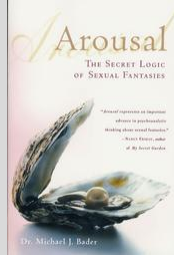


Biology of the Sexual Response

Objectives:

- > Sexual response stages
- > Sexual orientation & Kinsey's scale



1

Biology of the Sexual Response

Reading assignments:

1. [Human Sexuality - Pgs 88-94](#) (or 15 – 21)

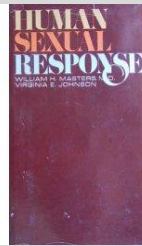
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Sexual Response = all physical & physiological changes that occur through stages of sexual arousal, activity, and resolution.

1st major scientific study published, which opened discussion and education in US was 1966 book "*Human Sexual Response*" by **Masters and Johnson** (psychologists).

- 694 volunteers interviewed, observed, and examined with sensors.
- Some participants heterosexual, homosexual, bisexual.
- Some participants were couples, others single.
- Participants observed in sexual activity (intercourse & masturbation).

Human Sexuality - Pgs 88-94 or 15-21



3



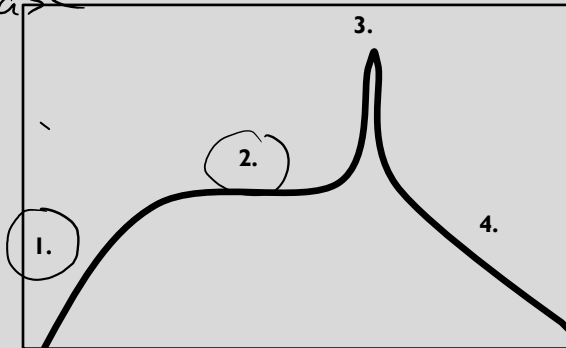
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1. Masters and Johnson Model of Sexual Response

Masters & Johnson described 4-phase model of sexual response:

EPOR:

1. Excitement phase
2. Plateau phase
3. orgasm phase
4. Resolution phase



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1. Masters and Johnson Model of Sexual Response

1. Excitement phase = initial sexual arousal.

Female:

- Erection of clitoris (tumescence)
- ↑ vaginal lubrication
- Breasts swell (↑ 50%)
- Nipples erect
- Labia swell & darken w/blood
- Uterus "lifts up"
- "Sex flush" (50% of women)
- ↑ pelvic muscle tension

Male:

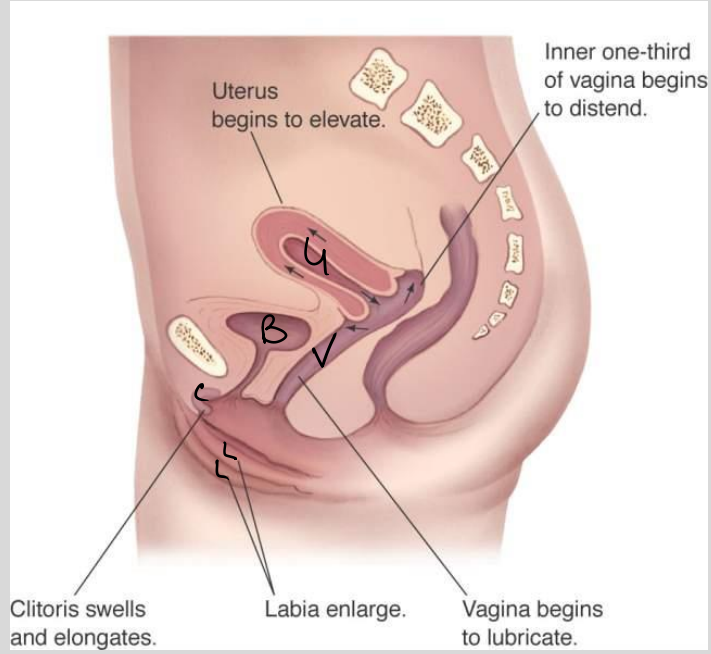
- Erection of penis (tumescence)
- Bulbourethral gland secretions
- Testes swell (↑ 50%)
- Nipples erect
- "Sex flush" (60 -70% of men)
- ↑ pelvic muscle tension

Question?

What is the G-spot? = inner anterior wall of vagina. Named after German Dr. Grafenberg.

