

Example: Probability of hypertension at baseline

- (1) In the Framingham dataset, of the 4,434 participants, 3,004 did not have hypertension at baseline and 1,430 did have hypertension at baseline. Using this information, what is the probability that a randomly selected participant in the Framingham study had hypertension at baseline?

- (2) What is the probability that this participant did not have hypertension at baseline?

- (3) Are these events mutually exclusive, exhaustive, neither, or both?

- (4) What is the probability that three randomly selected participants all do not have hypertension at baseline?

- (5) Suppose we again randomly select two participants from this population. What is the probability that both participants have hypertension at baseline, given that at least one of the participants had hypertension.