

# Male circumcision and HIV acquisition

- Male HIV acquisition:
  - >31 observational studies show reduced risk of male HIV acquisition
  - General populations RR ~ 0.56
  - High risk populations RR ~ 0.29
  - One RCT in SA RR = 0.40
- Female HIV acquisition
  - Limited data, Rakai RR = 0.44, no male-to-female transmission in male viral load <50,000 cps/mL

# Biological Rationale for circumcision & HIV

- **Foreskin is retracted over shaft during intercourse**
  - Large inner mucosal surface exposure
  - Micro-tears, especially of frenulum
- **Biological plausibility**
  - Inner mucosa of foreskin is rich in HIV target cells
  - External foreskin/ shaft keratinized and not vulnerable
  - After circumcision, only vulnerable mucosa is urethral meatus
  - Moist sub-preputial space increase HIV survival
- **Intact foreskin associated with STIs and other infections**
  - GUD
  - Balanitis/phimosis
  - Possible increase HIV entry or shedding