MUSCLE ACTIONS
To discuss the different roles that muscles can play, we'll use a simplified diagram of the upper limb.

Biceps brachii
(Note: Origin is on the scapula, not shown)
Brachialis = prime mover (agonist)
Brachioradialis = synergy and antagonist are relative:
Biceps brachii and brachioradialis are synergists (helpers) to
brachialis in flexing the elbow, but they (like brachialis) are
agonists to triceps brachii.

MUSCLE TYPES
Deltoid: a pennate ("feather" shaped) muscle
Tendon

Parallel muscles are better at allowing a greater change in length, but pennate muscles are stronger because they have more muscle cells pulling on the tendon (four times as many, in this example).

MUSCLE STRENGTH
Muscle strength is proportional to cross-sectional area. So if your opponent has arms twice as thick as yours, then you'll need 3 friends (if you don't want to get beat up).

Here's why:
His arm:
Area = \( \pi (2x)^2 \)
Ratio = \( \frac{4\pi x^2}{\pi x^2} \) = 4 times as strong!
Your arm:
Area = \( \pi x^2 \)

For equivalent strength, you need 4 times as many arms.

\( \equiv \) you + 3 FRIENDS