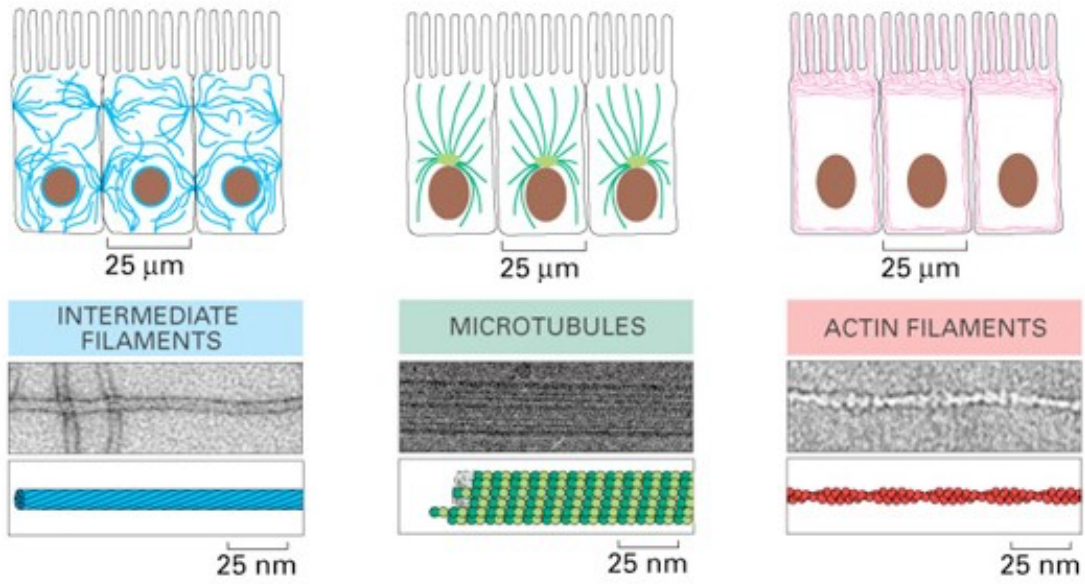


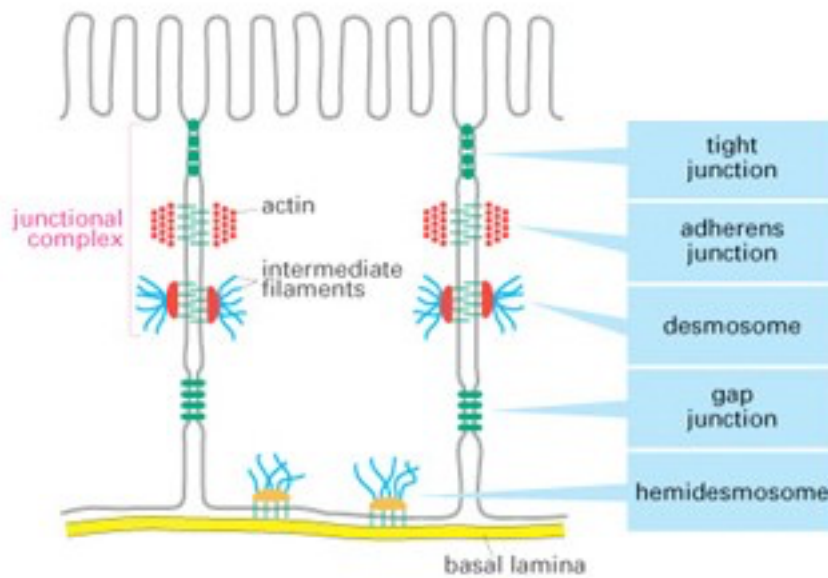
The Cytoskeleton

What the cytoskeleton does

Three types of protein filaments



The cytoskeleton and cell-cell junctions



Intermediate filaments

Structure of intermediate filaments

