Generalized Fungal Life Cycle

1. Period of vegetative growth (colonization and substrate exploitation)
2. Period of asexual reproduction (often called anamorphic phase of fungal life cycle)
3. Period of sexual reproduction (often called the teleomorphic phase of fungal life cycle)

*often the basis for the most common name of a fungus (its anamorphic name), because discovered and/or observed first.

Importance of Spores

A. Biological
   1) allow for dissemination
   2) allow for reproduction
   3) allow for survival

B. Practical
   1) rapid identification*,** (also helps with classification)
   2) source of inocula for human infection
   3) source of inocula for contamination

* of both anamorphs and teleomorphs
**however, may soon be replaced by use of molecular biology (PCR-based) technology, which doesn’t require an expert.

Kinds of Fungal Spores

1. Mitospores - chromosomal complement directly from mitosis
2. Meiospores - chromosomal complement more or less from meiosis
3. Karyospores - chromosome complement derived more or less directly from zygote nuclei
Fungal Spore Types

1. endogenous mitospores* - encysted zoospores of fungal-like protists and Chytridiomycota and sporangiospores of Zygomycota

2. exogenous mitospores* - conidia, blastospores, teliospores**, etc. of Ascomycota, Basidiomycota, Fungi Imperfecti

3. endogenous meiospores+ - ascospores of Ascomycota

4. exogenous meiospores+ - basidiospores of Basidiomycota

5. karyospores+ - zygospores, oospores, resting spores and resting sporangia of Zygomycota, Oomycota & Chytridiomycota respectively

6. chlamydospores* - vegetative units that attain spore-like characteristics (dormancy qualities).

asexual

**N+N

+ sexual