

# Power as a function of $\delta$ for $\alpha=0.05$

$\delta$	$\alpha = 0.05$
1.4	0.29
1.5	0.32
1.6	0.36
1.7	0.4
1.8	0.44
1.9	0.48
2	0.52
2.1	0.56

So, for  $\delta=1.65$ , power is about 0.38

- So, with power = 0.38, if  $H_0$  is false and  $\mu_1 = 105$ , only about 38% of the time will the clinician find a statistically significant difference between her sample mean and the mean specified by  $H_0$ . In other words, 62% of the time the clinician will be making a Type II error (i.e., failing to find a difference when there is one present).
- So, how would you increase the power of this experiment?