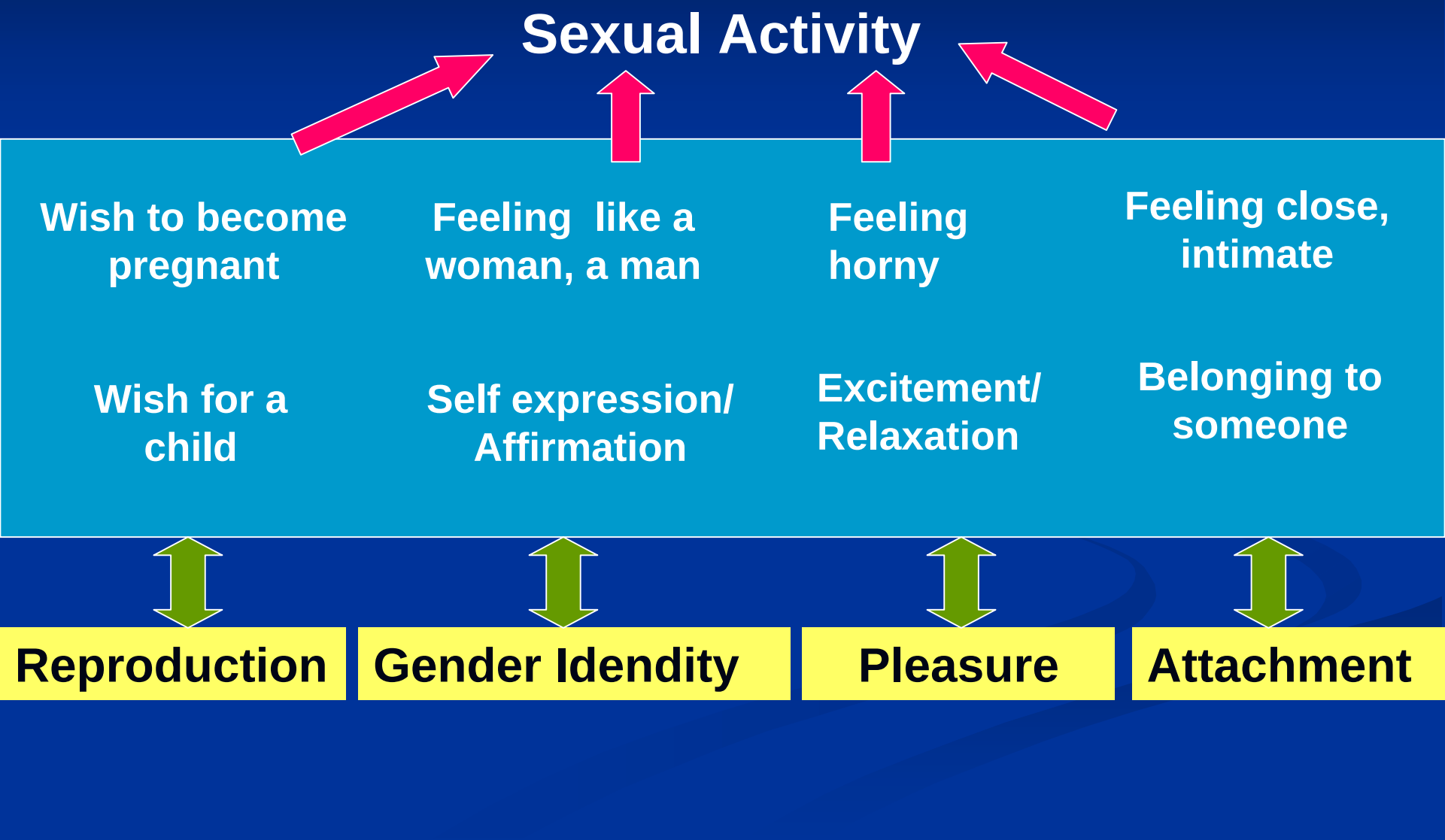
