with „Never Users“. Longterm decrease in libido through Genetic Imprinting?

- but

Retrospective study with women under Testosterone supplementation

When is SHBG abnormally high and when is it still in a normal fluctuation range?

What is the relationship between SHBG and sexual dysfunction?
HSDD and androgens in women

- No single androgen level is predictive of low female sexual function (Davis 1999 and 2005)
- No correlation between SHBG levels during OC use and HSDD frequency (Bitzer et al in press); there seems to be a broad range of tolerance with respect to testosterone fluctuations.
- Women with free testosterone levels of 2pg/ml or less are at increased risk of HSDD
## IUD and Sexual function

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goldstein I, Fugl-Meyer KS. Fugl-Meyer AR.</strong></td>
<td>Pain 9% in age group up to 24</td>
</tr>
<tr>
<td><strong>Poster ISSWSH 2006 Lisbon</strong></td>
<td>Pain 17% in women between 25 and 34 years</td>
</tr>
<tr>
<td><strong>Confino E. et al: Comparison between OM-GA Cu and Copper-T IUCDs.</strong></td>
<td>OM-GA Cu and Copper-T IUCDs were compared in two-hundred women and followed up for two years. Dysmenorrhea and dyspareunia were more frequent with the Copper-T. Menometrorrhagiae, vaginal discharge and pelvic inflammatory disease were similar with both IUCDs.</td>
</tr>
<tr>
<td><strong>Barnard Johnes 1973</strong></td>
<td>Libido increase 33% Decrease 11% Stable 65%</td>
</tr>
<tr>
<td><strong>Li RH et al: Impact of common contraceptive methods on quality of life and sexual function in Hong Kong Chinese women Contraception 2003</strong></td>
<td>IUCD no significant adverse impact on quality of life and sexual function. After female sterilization, there is a significant improvement in sexual satisfaction and sexual drive.</td>
</tr>
</tbody>
</table>
## Reasons for Dissatisfaction Leading to Discontinuation

<table>
<thead>
<tr>
<th>Reason for Discontinuation, %</th>
<th>Condom n=705</th>
<th>Pill n=1637</th>
<th>Injectable n=579</th>
<th>Implantable n=66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too difficult or messy to use</td>
<td>15.2</td>
<td>5.7</td>
<td>1.2</td>
<td>10.4</td>
</tr>
<tr>
<td>Partner unsatisfied</td>
<td><strong>38.6</strong></td>
<td>2.8</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Experienced side effects</td>
<td>17.9</td>
<td><strong>64.6</strong></td>
<td><strong>72.3</strong></td>
<td><strong>70.6</strong></td>
</tr>
<tr>
<td>Worried about side effects</td>
<td>2.0</td>
<td>13.1</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Did not like the changes in menstrual periods</td>
<td>1.5</td>
<td>12.7</td>
<td><strong>33.7</strong></td>
<td><strong>19.3</strong></td>
</tr>
<tr>
<td>Experienced contraceptive failure</td>
<td>7.5</td>
<td><strong>10.4</strong></td>
<td>5.7</td>
<td>8.3</td>
</tr>
<tr>
<td>Worried about effectiveness</td>
<td>13.2</td>
<td>3.0</td>
<td>2.2</td>
<td>0</td>
</tr>
<tr>
<td>Other health problems/doctor's advice</td>
<td>2.5</td>
<td>8.5</td>
<td>5.7</td>
<td>9.2</td>
</tr>
<tr>
<td><strong>Method decreased sexual pleasure</strong></td>
<td><strong>37.9</strong></td>
<td><strong>4.1</strong></td>
<td><strong>8.2</strong></td>
<td><strong>1.1</strong></td>
</tr>
<tr>
<td>Other reason</td>
<td>15.4</td>
<td>10.6</td>
<td>8.1</td>
<td>10.2</td>
</tr>
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</table>

STI = sexually transmitted infection.

General methodological problems leading to bias and confounding

- **Measurement of sexual dysfunction:**
  - Heterogenity of instruments (standardized and self developed)

- **Lack of control of intervening variables**
  - Motivation for contraception
  - Context of contraception
  - General status of wellbeing before
  - Preexisting personal factors and sexual experience
  - Quality of relationship etc.
Sexual Counseling - Diagnosis

Door opener: Addressing Sexual Problems

Descriptive Diagnosis of Sexual Dysfunction

Exploration of Conditioning Factors

Biological factors

Psychological factors

Contraceptive method

Sexual function

Relationship factors

Environmental factors

Comprehensive, explanatory Sexual Diagnosis
Diagnostic approach

- **Door Opener:**
  - “Contraception should help you to enjoy your sexuality. Are you satisfied with your sexual life or are there any problems you would like to talk about.”
  - Since our last visit, did you experience any change or any problem in your sexual life.