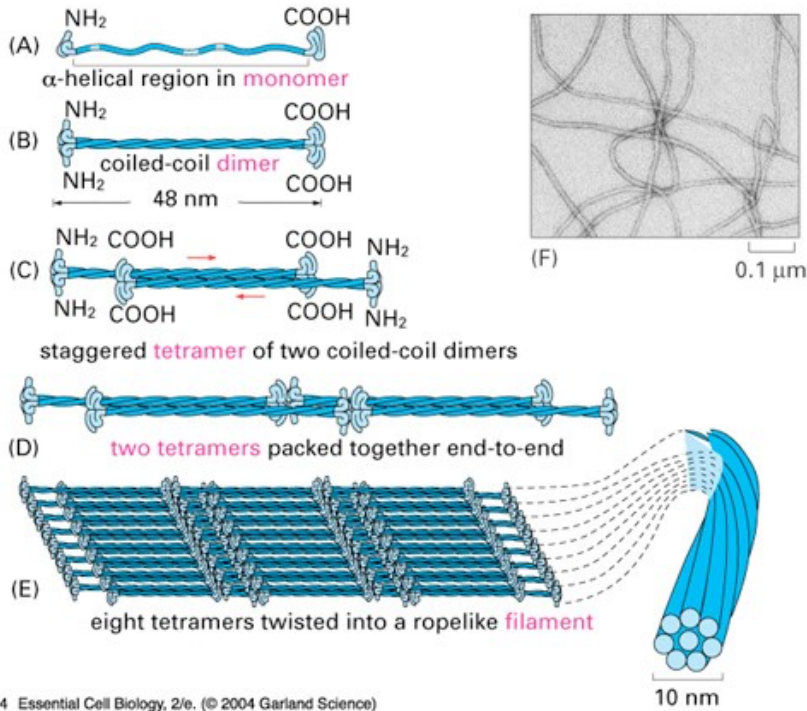


Figure 17-4 Essential Cell Biology, 2/e. (© 2004 Garland Science)

Classes of intermediate filaments

Functions of intermediate filaments

Microtubules

Structure of microtubules

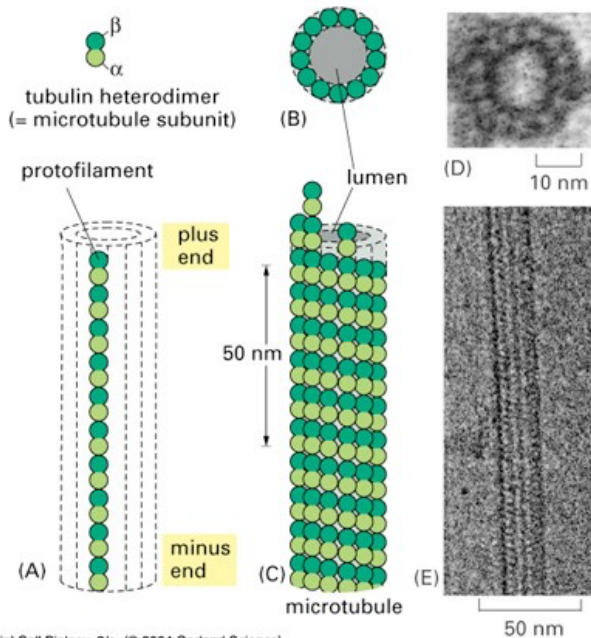
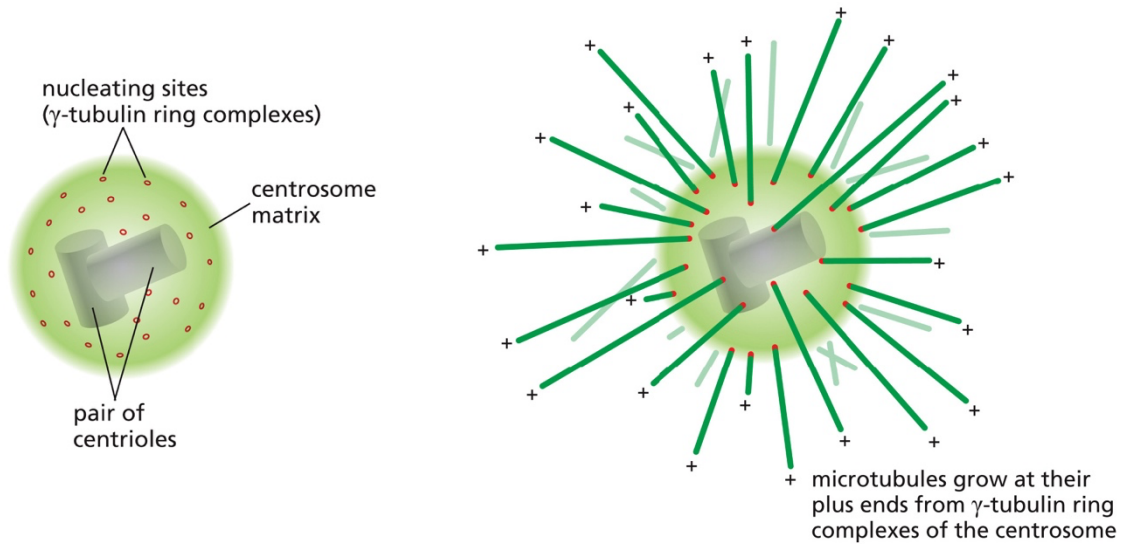


