

BIO 4AE3: 15 Sep.

WRITING.

- practice!
- MacPherson Institute
- 'peeves' -

REFERENCES

- primary literature
- Wikipedia is OK, follow references
- Google scholar

author:

- follow references backward and forward
- web resources.

CITATIONS.

- cite anything you use
- NEVER cite anything you haven't read.
- citation format: complete author-date

journal articles:

author, date, title, journal title

DOI

BIBLIOGRAPHY manager

EPIDEMIC models
for microparasites



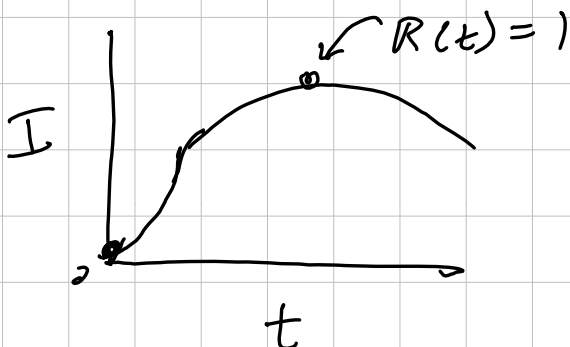
compartmental
box

$$\frac{dS}{dt} = \dots \quad \frac{dI}{dt} = \dots, \quad \frac{dR}{dt} = \dots$$

R_0 = expected # of secondary infections
caused by a single infected host
in a susceptible population.
INTRINSIC REPROD. NUMBER

initial geometric / exponential growth

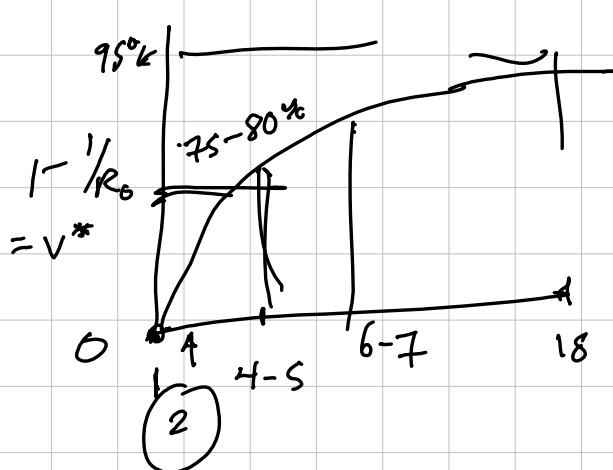
$$R(t) = R_0 \cdot \frac{S}{N}$$



$$R_0 \cdot (1 - v) \ll 1$$

$$v^* = 1 - \frac{1}{R_0}$$

$$R_0 \approx 20 \rightarrow v^* \approx 95\%$$



final size: fraction of pop ever infected.



CUMULATIVE
incidence

$$> v^*$$

SR, SIRS, SEIR, SEIRV, ...

masking

quarantine.

testing.

• STDs.

