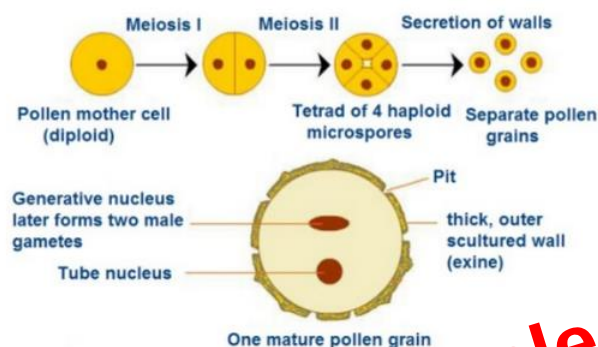


Male development before fertilization

- 7-8
- Male gametophyte development is similar to female but less complex
- Takes place in the anthers
- Many microspores mother cells in the anthers undergo meiosis to form 4 microspores each
- Nucleus of each microspore undergoes mitosis to form a 2-celled microgametophyte
- A 2-layered wall develops around each microgametophyte
 - This is now a pollen grain
- Microspores develop into pollen grains
 - Pollen grain walls are often highly sculpted (google to see examples)



Mature pollen grains normally have:

- Ornate sculptured outer wall
- A number of apertures through which pollen tubes can grow
- Recognition proteins inside protein grain wall
 - This protein is recognized by the stigma of a flower of the same species and allows the grain to germinate

Pollination

- Is the mechanical transport of pollen from the anther to the stigma
- Mostly occurs between flowers of different parts of the same species
- Modes of pollination:
 - Wind
 - Water
 - Insects
 - Birds
 - Bats
 - Other animals
- Pollination is not the same as fertilization