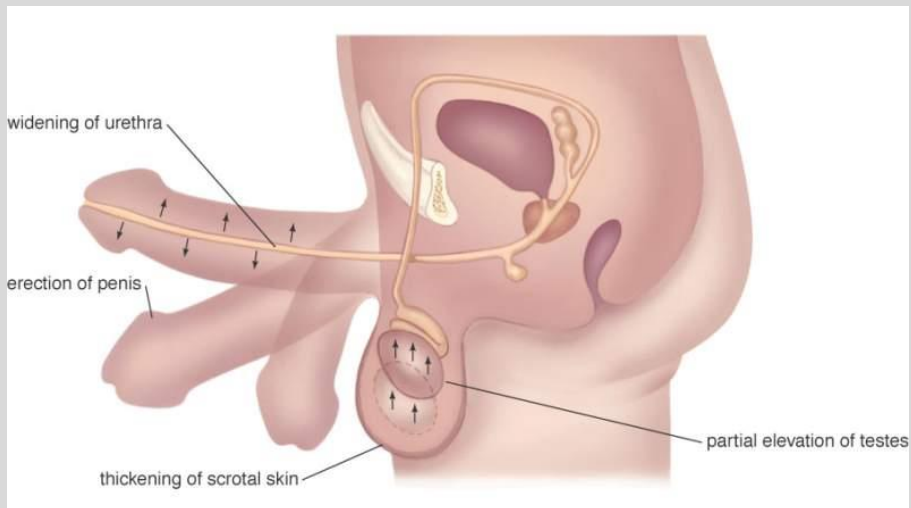
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1. Excitement phase = initial sexual arousal.



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1. Excitement phase = initial sexual arousal.



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1. Masters and Johnson Model of Sexual Response

2. **Plateau phase** = Stable state of sexual arousal.

Female:

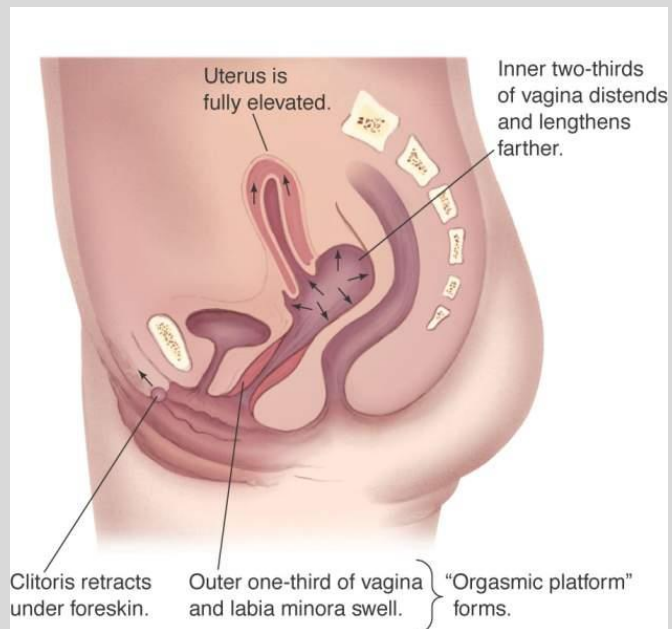
- Outer 1/3 wall vagina swells
- ↑ vagina length.
- Clitoris darkens & ~~retracts under hood.~~
- Uterine muscles contract (fibrillate)
- Sex flush spreads
- ↑ heart rate & blood pressure

Male:

- Few changes from arousal
- Head penis darkens (red/purple)
- Sex flush spreads
- ↑ heart rate & blood pressure

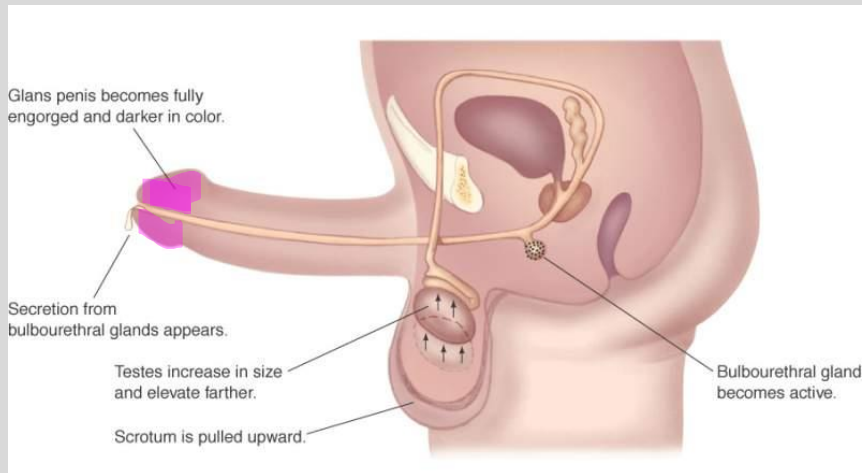
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2. **Plateau phase** = Stable state of sexual arousal.



