

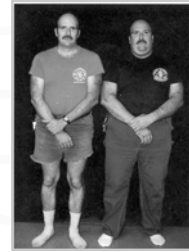
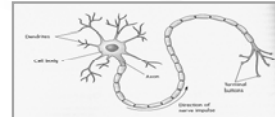
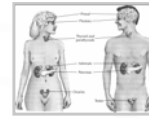
Genes and Hormones

Focus:

1. Genes

2. Hormones

3. Neurons



Genetic influences

- Evolutionary Psychology
- Twin Studies

Evolutionary Psychology



⌘ Natural Selection

genes contributing to survival will be passed on to succeeding generations
(dislike for bitter tastes & rotten smells)

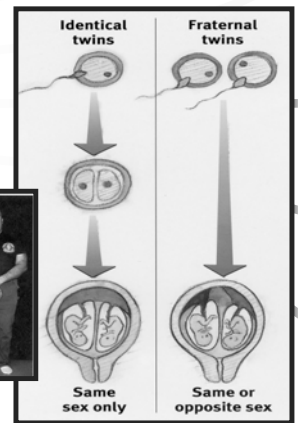
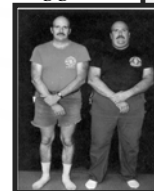
Male & Female Differences in Courtship & Mating









Twin studies

- identical:
1 sperm 1 egg

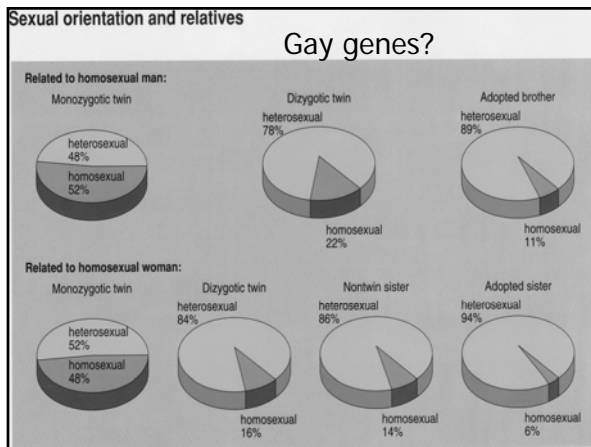
- fraternal:
2 sperms 2 eggs



Relationship	Degree of relatedness	Genetic overlap
Identical twins		100% 
Fraternal twins Brother or sister Parent or child	First degree relatives	50% 
Grandparent or grandchild Uncle, aunt, nephew, or niece Half-brother or half-sister	Second degree relatives	25% 
First cousin	Third degree relatives	12.5% 
Second cousin	Fourth degree relatives	6.25% 
Unrelated		0% 

Twin studies

- schizophrenia
- gay genes?



Is homosexuality linked to:

- quality of parent-child relation (domineering/passive mother, ineffectual/hostile father)
- fear or hatred of people of other gender
- being molested during childhood, seduced, sexually victimized by an adult homosexual
- living with gay parents

Homosexuality

- Neither willfully chosen nor willfully changed
- Homosexual behavior doesn't always indicate a homosexual orientation
- The brain & sexual orientation
- Abnormal prenatal hormone conditions

Genetic influences

Alcohol-abuse

Genes & Weight:

Set-Point theory

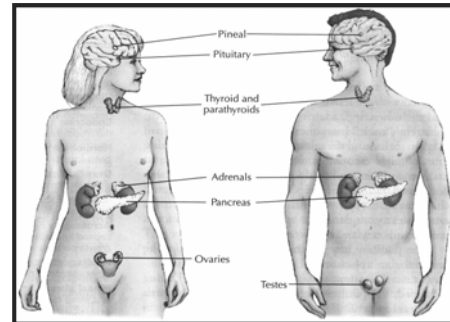
Set-Point theory

Biological mechanism keeps body weight at a genetically influenced set point

We are genetically programmed for:

- metabolic rate
- fat cells

Endocrine system



II. Hormones & behavior

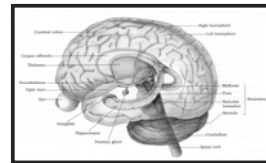
1. Stress

- adrenal gland
- hormones:
 - cortisol,
 - epinephrine,
 - norepinephrine

1. Stress

Psychological dwarfism:

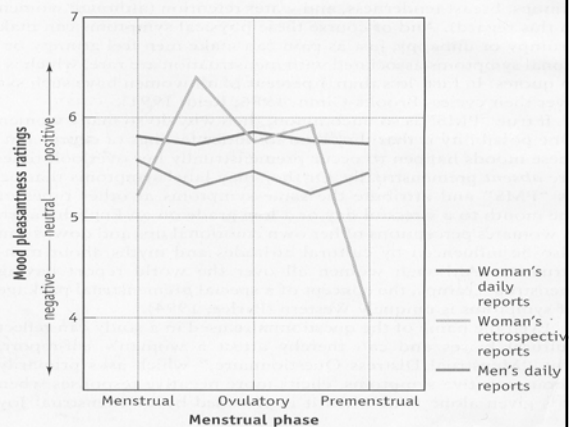
stress \Rightarrow cortisol \Rightarrow pituitary gland



↓
growth hormone
↓
growth failure

2. PMS

- estrogen
- progesterone
- Premenstrual Dysphoric Disorder





3. Child birth

- postpartum blues
- postpartum depression
- postpartum psychosis

Intelligence

- adoption studies: 70%

Intelligence: environmental influences

- "Flynn effect"
- intellectual enrichment programs
- socio-cultural deprivation
 - lack of intellectual stimulation
 - inferior school
 - malnutrition
 - lack of medical care