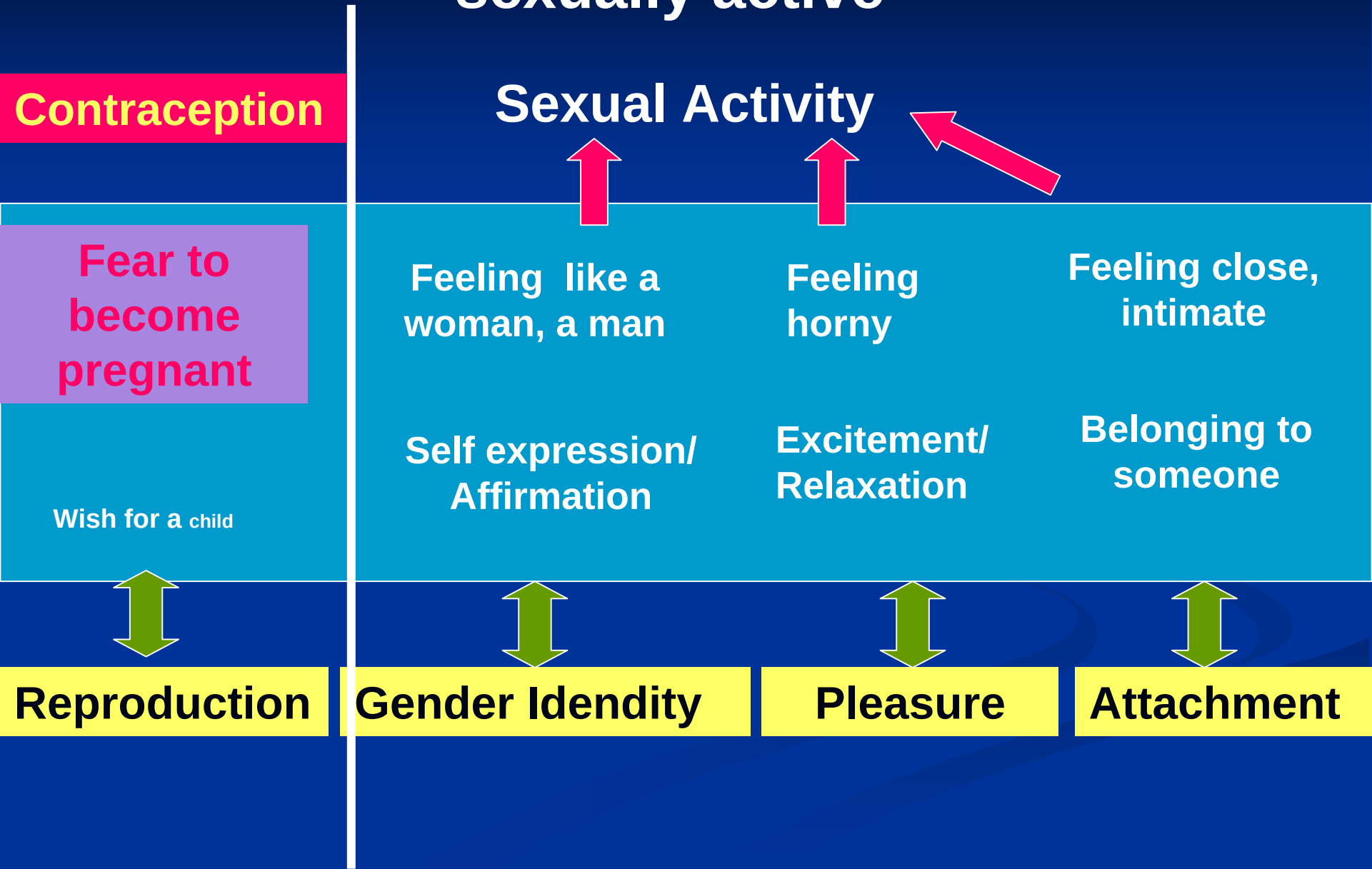
Sexuality and Contraception

