Basic reproduction number for in-host viral infections IRMA
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demiology, the basic reproduction number (R_0) is used to measure the spread po-
tential of a disease. It is defined as the number of secondary infections produced
by a first infection in a homogeneous susceptible population. To calculate R_0 for
within host models, modelers use the methods commonly used for epidemiological
models. However, the infection dynamics of epidemiology models differ from the
simple in-host viral model in that epidemiological models assume direct contact be-
tween infected and susceptible individuals while in-host infectious use the virus as
an intermediary agent. We examine the meaning of the basic reproduction number
in the context of a simple in-host viral infection model.

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