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2. **Plateau phase** = Stable state of sexual arousal.



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1. Masters and Johnson Model of Sexual Response

3. **Orgasm phase** = Brief phase (seconds – min) where all thought suspended & focus on pleasurable sensations. *[Remember the amygdala in women?]*

Female:

- Clitoral & possible vaginal orgasm (set of 3-15 muscular contractions @ frequency of 0.8 sec)
- Sex flush spreads
- Oxytocin release
- Female ejaculation?? (speculation about substance secreted from “skene gland”).

Male:

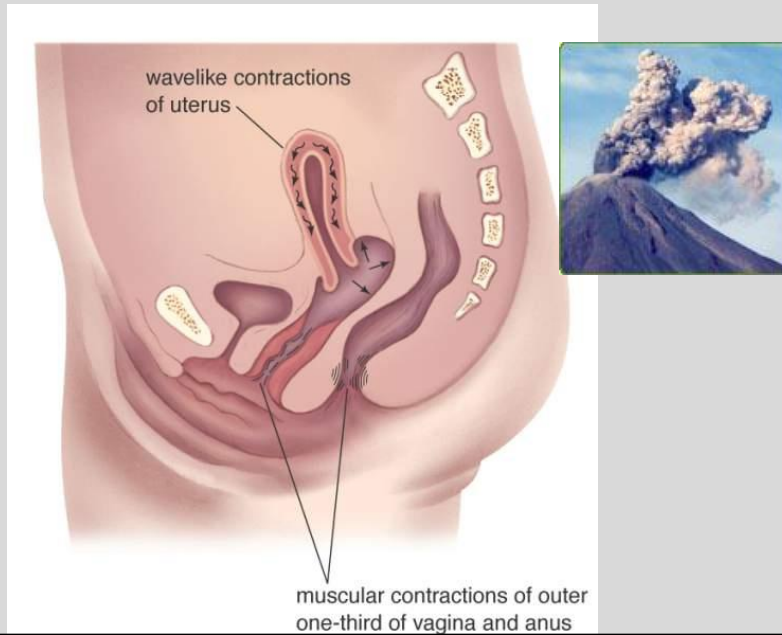
- Orgasm = moment of no return called “ejaculatory inevitability” (ejaculation of semen).
- Orgasms is set of 3-15 muscular contractions @ frequency of 0.8 sec.
- Oxytocin release

• sex Flush

Oxytocin release = in sexual context this is the “cuddle” or bonding hormone.

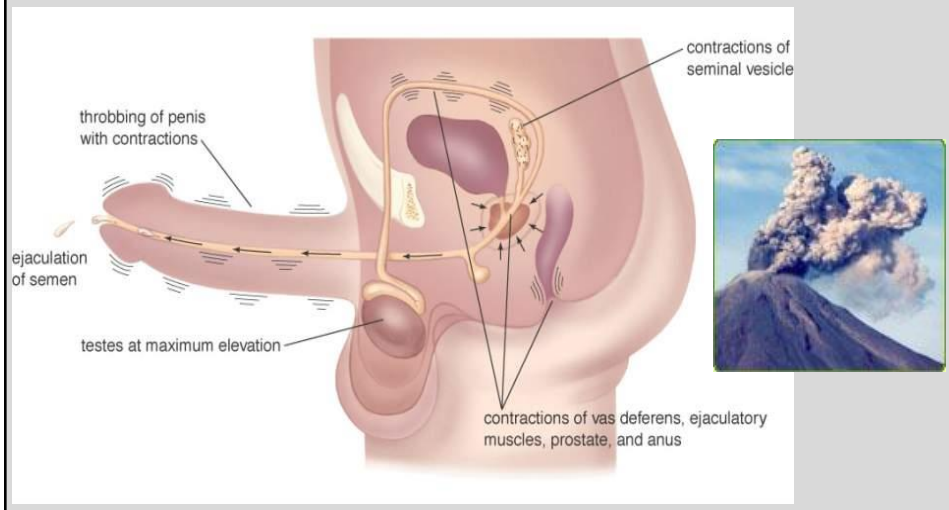
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3. Orgasm phase = Brief phase (seconds – min) where all thought suspended & focus on pleasurable sensations.