Prof. J. Bitzer
Dep. Obstetrics and Gynecology
University Hospitals Basel

The motivation for poeple to become sexually active

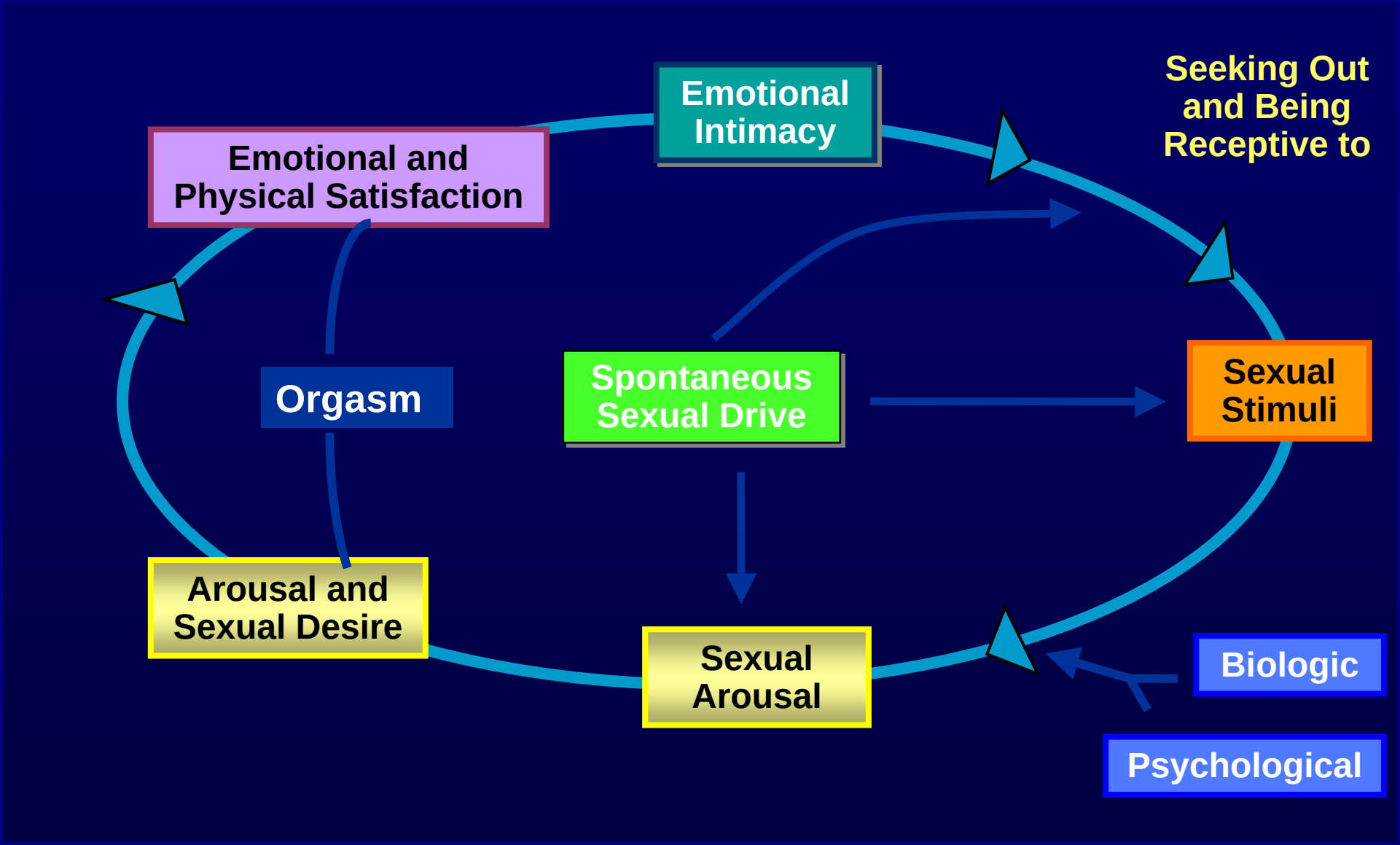