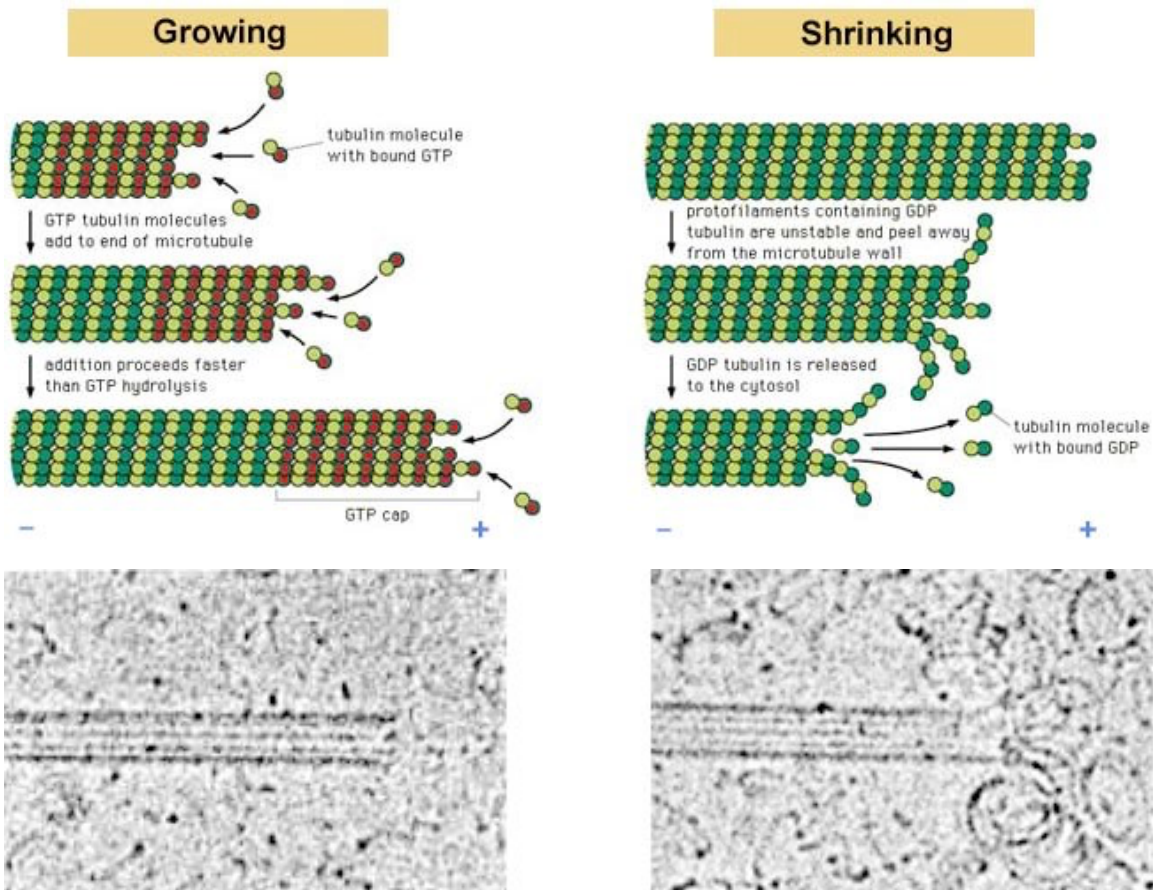
Figure 17-10 Essential Cell Biology, 2/e. (© 2004 Garland Science)

