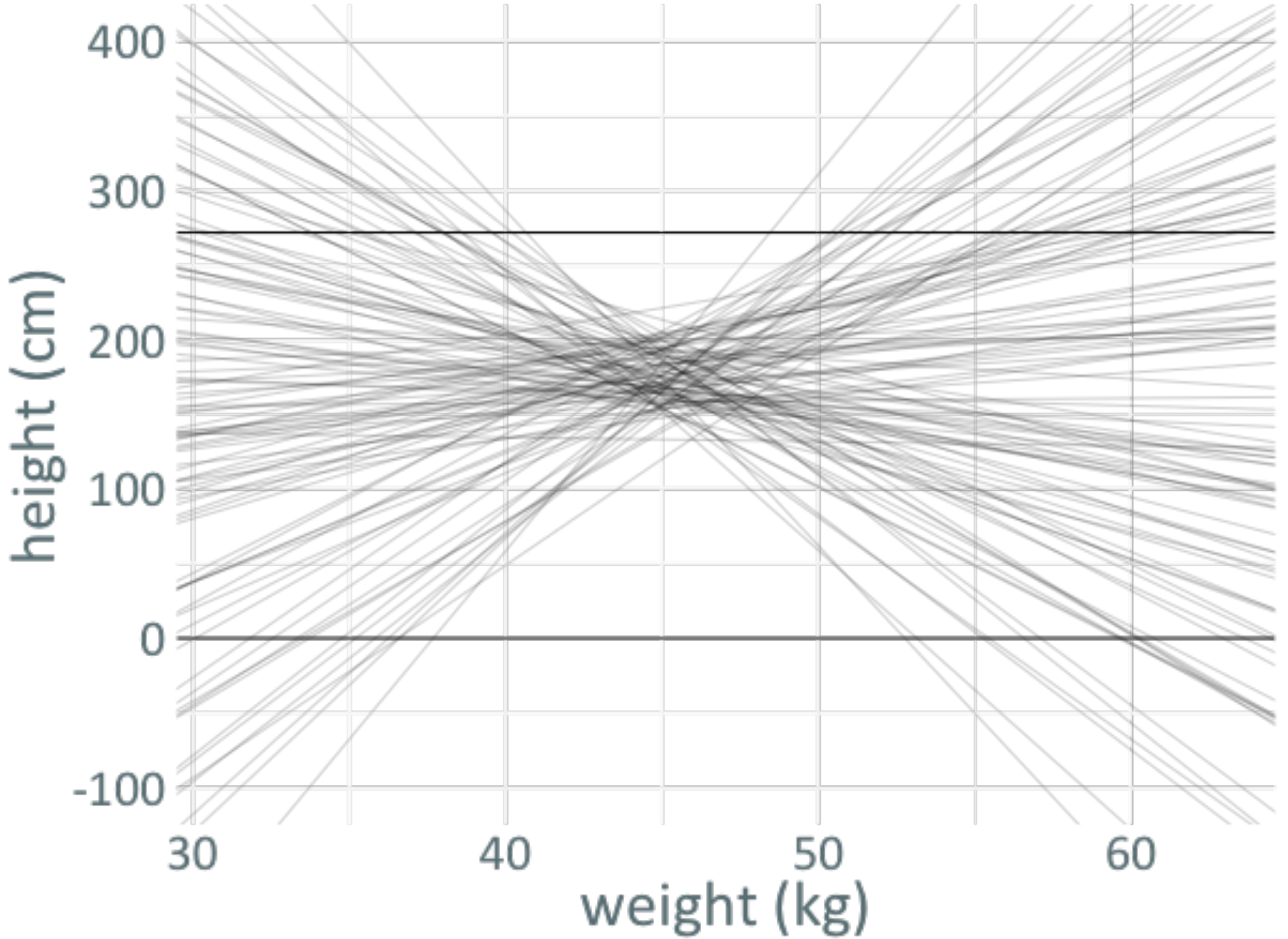