The motivation for poeple to become sexually active



Understanding female sexuality

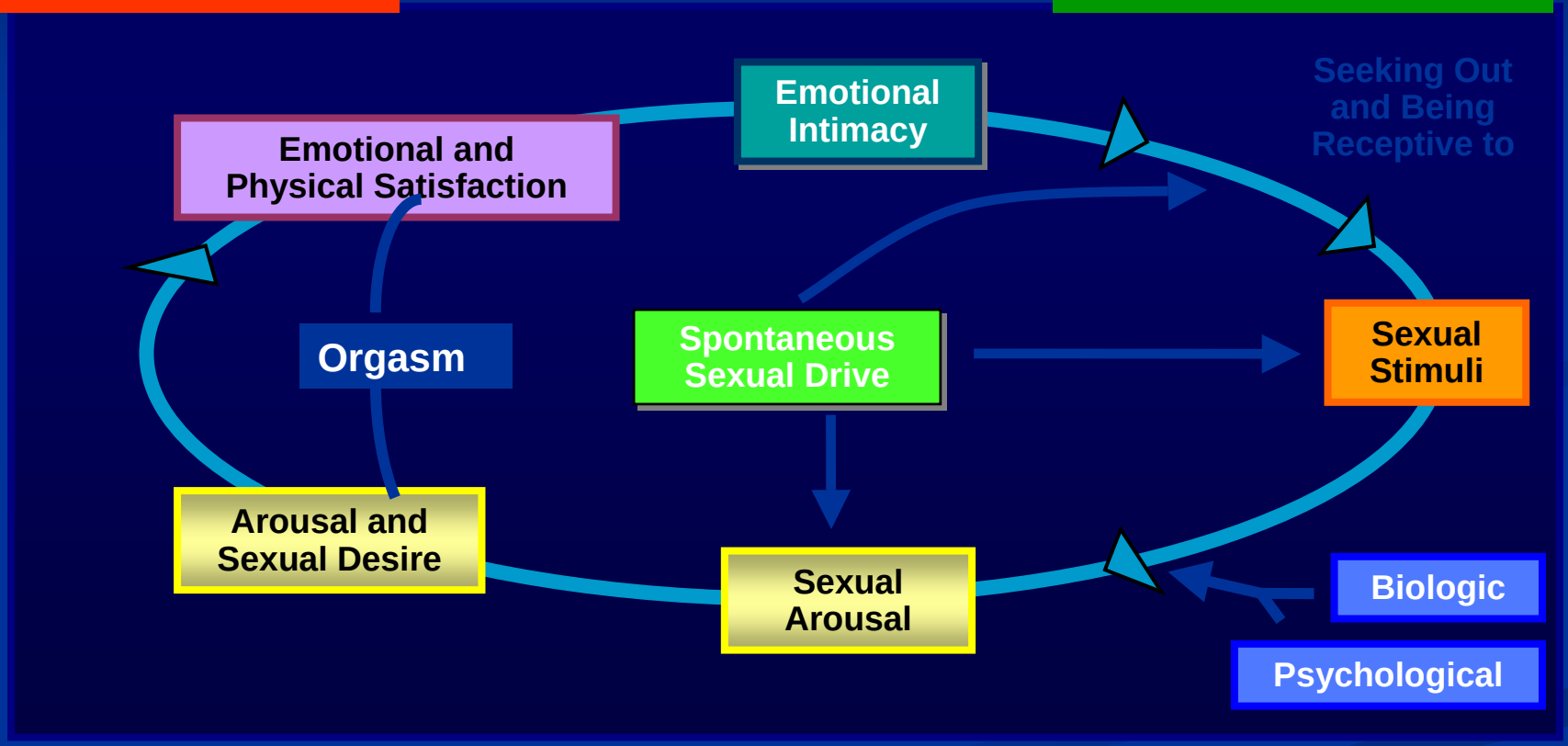
The circular model (Basson et al 2003)



