



# Introduction to Inference Methods: Oh the Things you will see!

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Brenda Gunderson



# What's Ahead?

Learning how to use data to ...

- **estimate** parameters with *confidence*
- **test theories** about parameters

**Statistical  
Inference**

**Research Question:**  
**What proportion**  
**of all parents with toddlers**  
**report they use a car seat**  
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**Estimate a Population Proportion**  
**with Confidence**



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**What is the average**  
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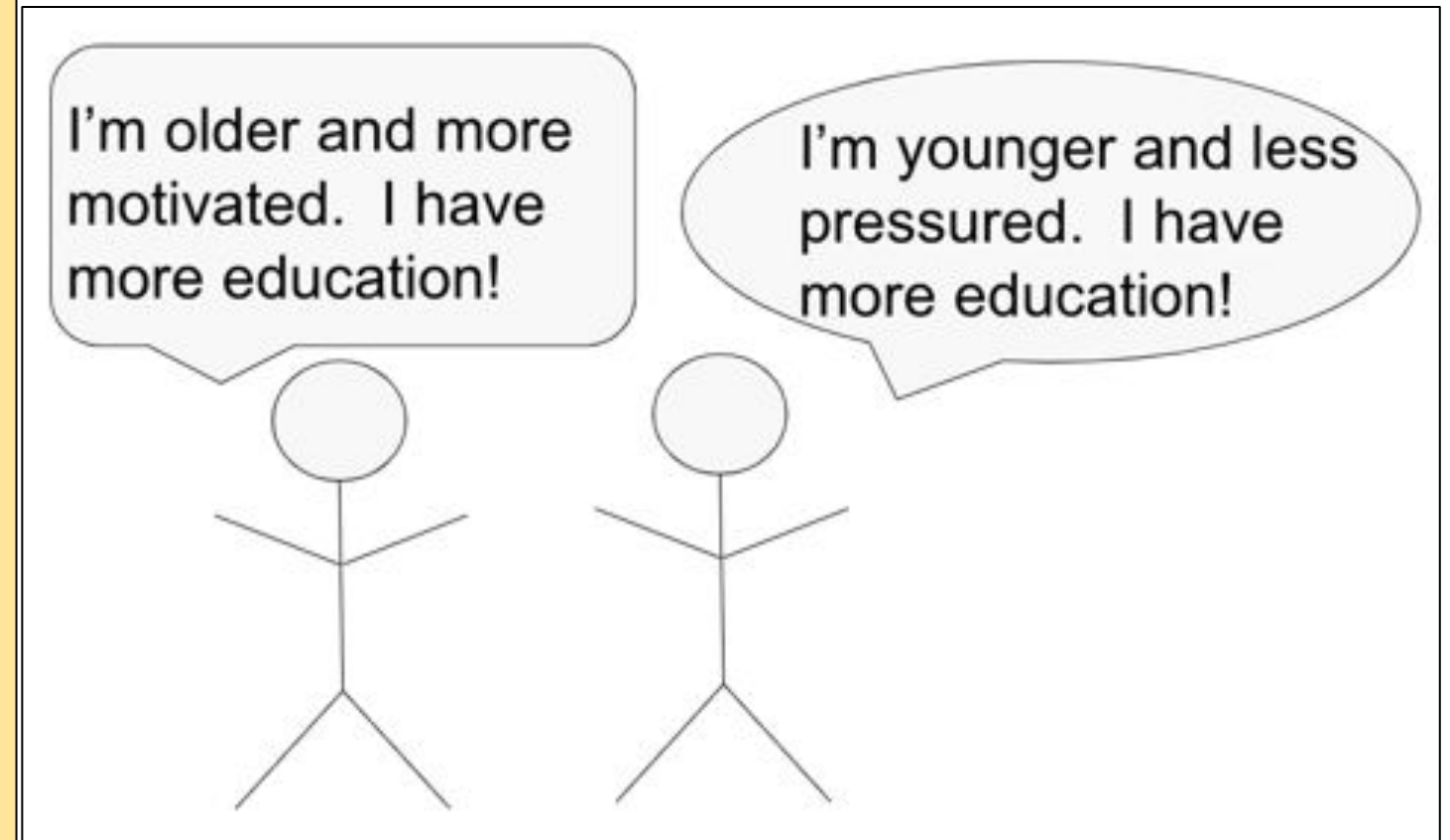
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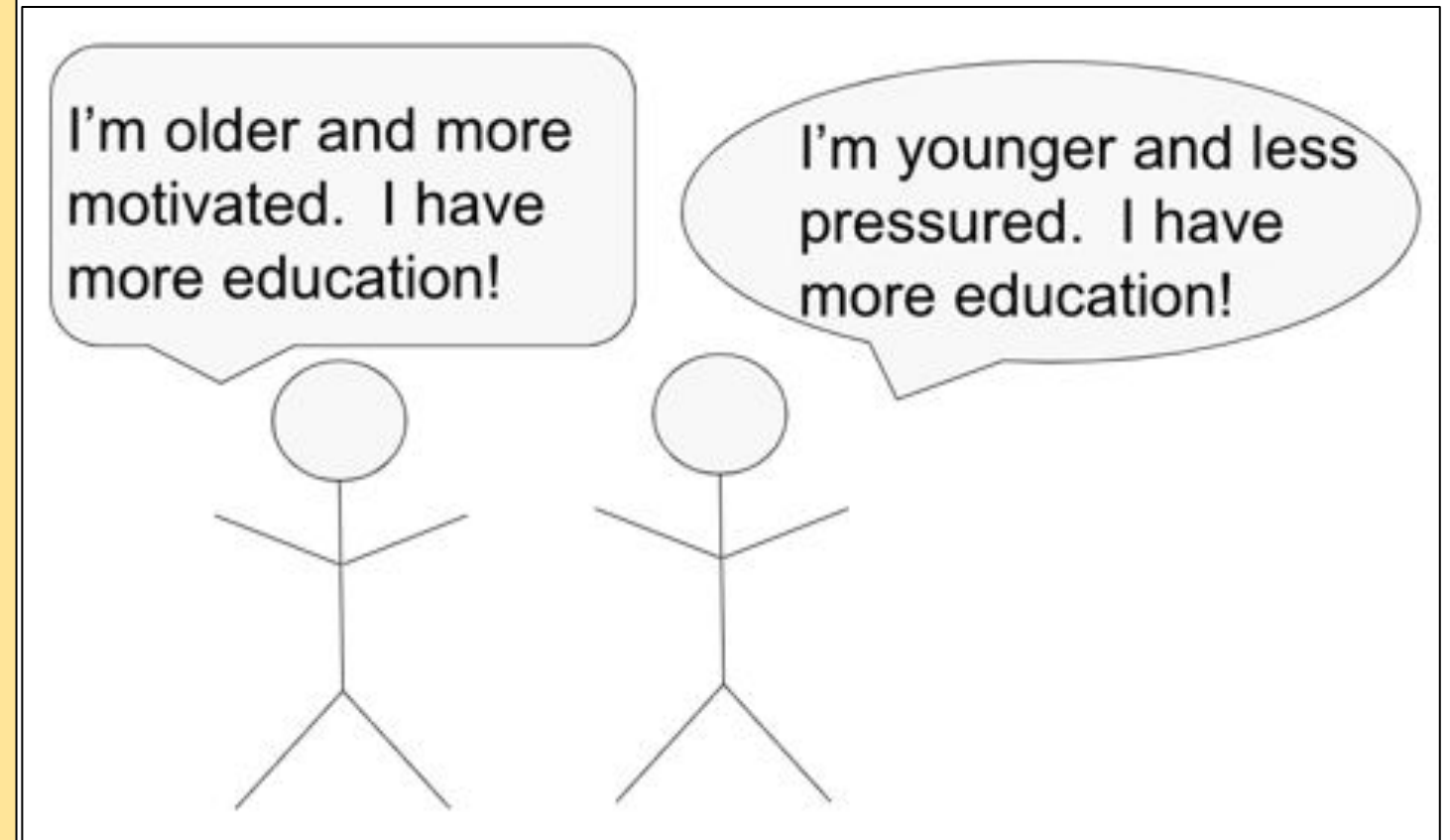