Microtubules assembly and disassembly

The centrosome: the major microtubule-organizing center in animal cells

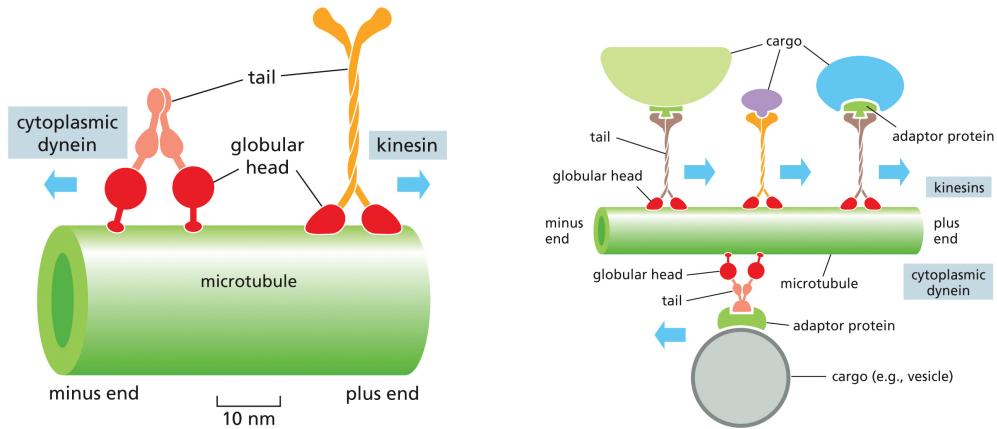


Dynamic instability



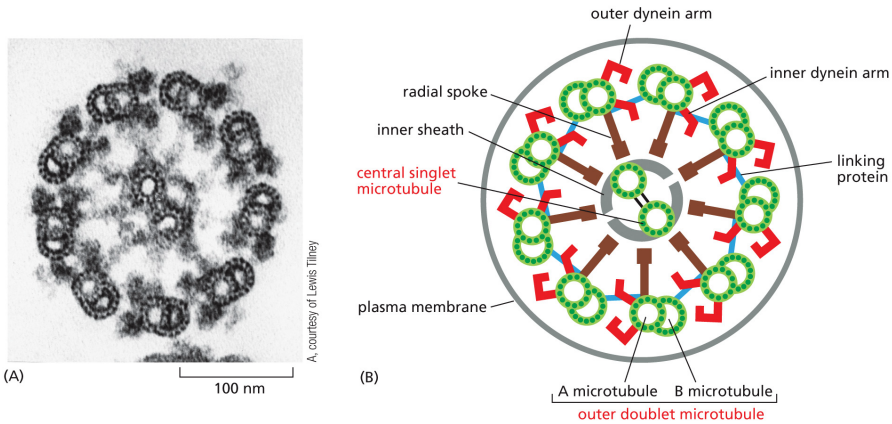
Functions of microtubules

Microtubule motor proteins kinesins, dyneins



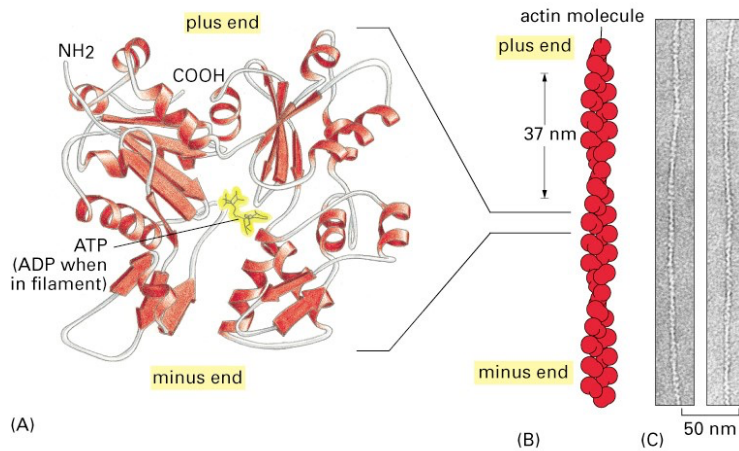
Organelles move along microtubules

Cilia and flagella:



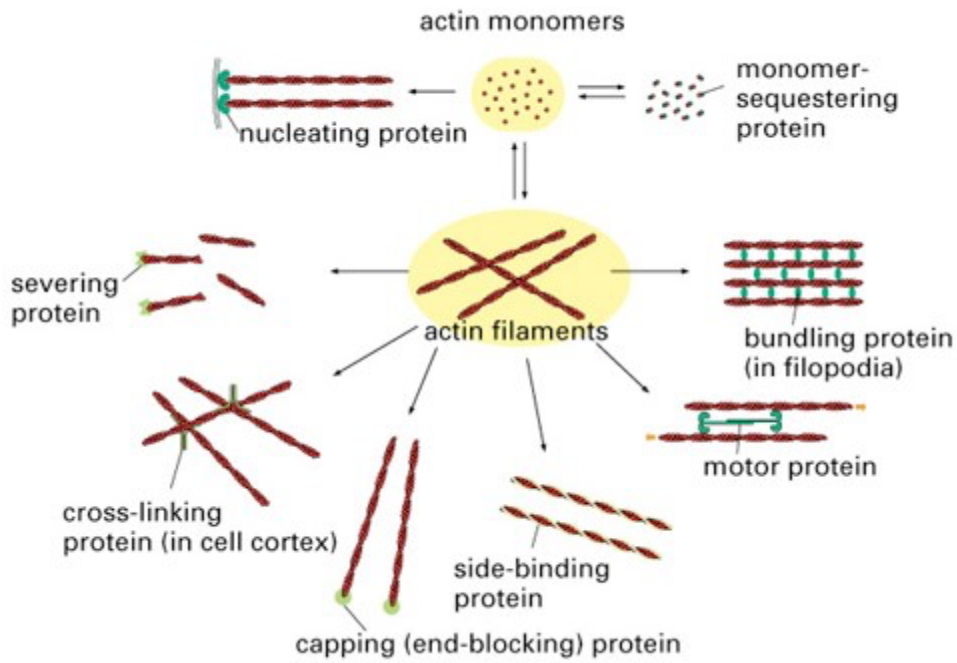
Actin filaments

Structure of actin filaments



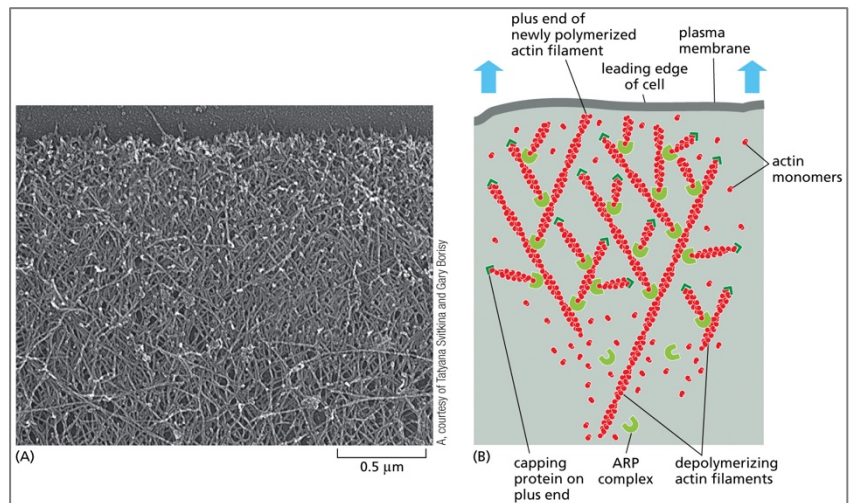
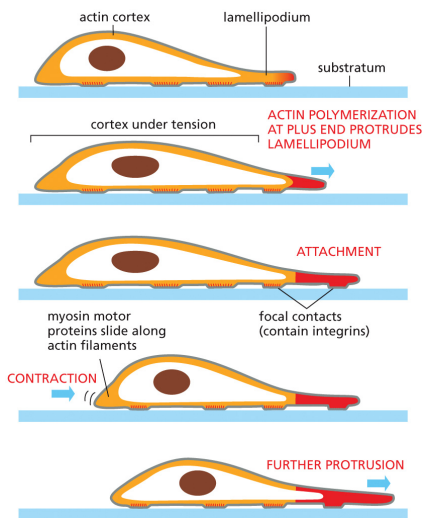
Actin and tubulin polymerize by similar mechanisms