- **Descriptive Sexual Diagnosis**
  - **Type:**
  - **Duration:**
    - Primary, longstanding versus secondary, recent origin
  - **Context:**
    - Global versus situational,
Biomedical Factors

Physical Wellbeing
Possible Impact of contraceptive methods

COC

Modification on menstruation

- Diminish Dysmenorrhea and Hypermenorrhea
- Regularize cycle

Dysmenorrhea
Hypermenorrhea

IUDs

POC
COC

Irregual Bleeding
Biomedical Factors

Physical Wellbeing
Possible Impact of contraceptive methods

COC

Improve Seborrhea
Induce Seborrhea

Improve Acne
Induce Acne

Skin Changes

POC
COC

POC
COC
Physical Wellbeing
Possible Impact of contraceptive methods

COC
No influence, Slight reduction

Weight Gain
Increase Weight

DMPA
POC
COC
Biomedical Factors

Physical Wellbeing
Possible Impact of contraceptive methods

COC

Diminish Dysmenorrhea
Attenuate PMS, PMDD

Pain Syndromes

Dyspareunia
Breast tension
Headache

IUDs
POPCOC
Low dose
POC
Mental Wellbeing

Impact of contraceptive methods

Possible

COC

Reduce anxious/depressed mood

Depressive mood

Mild depressive mood or aggravation

POC

COC

Attenuate PMDD
Biomedical Factors

Hormonal regulation

Possible Impact of contraceptive methods

Function and vitality of the mucosal membranes, olfactoric and psychotropic effect

Oestrogens

Progestogens

Androgens

Prolactine

Ocytocine

SHBG

Increase

Neuropeptides

Positive effect on desire and mood

Negative effect on skin and body image

Antio-estrogenic effect

Neurotropic effect

Possible Impact of contraceptive methods

Biomedical Factors
Psychological Factors
Sexual and love script
Possible Impact of contraceptive methods

Freedom from anxiety about unwanted pregnancy; enjoy sexuality and lust

Preexisting sexual interest and pleasure may be facilitated through the use of COCs

Deprivation of a creative potency, of a biological and archaïque meaning of sexuality

Preexisting sexual dissatisfaction may be attributed to external factor like COCs

Sexuality

Hormonal C
IUD
Barrier
NFP

Fertility
Relationship Factors
Partner Dynamics
Possible Impact of contraceptive methods

- Attractiveness; Sexual interaction
  - OCs neg influence on pherhormones
  - Condom risk of ED, Pain
  - IUD thread and Vaginal Ring
  - Couple Discordance Neg. Impact

- Wish for a child, autonomy
  - COC positive skin effects
  - Couple concordance Pos. Impact
  - Couple Dissens Neg. Impact

- Responsibility for contraception
  - Couple Consens Pos. Impact
Sexual Counseling and Therapy

Treat clinical condition (ex hypothyroidism, infection)
Change to an androgenic progestogen
Increase the dosage of EE
Change to a non hormonal method in vulnerable women
Sexual Counseling and Therapy

Information and Education
- Body awareness methods
- CBT
- Individual PT
- Treat Depression

Biological Factors
- Comprehensive Diagnosis of Sexual Dysfunction

Relational Factors;

Social Factors;
Sexual Counseling and Therapy

**Biological Factors**

**Individual Psychologic factors;**

**Comprehensive Diagnosis of Sexual Dysfunction**

**Social Factors;**

Improve communication,
Help reestablish balance between give and take
Sexual Counseling and Therapy

- Biological Factors
  - Correct irrational beliefs and myths,
  - Detect and denounce hidden forms of sexual violence

- Individual Psychologic factors;

- Comprehensive Diagnosis of Sexual Dysfunction

- Relational Factors;
Sexual Counseling and Therapy

- Treat clinical condition (ex. hypothyroidism, infection)
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Comprehensive Diagnosis of Sexual Dysfunction

- Improve communication,
- Help reestablish balance between give and take

Information and Education
- Body awareness methods
- CBT
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- Treat Depression
Thanks for Listening
Have Fun