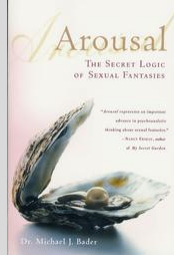


## Biology of the Sexual Response

### 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)

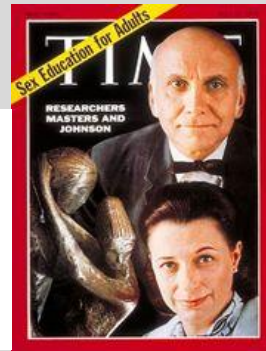
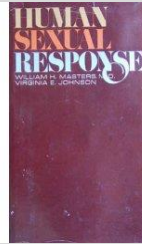
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\_\_\_\_\_ = all physical & physiological changes that occur through stages of sexual arousal, activity, and resolution.

1<sup>st</sup> 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



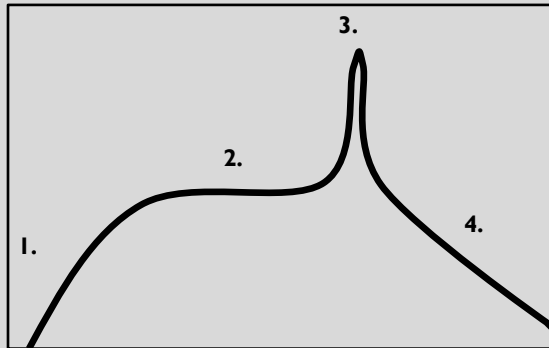
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## 1. Masters and Johnson Model of Sexual Response

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

**EPOR:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_



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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:**

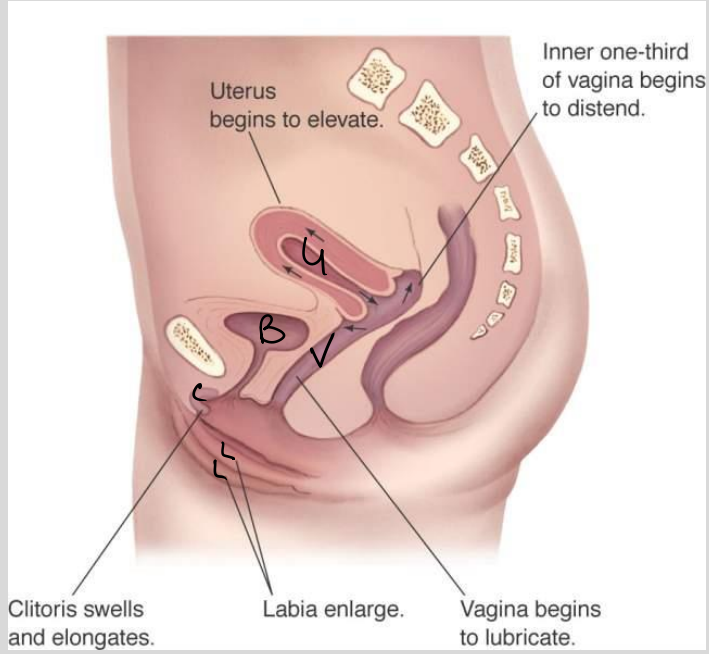
- Erection of penis (tumescence)
- Bulbourethral gland secretions
- Testes swell (↑ 50%)
- Nipples erect
- “Sex flush” (60 -70% of men)
- ↑ pelvic muscle tension

### **Question?**

What is the G-spot? = \_\_\_\_\_

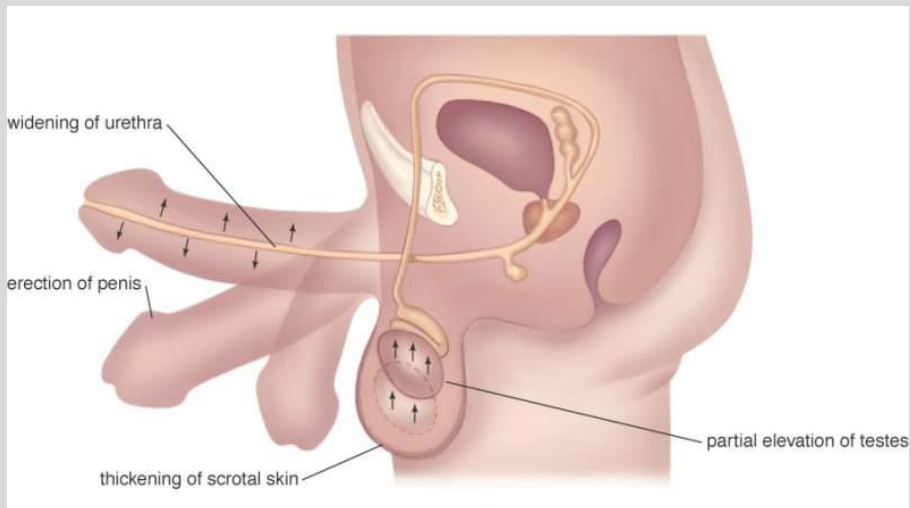
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**1. Excitement phase** = initial sexual arousal.