Understanding female sexuality

Biological Factors

Psychological Factors



Relationship Factors

Sociocultural Factors

Classification of Sexual Disorders*

- Sexual Desire Disorders
  - Hypoactive sexual desire disorder
  - Sexual aversion disorder
- Sexual Arousal Disorder
- Orgasmic Disorder
- Sexual Pain Disorders
  - Dyspareunia
  - Vaginismus

Basson, R et al.(2000) *Report on the International Consensus Development Conference on Female Sexual Dysfunction: Definitions and Classification*. The Journal of Urology, **163**, 888:893

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

COC and Vulvovestibulitis

■ *Vulvar vestibulitis in the North of Sweden. An edpidemiologic case-control study.* ■ *Sjoberg et al.; J. Reprod Med 1997*	■32 women with VVS and 17 controls ■Women with VVS had significantly more often a history of HPV infection and longer duration of OC use
■ *Vulvar pain, Sexual behavior and genital infections in a young population: a pilot study* ■ *Berglund AL et al: Acta Obstet Gynecol. Scand 2002*	■172 adolescents (between 12-26 years); Questionnaire ■1/3 report experiencing pain during intercourse;
■ *Use of oral contraceptive pills and vulvar vestibulitis: a case control study.* ■ *Bouchard C. et al : Am J. Epidemiolog.2002*	138 women presenting with VVS during previous 2 years compared to 309 controls 4% of cases 17% of controls never used OCs. RR 6.6 (CI 2.5-17.4) If the use of OCs began before age 16, the RR for VVS was 9.3 (CI 3.2-27.2)
■ *Decreased mechanical pain threshold in the vestibular mucosa of women using oral contraceptives - a contributing factor in vulvar vestibulitis* ■ *Bohm-Starke N. et al : J. Reprod.Med.2004*	■39 women under OC, 18 controls ■Threshold for pain and heat ■The mechanical threshold was significantly lower in Oc users, but not the threshold for heat

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**

Smith EM et al. Infect Dis Obstet Gynecol 2002; 10(4):193-202

Arnold LD, Bachmann G Kelly S: Vulvodynia: Characetristics and Association with Co-Morbidities and Quality of life. Obstet Gynecol. 2006 March ; 107(3): 617–624

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

† :p<0.05

Case control study

77 patient with vulvodynia vs 208 healthy controls

COC and HSDD

■ *Retrospective studies (14 studies)* ■ *1959-1990*	■ Large increase in desire to modest decrease ■ The majority experienced increase or no change
■ *Prospective uncontrolled studies (3 studies)* ■ *Nillson 1967, Cullberg 1969, Sanders 2001*	■ The majority of COC users had no change in libido with much smaller proportions reporting increase and decrease; ■ Increase 17%; Decrease 39%; stable 44% (Sanders 2001)
■ *Prospective and cross sectional controlled studies (3 studies)* ■ *Herzberg1971, Barnard Jones 1973, Bancroft 1991*	Slight Decrease; More increase in OC users; The rate increase/decrease was higher in IUD users than in COC users
■ Randomized pacebo-controlled trials (4 studies) ■ *Cullberg 1972, Leeton 1978, Graham 1993, Graham 1995*	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

Davis AR, Castano PM 2006

OCs and Libido

- Basic science studies:
  - Ovulatory shifts in female sexual desire. Pillworth 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 women with sexual dysfunction. Panzer et al J Sex 2006;**

    , SHBG levels in the „Discontinued Users" did not decrease to values consistent t with „Never Users". Longterm decrease in libido through Genetic Imprinting ? ing ?

but

Retrospecitve study with women under Testosterone supplementation

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

What is the relationship between SHBG and sexual dysfunction ?