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3. Orgasm phase = Brief phase (seconds – min) where all thought suspended & focus on pleasurable sensations.



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1. Masters and Johnson Model of Sexual Response

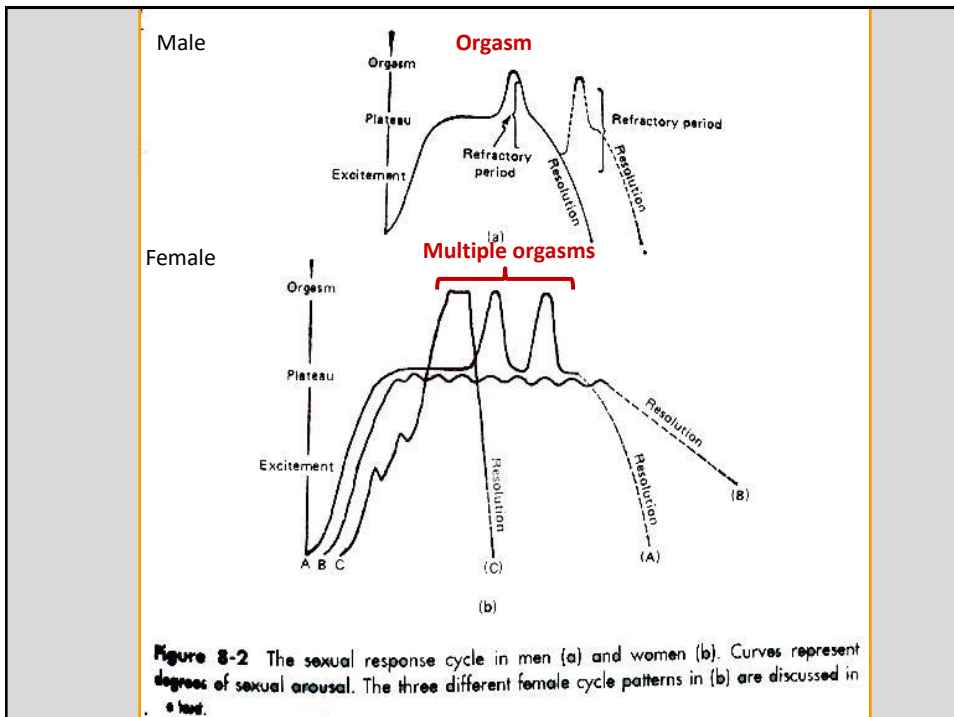
4. **Resolution phase** = Phase of relaxation where body returns to normal, unaroused state.

BOTH Female & Male:

- ↓ **tumescence** of genitals (loss of erectile state in penis & clitoris)
- Shrinkage of breasts & testes back to normal
- ↓ heart rate & blood pressure
- Men experience **refractory period** = period of time during which another erection cannot be achieved no matter the stimulation.
- Some women experience refractory period, while others don't & can be stimulated to achieve **multiple orgasms**.

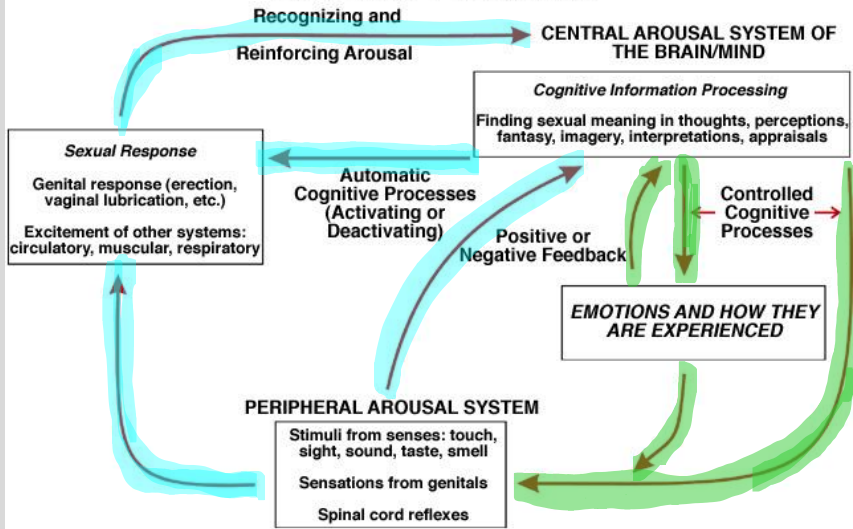
Swelling from blood flow

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Mind-Body Interactions in Sexual Arousal



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Why did orgasms evolve?