7

**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:

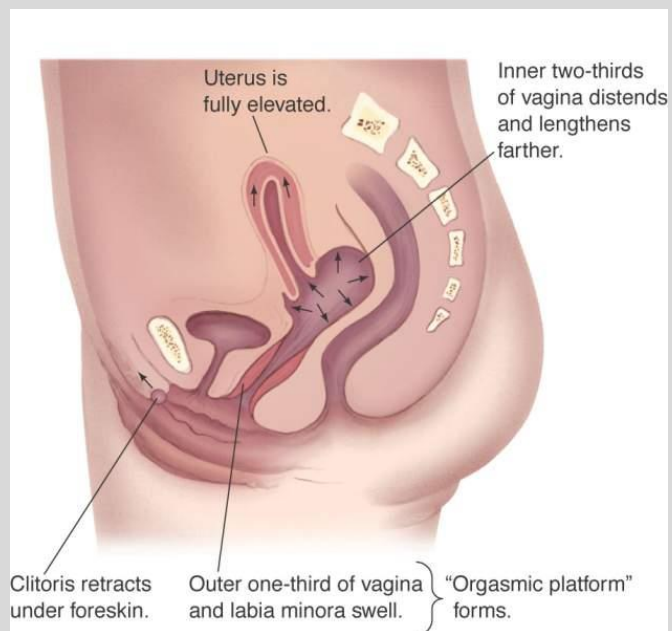
- Outer 1/3 wall vagina swells
- ↑ vagina length.
- Clitoris darkens & retracts under hood.
- Uterine muscles contract (fibrillate)
- Sex flush spreads
- ↑ heart rate & blood pressure

### Male:

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

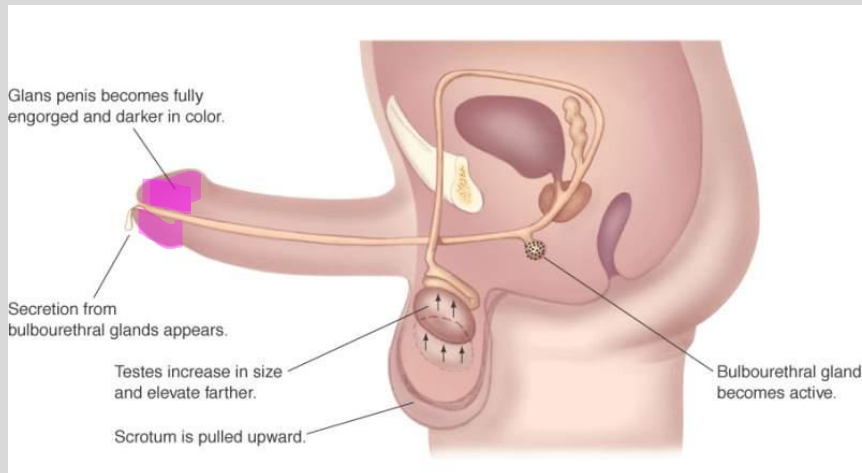
9

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”).