HSDD and androgens in women

- No single androgen level is predicitive of low female sexual function (Davis 1999 and 2005)
- No correlation between 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

■ *Goldstein I, Fugl-Meyer KS. Fugl-Meyer AR.* ■ *Poster ISSWSH 2006 Lisbon*	■**Pain 9% in age group up to 24** ■**Pain 17% in women between 25 and 34 years**
■*Confino E. et al: Comparison between OM-GA Cu and Copper-T IUCDs.* ■*Contraception. 1983 Dec;28(6):521-5. Links*	■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. ;
■*Barnard Johnes 1973*	**Libido increase 33%** **Decrease 11% Stable 65%**
■ *Li RH et al: Impact of common contraceptive methods on quality of life and sexual function in Hong Kong Chinese women Contraception 2003*	**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.**

Reasons for Dissatisfaction Leading to Discontinuation[1]

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

STI=sexually transmitted infection.

[1]Moreau C, et al. *Contraception.* 2007;76(4):267–272.

General methodological problems leading to bias and confounding

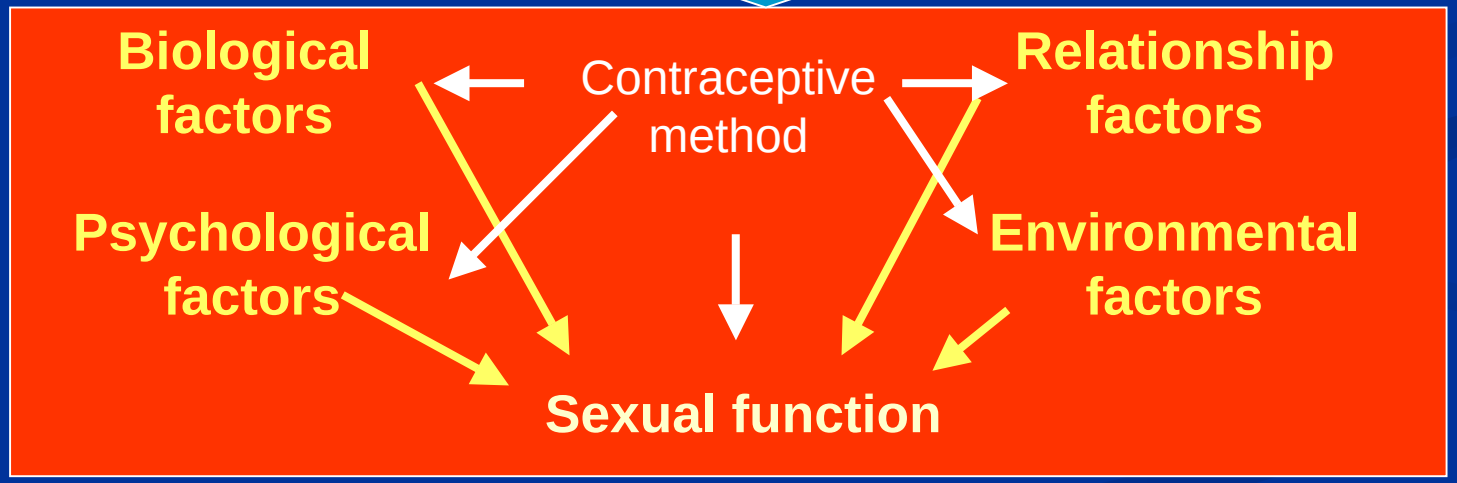
- **Measurement of sexual dysfunction:**
  - **Heterogenity of instruments (standardized and self developped)**
- **Lack of control of intervening variables**
  - **Motivation for contraception**
  - **Context of contraception**
  - **General status of wellbeing before**
  - **Preexisting personal factors and sexual experience**
  - **Quality of relationship etc.**

