Mean: Difference between two independent means (two groups)

A priori: Compute required sample size

Tail(s) = Two
Effect size d = 0.5
α err prob = 0.05
Power (1-β err prob) = 0.95
Allocation ratio N2/N1 = 1

Noncentrality parameter δ = 3.622844
Critical t = 1.971435
Df = 208
Sample size group 1 = 105
Sample size group 2 = 105
Total sample size = 210
Actual power = 0.950129

Critical t = 1.9604
**t tests** - Means: Difference between two independent means (two groups)

**Analysis:** A priori: Compute required sample size

**Input:**
- Tail(s) = Two
- Effect size d = 0.1
- α err prob = 0.05
- Power (1-β err prob) = 0.95
- Allocation ratio N2/N1 = 1

**Output:**
- Noncentrality parameter δ = 3.605551
- Critical t = 1.960420
- Df = 5198
- Sample size group 1 = 2600
- Sample size group 2 = 2600
- Total sample size = 5200
- Actual power = 0.950007

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**t tests** - Means: Difference between two dependent means (matched pairs)

**Analysis:** A priori: Compute required sample size

**Input:**
- Tail(s) = Two
- Effect size dz = 0.1
- α err prob = 0.05
- Power (1-β err prob) = 0.8

**Output:**
- Noncentrality parameter δ = 2.805352
- Critical t = 1.962987
- Df = 786
- Total sample size = 787
- Actual power = 0.800095

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![Diagram](critical_t=1.963)