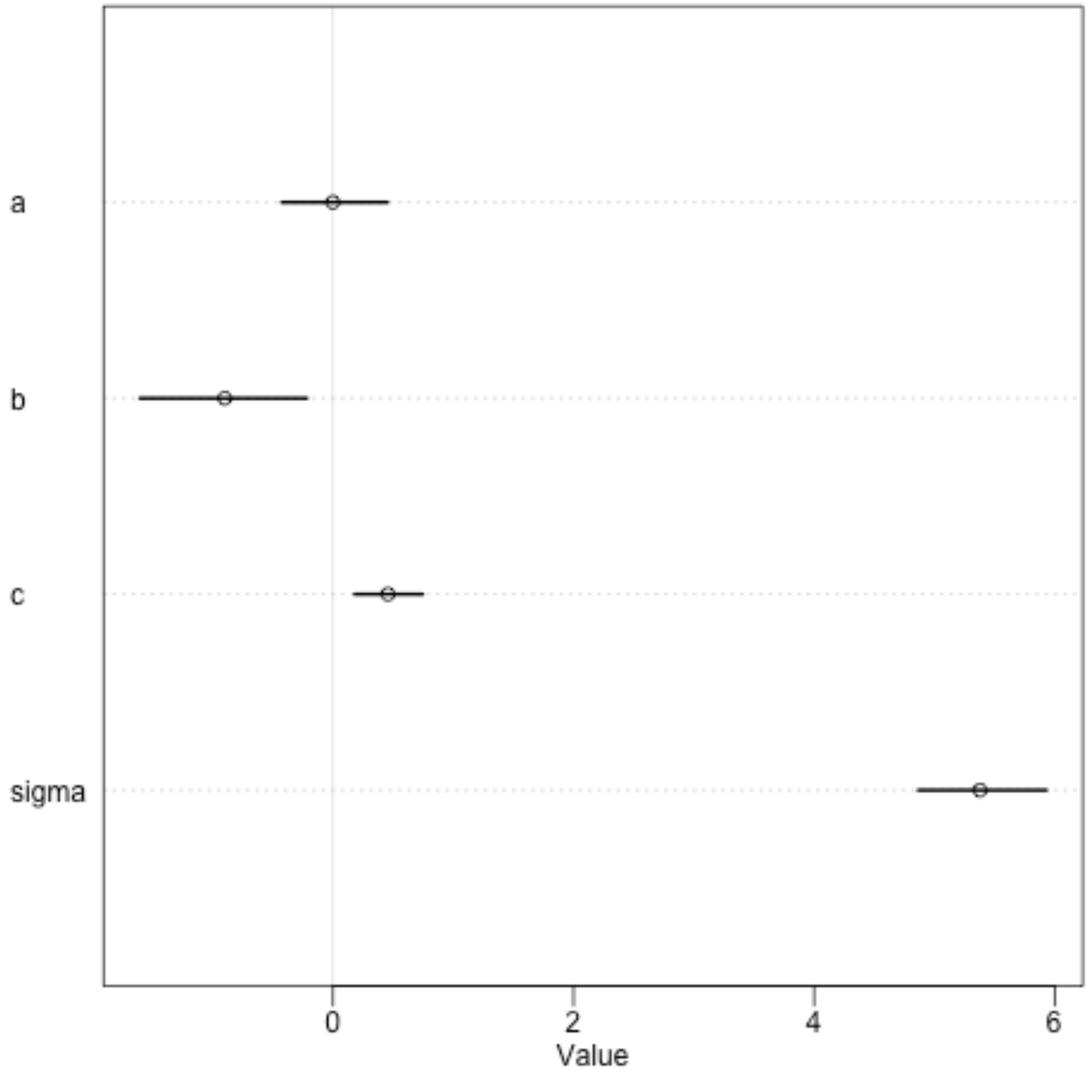
Model fit

$$size_i \sim Normal(\mu_i, \sigma)$$

$$\mu_i = a + b \times toxin_i + c \times age_i$$

```
> precis(rt_fit, prob = 0.95)
       mean   sd  2.5% 97.5% rhat ess_bulk
a      0.00 0.22 -0.43  0.45    1  1679.38
b     -0.90 0.35 -1.60 -0.22    1   821.89
c      0.46 0.14  0.18  0.74    1   791.07
sigma  5.38 0.27  4.87  5.93    1  1225.56

> plot(precis(rt_fit, prob = 0.95))
```



Estimates and true values

Simulation:

$$age_i = Uniform(0,\ 50)$$
$$toxin_i = Normal(10 + 0.4 \times age_i,\ 1)$$
$$size_i = Normal(30 - 1 \times toxin_i + 0.5 \times age_i,\ 5)$$

Model:

$$size_i \sim Normal(\mu_i, \sigma)$$
$$\mu_i = a + b \times toxin_i\ +\ c \times age$$

Exercise: What happens if we don't include age?