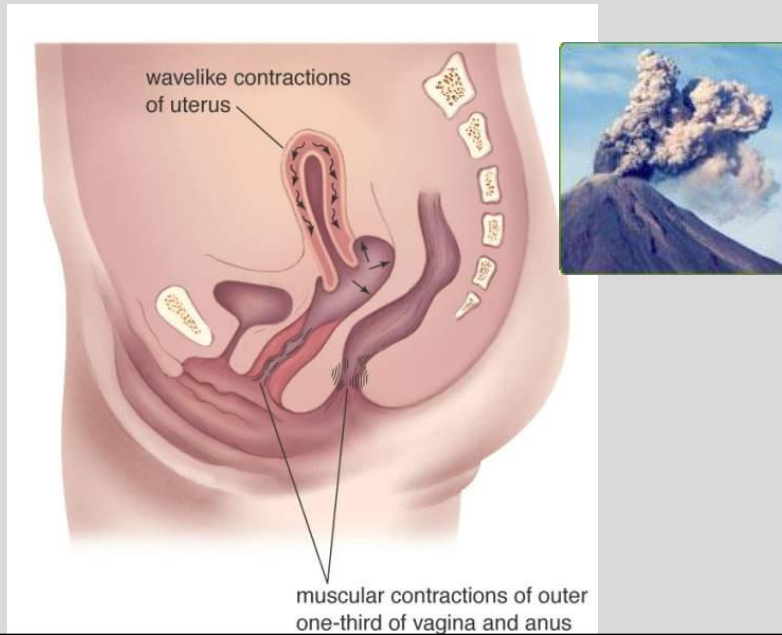
### **Male:**

- 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

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

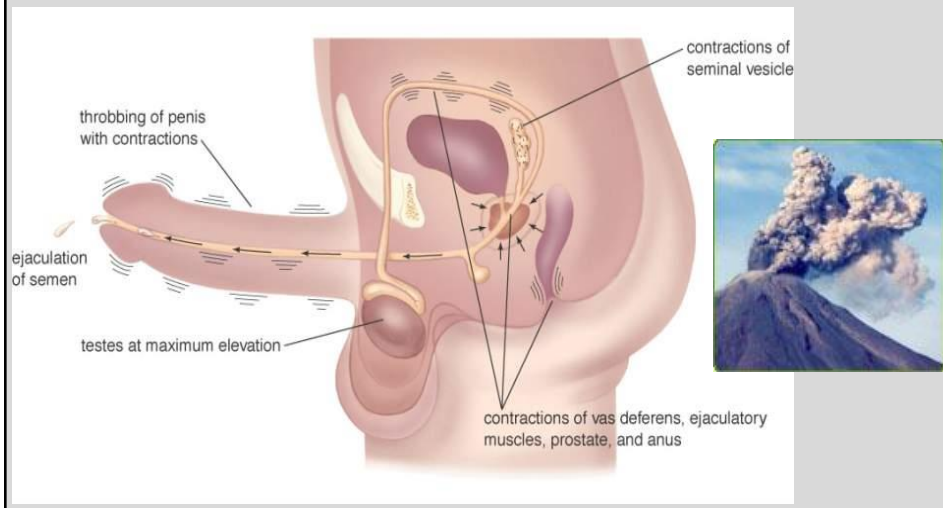
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**3. Orgasm phase** = Brief phase (seconds – min) where all thought suspended & focus on pleasurable sensations.



13

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



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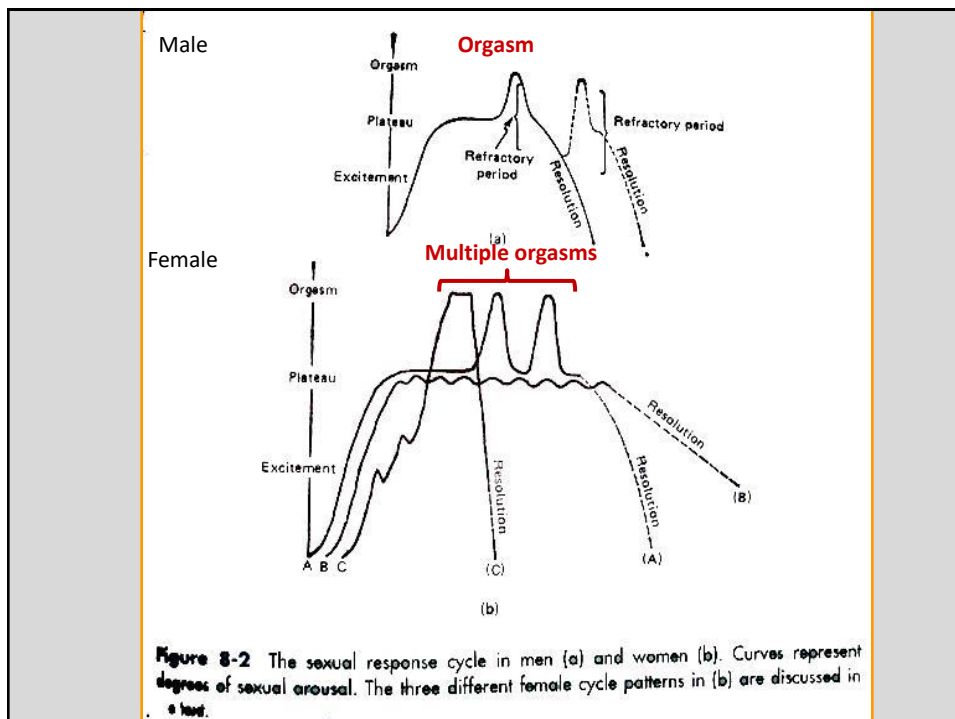
# 1. Masters and Johnson Model of Sexual Response