**Estimate a Population Mean  
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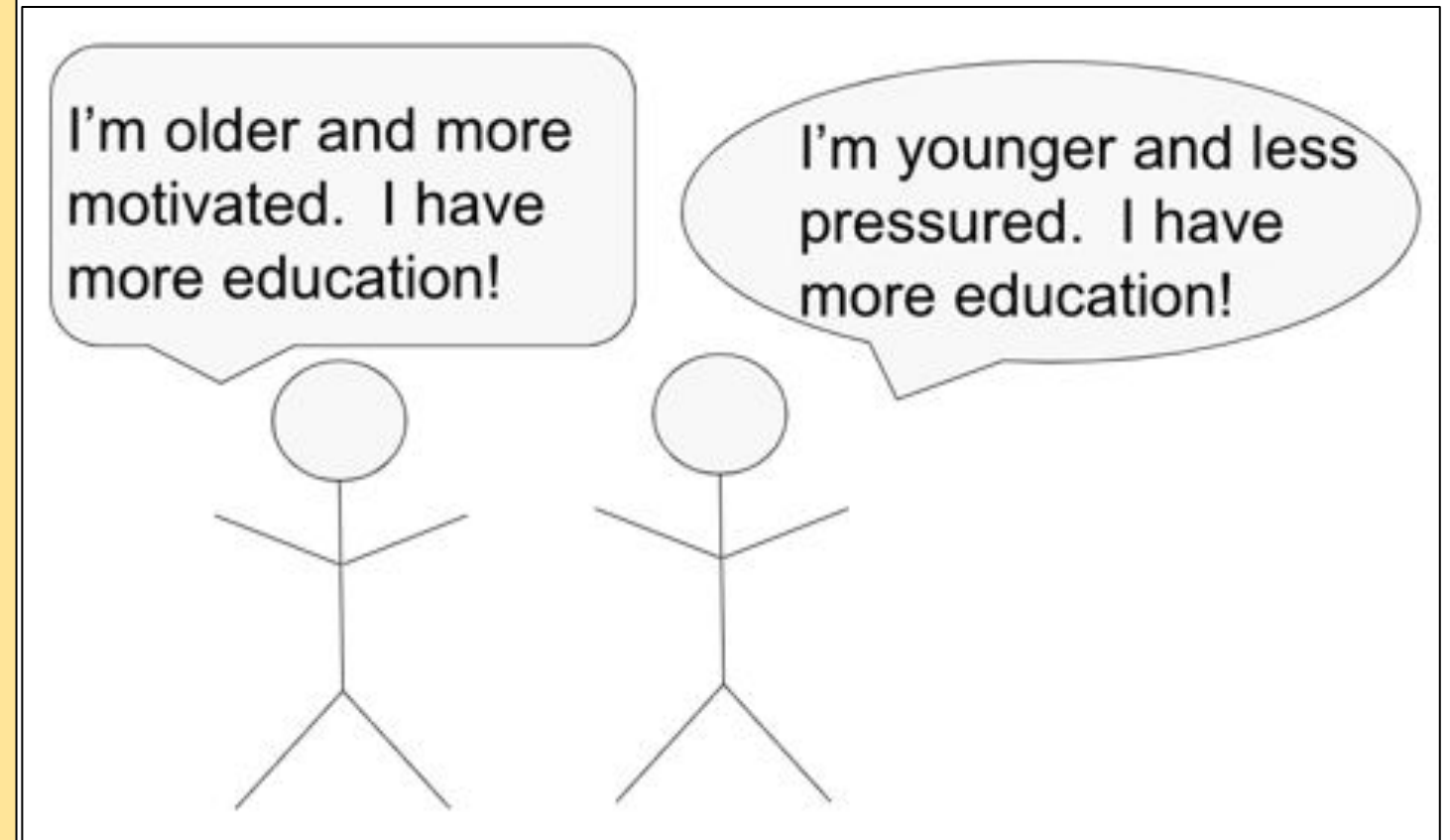
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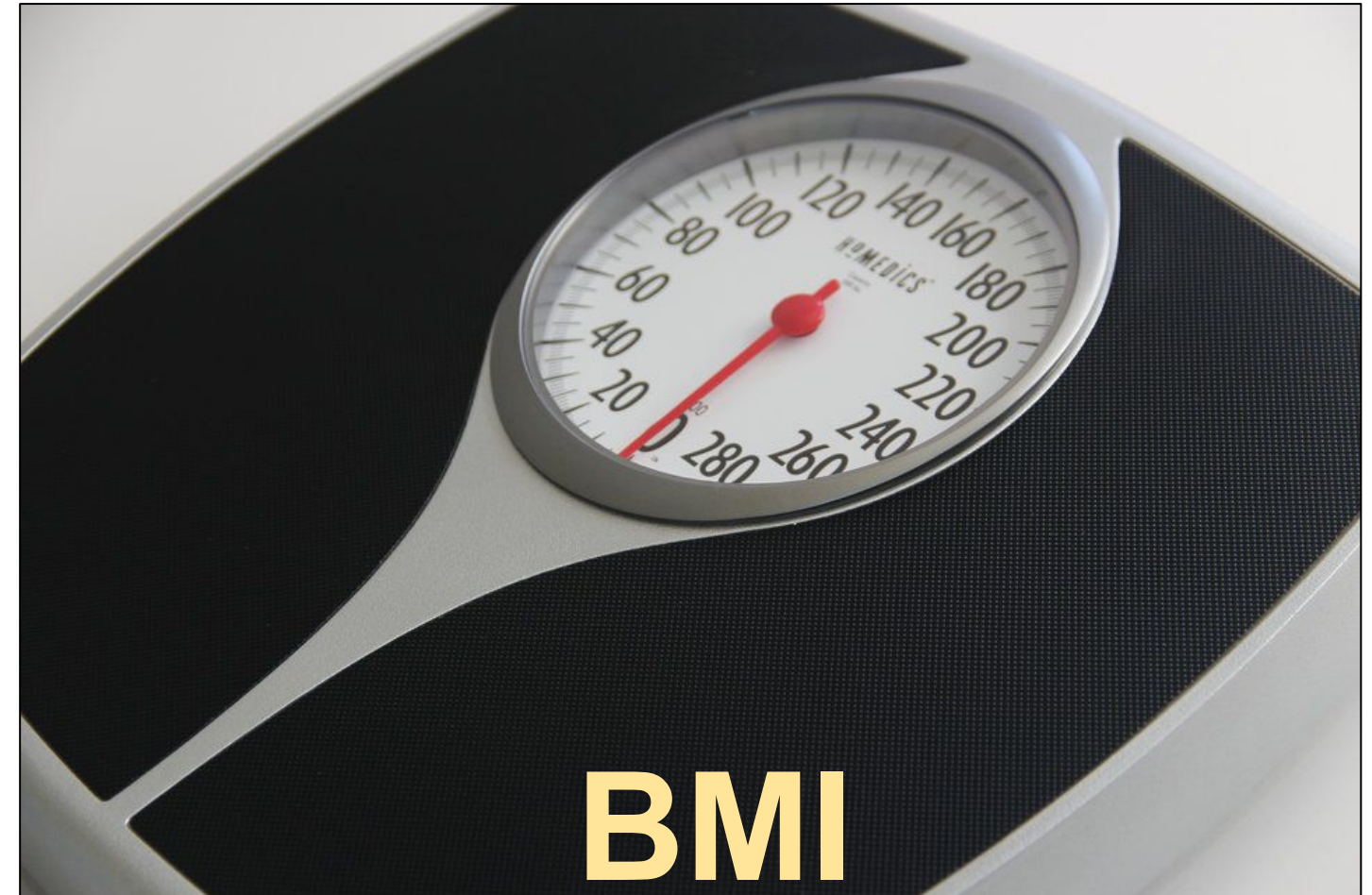