Sexual Counseling - Diagnosis

Door opener Addressing Sexual Problems

Descriptive Diagnosis of Sexual Dysfunction

Exploration of Conditioning Factors



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:
    - Lack of spontaneous desire? Loss of sexual phantasies ? Lack of responsiveness to sexual stimuli ? Quality of stimulation ? Arousal (Physical, Mental ? Orgasm ? Pain
  - Duration:
    - Primary, longstanding versus secondary, recent origin
  - Context:
    - Global versus situational,

Conditioning Factors of Sex Life

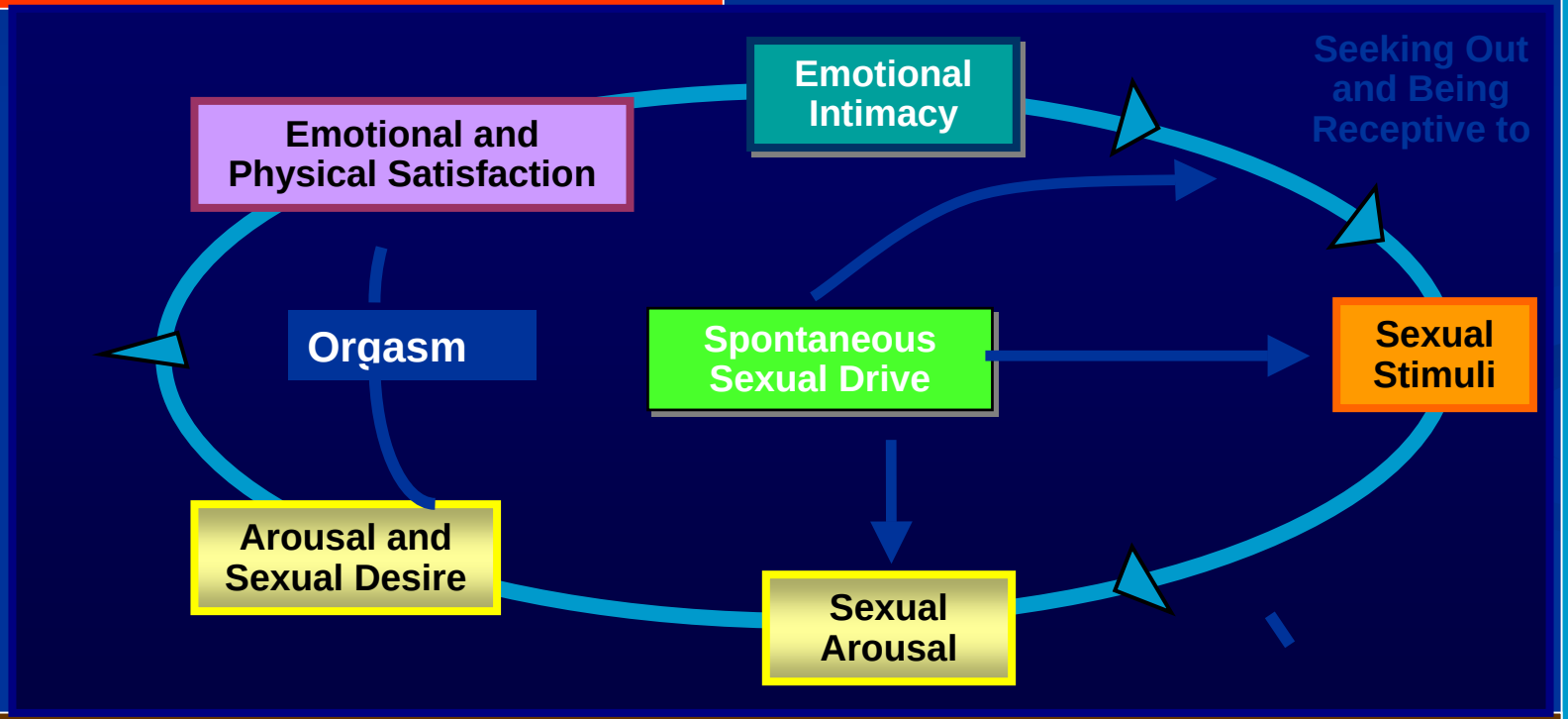
Individual Factors

Biomedical

General Health
Diseases
Drugs
Hormones
Throid
Sex Steroid

Psychological

Sexual Script
Body image
Emotional State
Sexual/
Relationship
Biography



Environmental Factors

Sociocultural norms
Space, Time
Distress

Relationship Factors

Sexual Function of the partner
Emotional Intimacy/Trust
Attractiveness/ Stimulation
Communication Conflict Competence

Biomedical Factors

Physical Wellbeing
Possible Impact of contraceptive methods

COC

Diminish Dysmenorrhea and Hypermenorrhea

Regularize cycle

Modification on menstruation

Dysmenorrhea

Hypermenorrhea

Irregual Bleeding

IUDs

POC

COC

Biomedical Factors

Physical Wellbeing
Possible Impact of contraceptive methods

COC

Improve Seborrhea

Improve Acne

Skin Changes

Induce Seborrhea

Induce Acne

POC

COC

POC

COC

Biomedical Factors

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	Dyspareunia	Breast tension	Headache	LAP
IUDs	POP Low dose COC		COC POC	

Biomedical Factors

Mental Wellbeing

Possible

Impact of contraceptive methods

COC

Attenuate PMDD

Reduce anxious/ depressed mood

Depressive mood

Mild depressive mood or aggravation

POC

COC

Biomedical Factors

Hormonal regulation

Possible Impact of contraceptive methods

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

SHBG Increase

Neuropeptides

?

Oestrogens

Androgens

Progestogens

Positive effect on desire and mood

Negative effect on skin and body image

