

1 Biological Sex

1.1 Introduction

Typically 5 markers used to determine sex

- Chromosomes
- Hormones
- Inner genitalia
- Outer genitalia
- Secondary sexual characteristics

1.2 Sex Development

- Chromosomes
 - XY (typically male)
 - XX (typically female)
- All embryos begin with indistinguishable sex and have potential to become a variety of sexes
- Fetus starts to form sexual characteristics around age 5-7 weeks

1.3 Chromosomal Variance

- Not all chromosomal compositions are XX or XY
- Over 70 chromosomal combinations documented
- Roughly 1 in every 426 humans have a chromosomal makeup that does not conform to XX/XY binary
 - Statistically ~125 students at Purdue
 - Likely higher than 1/426 odds; not many people get their chromosomes tested
- Examples:
 - XXY or XXXY (Klinefelter's Syndrome)
 - XO (Turner's Syndrome)

1.4 Hormones

- Glands secrete combination of the hormones testosterone, estrogen, and progesterone
- 2 essential washing of hormones - in utero and at puberty
- Different combinations = different effects on the body
- Interaction between chromosomes and hormones determined development of physical body
- Variety of physically diverse bodies

1.5 Hormones and the Life Course

- Hormone production varies over the life course
- Endocrine system influences body and brain functioning
- Influenced by external factors

- Environment
- Diet
- Social roles

1.6 Chromosomes + Hormones

Chromosomes and hormones encourage the development of primary and secondary sexual characteristics

- Primary (M): testes, penis, scrotum, prostate,
- Primary (F): ovaries, fallopian tubes, uterus, vagina
- Secondary (F): breast development, wider hips, higher body fat (esp. in hips, thighs, butt)
- Secondary (M): deepening of voice, broader shoulders, increased muscle mass, growth of body hair

1.7 Transgressive Bodies

- Roughly 2% of the population is non-binary
- Medicalization of the body leads normative assumptions about the body and categorizes some as 'normal' and others as 'abnormal'
- Frequently we 'correct' bodies that do not fit the binary
 - Infanticide
 - Murder
 - Sexual assignment surgery
 - Hormone Therapy
 - * Over assignment to female
 - * "Easier to dig a hole than to build a hole"