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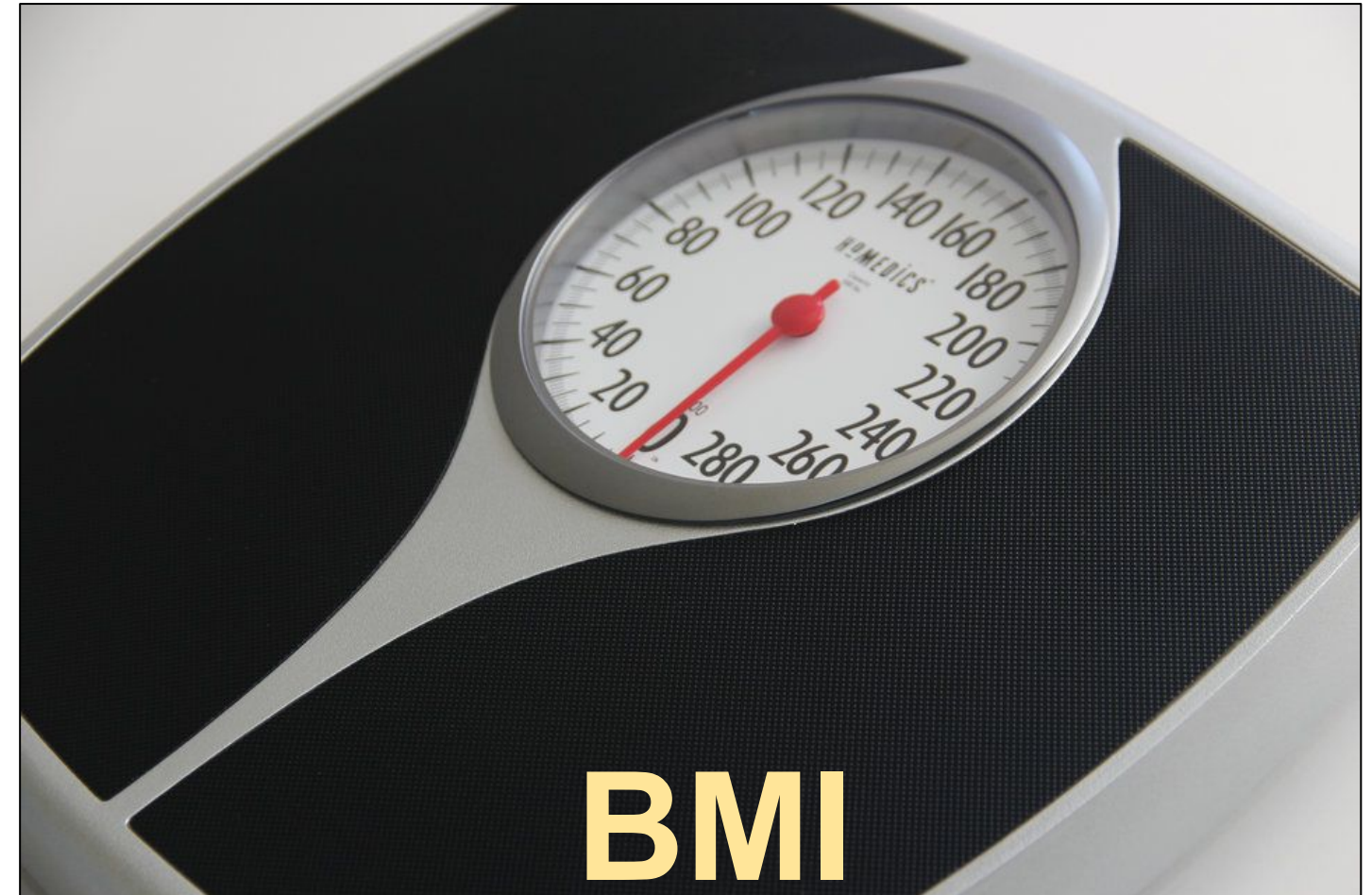
**Estimate a Population Mean Difference**  
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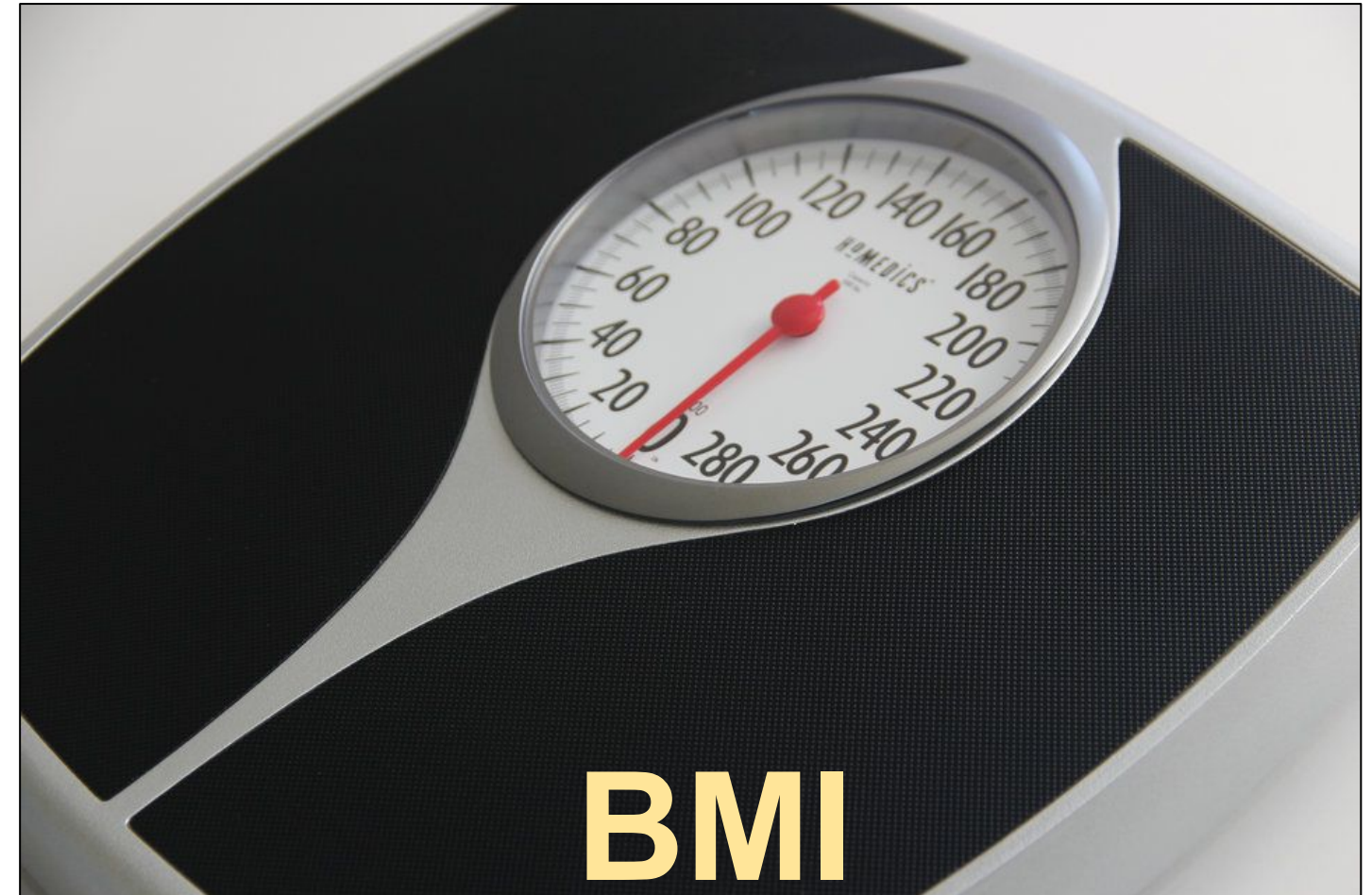


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**Test a Theory**  
**about Two Population Means**

## **Research Question:**

**In previous years 52% of parents believed electronics and social media was cause of teenager's lack of sleep.**

**Do more parents today believe that their teenager's lack of sleep is caused due to electronics and social media?**





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**Test a Theory  
about a Population Proportion**

# Get Excited for What is Ahead!

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