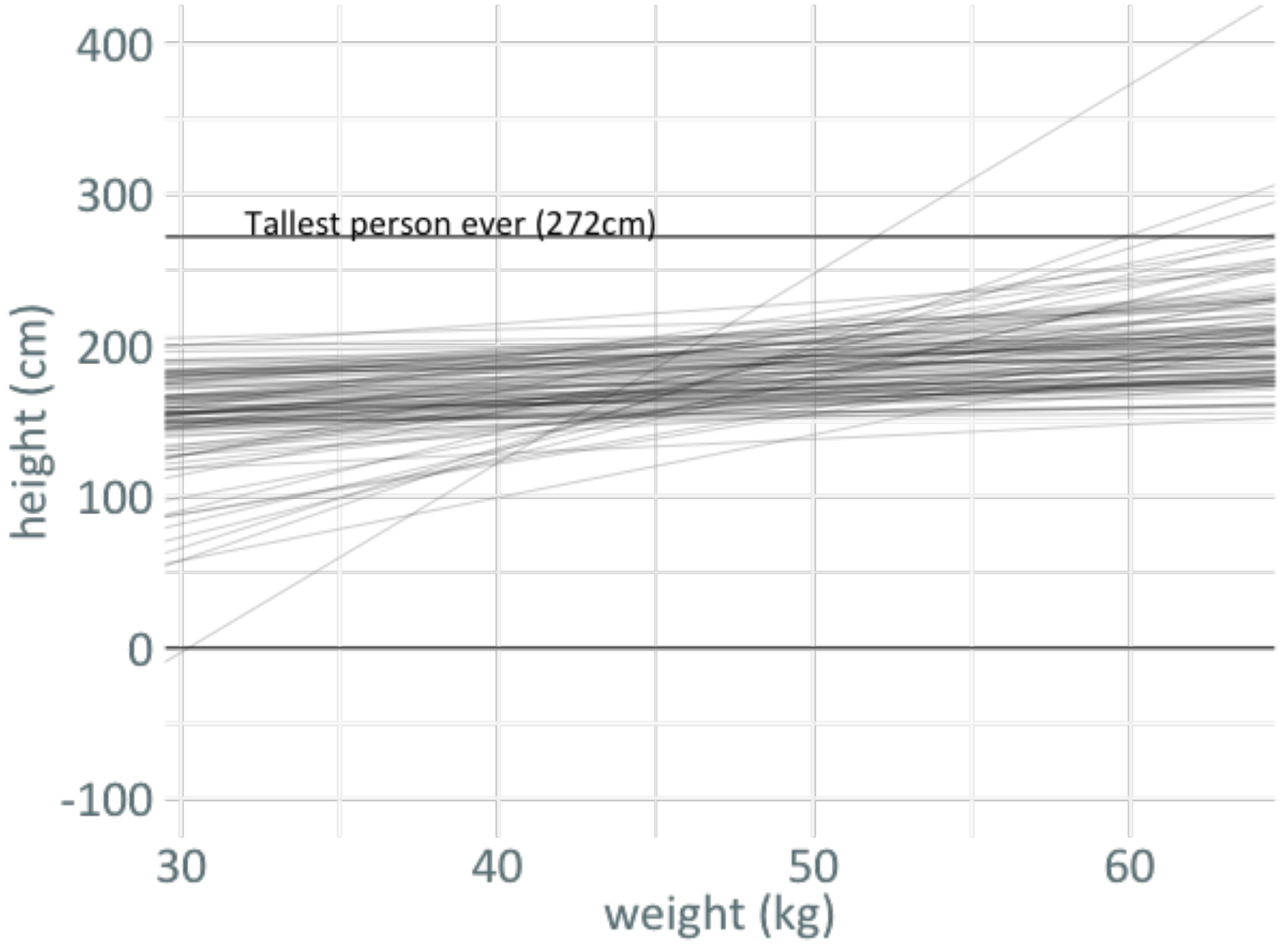
Wide vs narrow prior