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**.

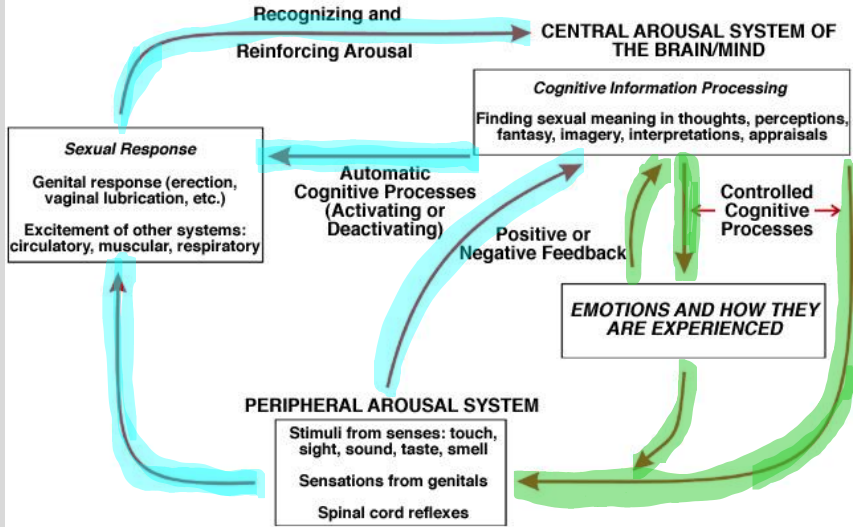
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## Mind-Body Interactions in Sexual Arousal



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### Why did orgasms evolve?

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

- Not required for reproducing in many animals.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_


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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. 

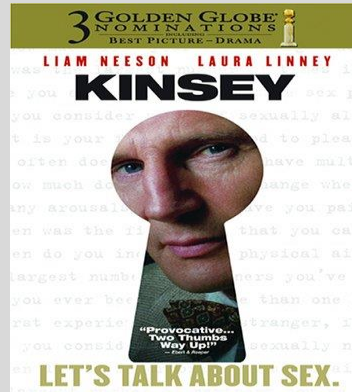
**Asexual** = An absence of sexual desires for either sex. 

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## Kinsey's Sexuality Scale

= a heterosexual-homosexual rating scale

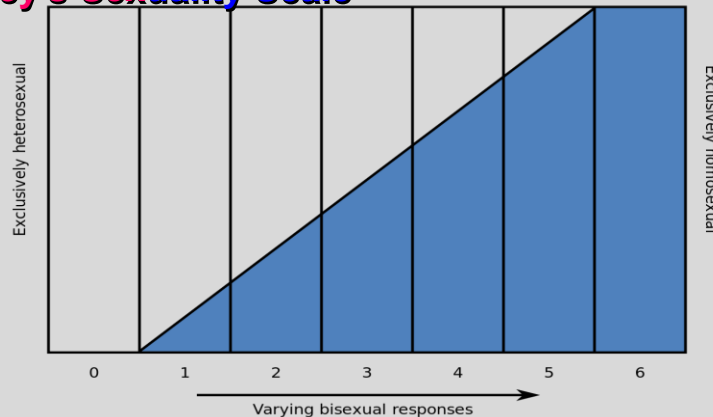
> Developed by Alfred Kinsey in 1948 to account for research findings that showed people did not fit into neat and exclusive heterosexual or homosexual categories. *VERY controversial at the time!*



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** = \_\_\_\_\_

- **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** = \_\_\_\_\_

1. **Polygyny** = \_\_\_\_\_

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

*Ethnographic Atlas - ~588 societies had polygyny.*



2. **Polyandry** = \_\_\_\_\_

(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