Human Sexuality - Pgs 92-93 (or 18 - 19)

- Not required for reproducing in many animals.

1. To make sex more pleasurable for repeat activity (ensure survival of species)
2. Pair bonding of male & female (2 parents better than one to ensure offspring survive)
3. Orgasm in females - uterus contracts to help sperm reach egg.
4. Post coital drowsiness (Keeps female's ~~laying~~ laying down to keep sperm in reproto. tract. prostaglandin)


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REVIEW

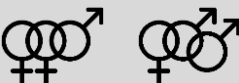
- Masters and Johnson model of sexual response (EPOR)
 - > Excitement phase
 - > Plateau phase
 - > Orgasm phase
 - > Resolution phase
- Why did orgasm evolve? (Hypotheses)


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D) Human Sexual Orientation

Heterosexual = Sexual attraction to member of opposite sex. 

Homosexual = Sexual attraction to member of the same sex. 

Bisexual = Sexual attraction to members of both sexes. 

Pansexual = Sexual attraction to members of both sexes and any gender. 

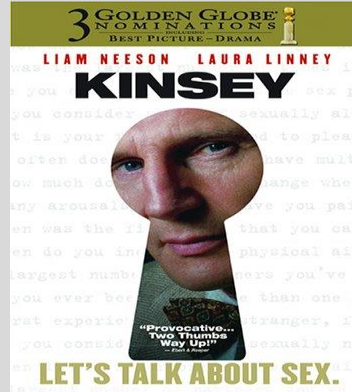
Asexual = An absence of sexual desires for either sex. 

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Kinsey's Sexuality Scale

= a heterosexual-homosexual rating scale

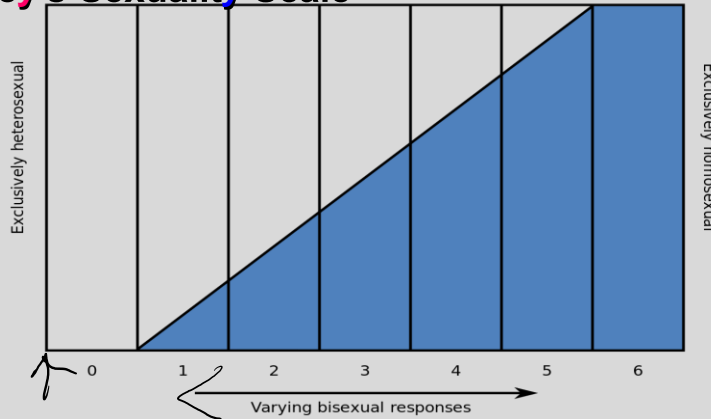
> Developed by Alfred Kinsey in 1948 to account for research findings that showed people did not fit into neat and exclusive heterosexual or homosexual categories. *VERY controversial at the time!*



Source: Kinsey scale <http://www.kinseyinstitute.org/research/ak-hhscale.html>

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Kinsey's Sexuality Scale



- 0 - Exclusively heterosexual with no homosexual
- 1 - Predominantly heterosexual, only incidentally homosexual
- 2 - Predominantly heterosexual, but more than incidentally homosexual
- 3 - Equally heterosexual and homosexual
- 4 - Predominantly homosexual, but more than incidentally heterosexual
- 5 - Predominantly homosexual, only incidentally heterosexual
- 6 - Exclusively homosexual

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4. Human Sexual Relationships

Monogamy = practice of having sex (relationship) with ~~only~~ only 1 partner.

- **serial monogamy** = practice of having sequences of monogamous sexual relationships – one after the other.

Ethnographic Atlas - ~186 societies monogamous.



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4. Human Sexual Relationships

Polygamy = having multiple spouses (partners) at same time.

1. **Polygyny** = man having more than 1 spouse

(Ex. Fundamentalist Mormons) – t.v. show “Big Love”

Ethnographic Atlas - ~588 societies had polygyny.



2. **Polyandry** = Woman has more than one husband.

(Ex. In Nepal & parts of China, brothers married to same wife where resources are scarce. Enhances child survival)

Ethnographic Atlas - ~43 societies had polyandry.



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REVIEW

- Sexual orientation
 - > Heterosexual
 - > Homosexual
 - > Bisexual
 - > Pansexual
 - > Asexual
- Kinsey's sexuality scale
- Human sexual relationships
 - > monogamy and serial monogamy
 - > Polygamy
 - polygyny
 - polyandry