

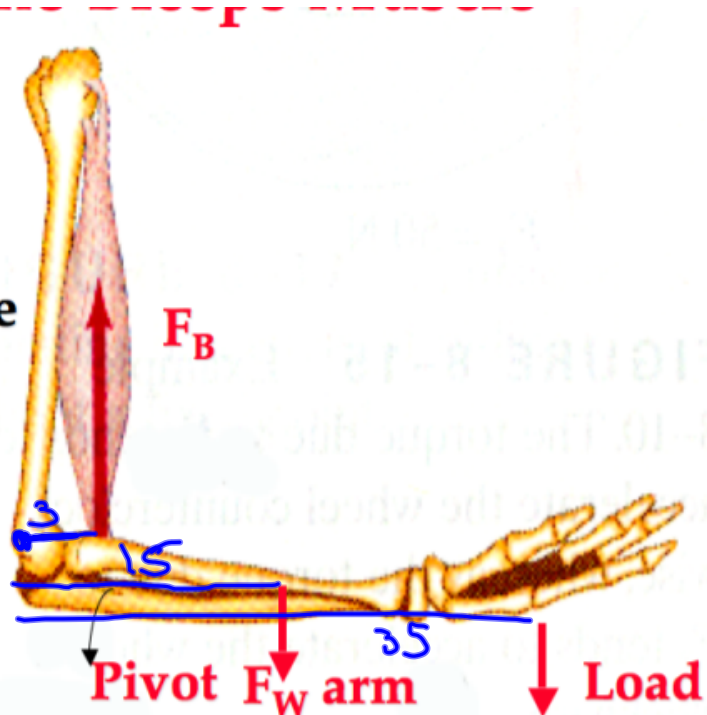
Reminders 11-05-07:

- Chapter 8 Homework Due 11/8!!!
- Use Torque Conceptual Questions to study for next exam, key is posted.
- Fluid Conceptual Questions due Wednesday or you can email document with answers by Tuesday.
- Take home problem in PowerPoint Notes Due Wednesday.
- Bring Chapter 9 Notes to Lab this week.
- Chapter 7 Conceptual Quiz Today Cancelled .
- Exam 3 November 14.

Objectives:

- Static Equilibrium Examples
- Rotational Dynamics

What is the force of the biceps muscle required to hold a 25 lb barbell? The muscle acts a distance of 3 cm from the pivot. The weight of the forearm is 5.0 lb and its c.g. is located 15 cm from the pivot point. The load is 35 cm from the pivot point.



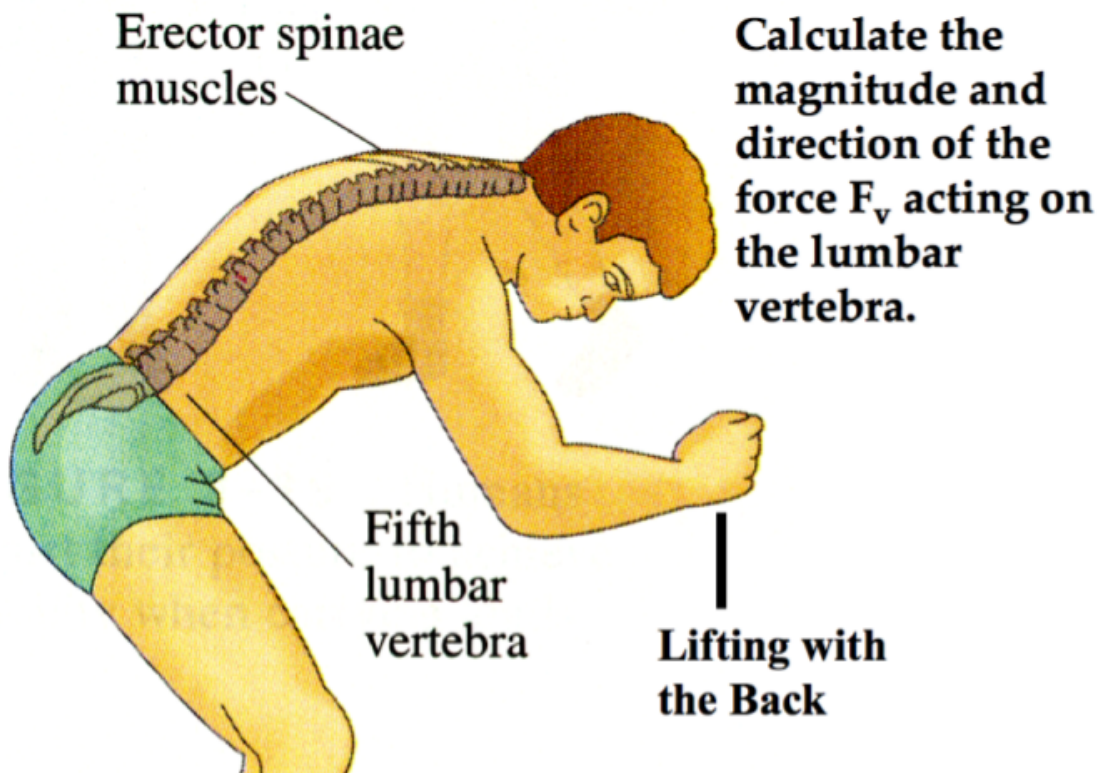
Sum torques

$$F_B (3) - F_W (15) - F_{Load} (35) = 0$$

$$F_B = \frac{F_W (15) + F_{Load} (35)}{3}$$

$$= \frac{(5 \text{ lb})(15 \text{ cm}) + (25 \text{ lb})(35 \text{ cm})}{3 \text{ cm}}$$

$$\underline{F_B = 320 \text{ lbs}}$$



Our Model

