

## Unit 5 Discussion Example - Initial Post

Hypothesis testing typically begins with a theory, a claim, or an assertion about a particular parameter (mean or proportion) of a population.

The Federal Trade Commission (FTC) is an independent agency of the U.S. federal government charged with preventing unfair or deceptive trade practices. It regulates advertising, marketing, and consumer credit practices, and also prevents antitrust agreements and other unfair practices.

The FTC publishes press releases regularly about health and fitness claims at <https://www.ftc.gov/news-events/media-resources/truth-advertising/health-claims>

Find a claim about a product or service from one of the press releases listed in the FTC website. Read through these and select one of interest to you that has not been picked by anyone else yet in class.

Initial Response: Formulating the Hypothesis

- 1) Summarize the advertising claim as shared in the media. What population parameter is the claim about?
- 2) If you were to formulate a hypothesis test about this product/service, what would your null and alternative hypothesis be? (Be sure to use all the correct notations for  $H_0$  and  $H_a$ )
- 3) State whether you have a one-tailed or two-tailed test (Be sure you use the correct inequality signs).

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1) On May 24, 2016: Mosquito Shield Bands (made by Viatek Consumer Products Group) is a bracelet that contains mint oil and promises to protect people from mosquito bites for up to 120 hours. Viatek claims that Mosquito Shield Bands create a “vapor” barrier that can shield anyone within five feet for 96 to 120 hours.

<https://www.ftc.gov/news-events/press-releases/2016/05/marketers-mosquito-shield-bands-pay-300000-barred-making>

They are claiming that the mean time for people to be protected from mosquitos is between 96-120 hours. The population parameter is population mean,  $\mu$ .

- 2) Null hypothesis,  $H_0$ :  $\mu = 96$  hours  
Alternate hypothesis,  $H_a$ :  $\mu < 96$  hours
- 3) This would be a left-tailed hypothesis test.