Prolactine
Ocytocine

?

Antio-estrogenic effect

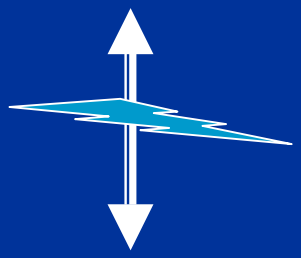
Neurotropic effect

Psychological Factors

Sexual and love script

Possible Impact of contraceptive methods

Sexuality



Fertility

Hormonal C

IUD

Barrier

NFP

Freedom from anxiety about unwanted pregnancy; enjoy sexuality and lust

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

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

Preexisting sexual disatisfaction may be attributed to external factor like COCs

Relationship Factors

Partner Dynamics

Possible Impact of contraceptive methods

OCs neg influence on pherhormones

Condom risk of ED, Pain

IUD thread and Vaginal Ring

Attractiveness; Sexual interaction

COC positive skin effects

Couple Discordance Neg. Impact

Wish for a child, autonomy

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 an non hormonal method in vulnerable women

Individual Psychologic factors;

Comprehensive Diagnosis of Sexual Dysfunction

Social Factors;

Relational Factors;

Sexual Counseling and Therapy

Information and Education

Body awareness methods

CBT

Individual PT

Treat Depression

Biological Factors

Comprehensive Diagnosis of Sexual Dysfunction

Social Factors;

Relational 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

Individual Psychologic factors;

Comprehensive Diagnosis of Sexual Dysfunction

Relational Factors;

Correct irrational beliefs and myths,

Detect and denounce hidden forms of sexual violence

Sexual Counseling and Therapy

Treat clinical condition (ex hypothyroidism , infection)

Change to an androgenic progestogen

increase the dosage of EE

Change to an non hormonal method in vulnerable women

Information and Education

Body awareness methods

CBT

Individual PT

Treat Depression

Comprehensive Diagnosis of Sexual Dysfunction

Improve communication,

Help reestablish balance between give and take

Correct irrational beliefs and myths,

Detect and denounce hidden forms of sexual violence

Thanks for Listening
Have Fun