This is sometimes called a non-informative prior

$\beta \sim \text{Normal}(0, 10)$

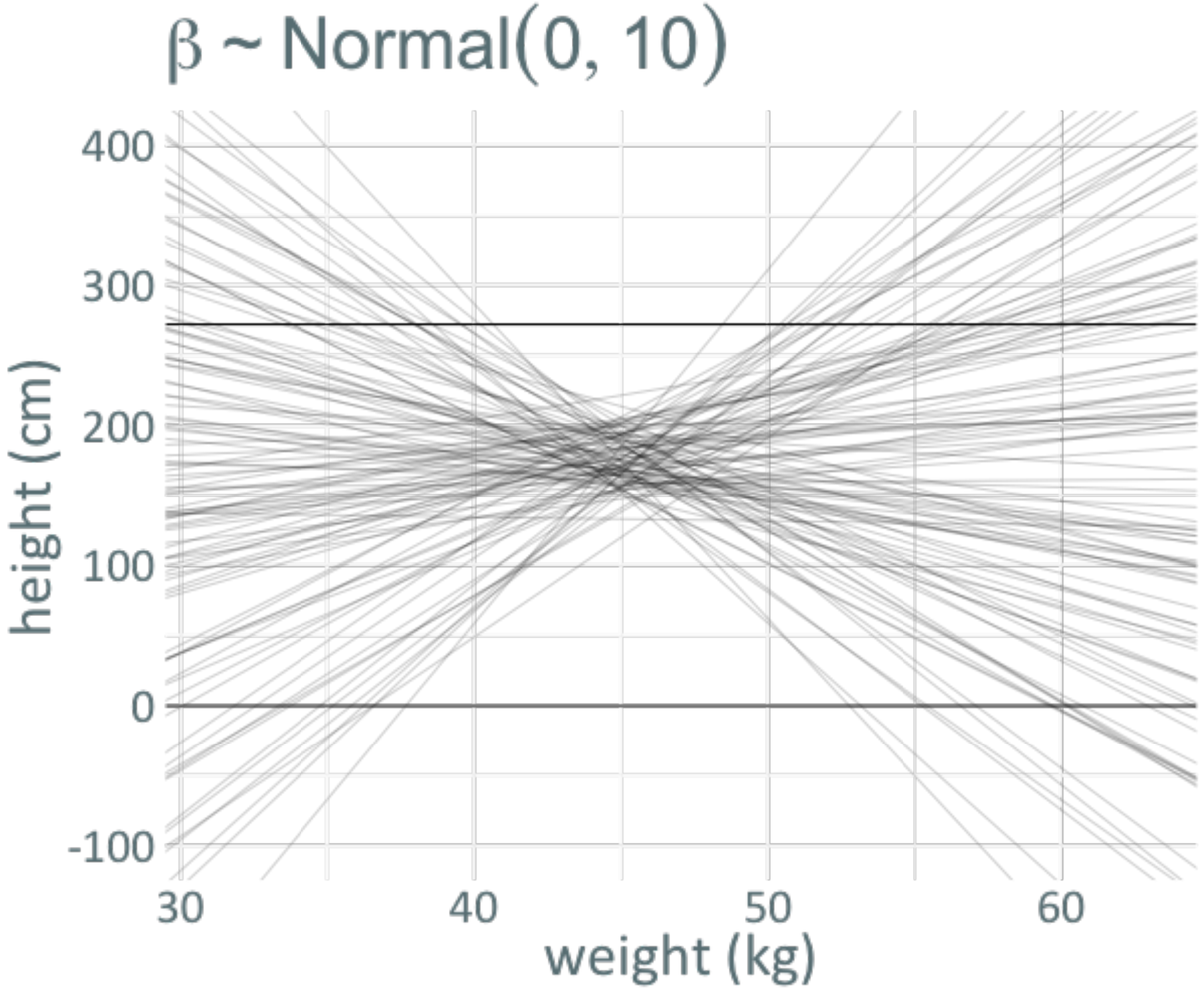


$\log(\beta) \sim \text{Normal}(0, 1)$

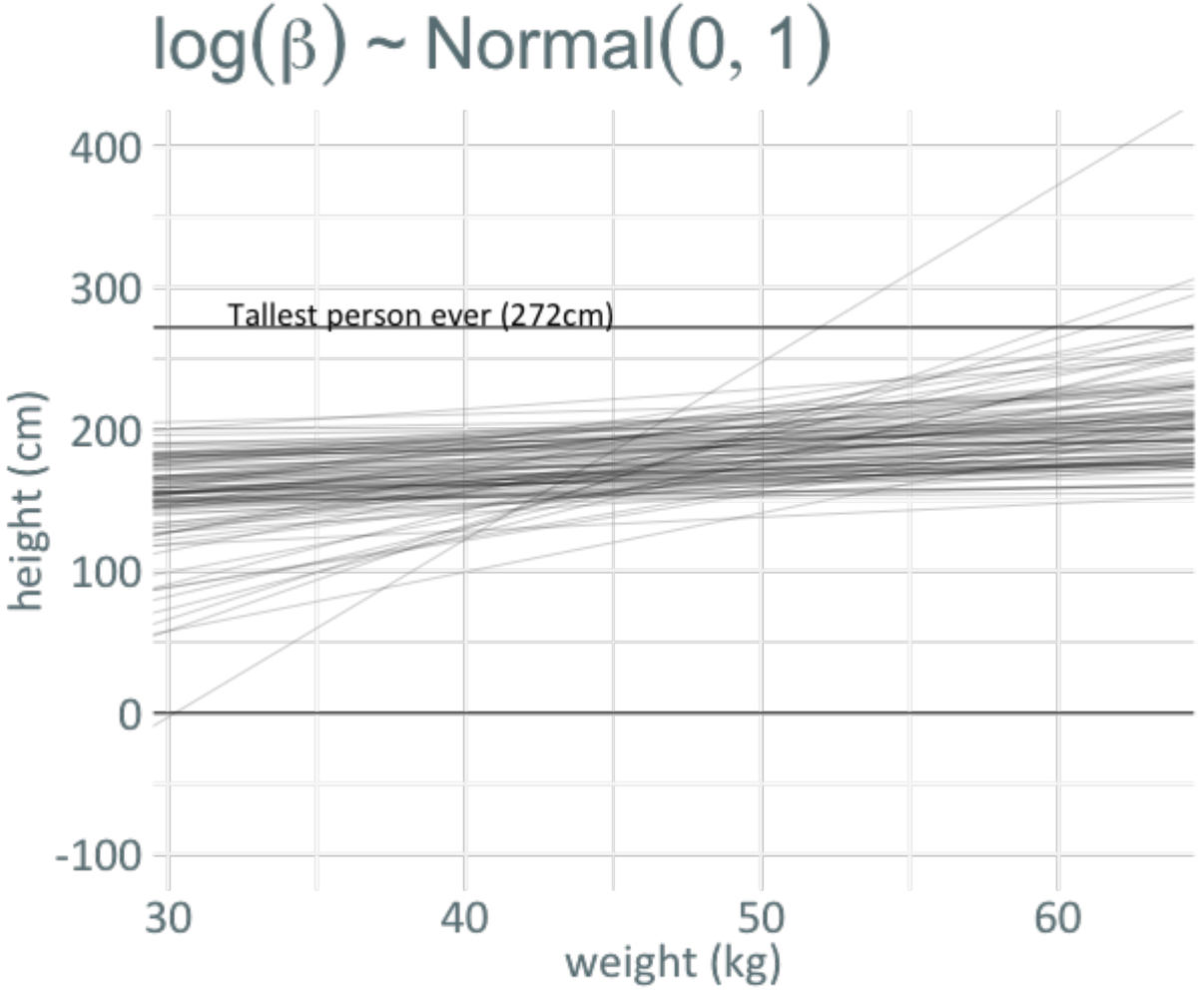


This prior is informative, but in a good way!

Wide vs narrow prior



This is sometimes called a non-informative prior



This prior is informative, but in a good way!

Our model for the height data

$$y_i \sim Normal(\mu_i, \sigma)$$
$$\mu_i = \alpha + \beta x_i$$
$$\alpha \sim Normal(0, 20)$$
$$\beta \sim lognormal(0, 1)$$
$$\sigma \sim Exponential(1)$$