The functions of proteins that bind to actin



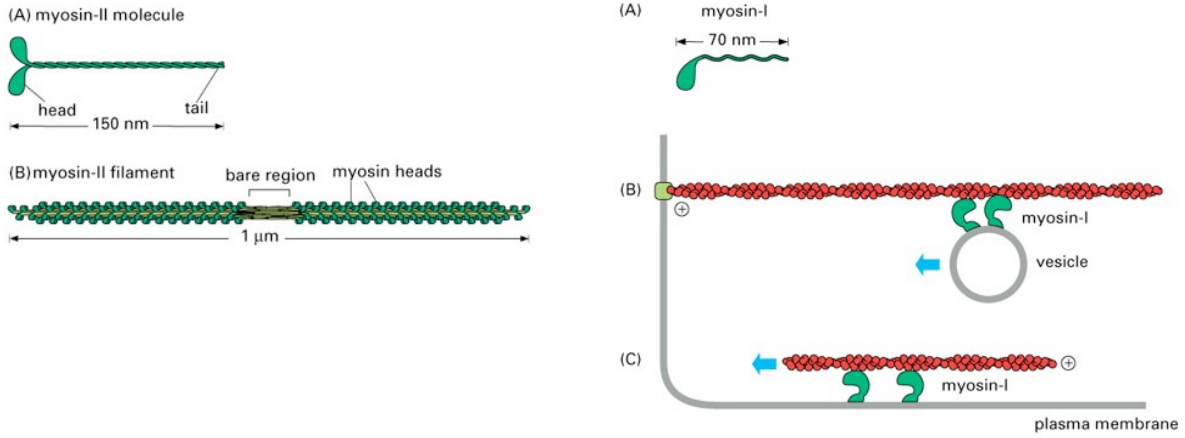
The cell cortex

How cells crawl

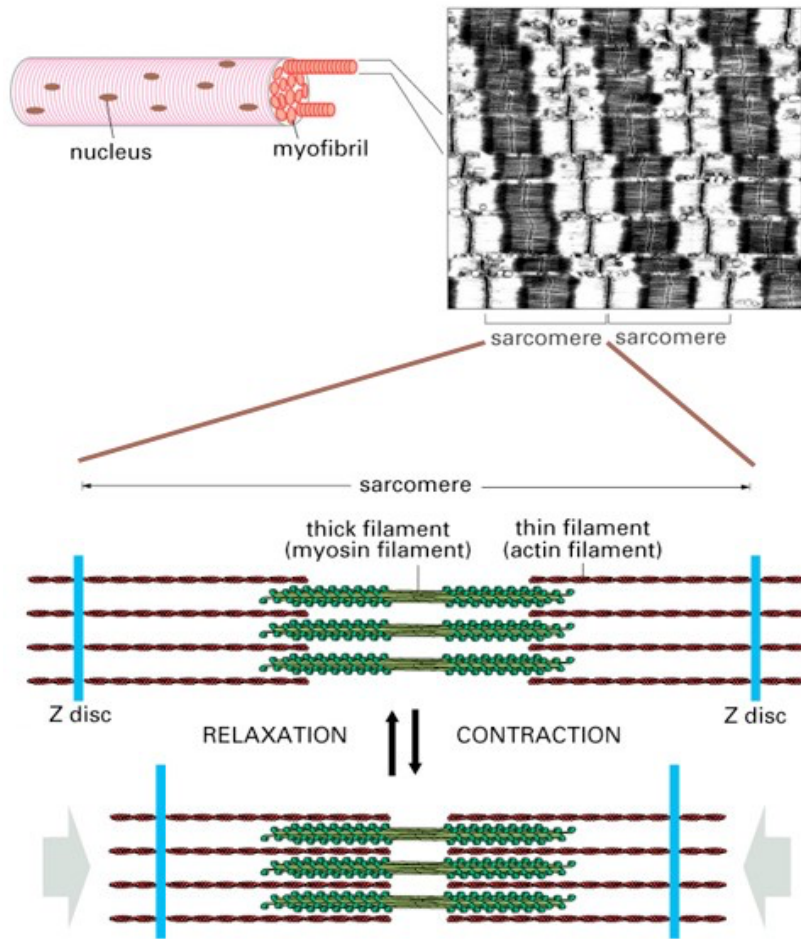


a top-down view of a lamellipodium

Actin and myosin form contractile structures



Muscle contraction



How myosin "walks"

