

HISTOLOGI: JARINGAN OTOT



Oleh:
RL Ambardini
FIK UNY

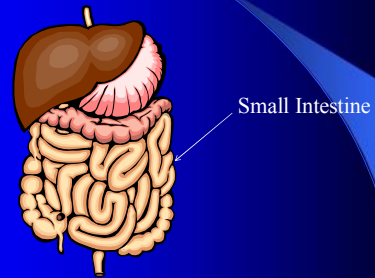
Jaringan Otot

- Mengandung protein kontraktile
- Sel otot & substansia interseularis
- Berdasarkan struktur & fungsinya:
 1. Otot polos (textus muscularis non striatus)
 2. Otot seran lintang (otot rangka/textus muscularis striatus)
 3. Otot jantung (textus muscularis cardiacus)

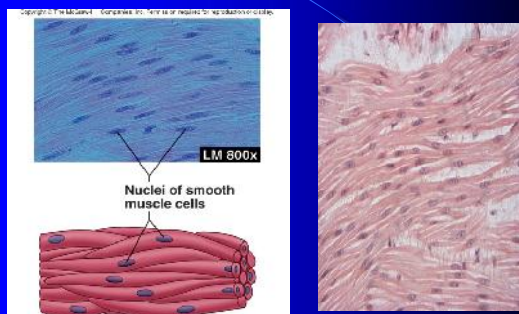
Otot Polos

- Bentuk seperti kumparan (fusiform)
- Inti di tengah sel
- Sitoplasma: homogen
- Otot polos terkecil: pembuluh darah, terbesar: uterus saat wanita hamil.
- Lokasi: pd semua alat yg mampu melakukan kontraksi di luar kehendak kita

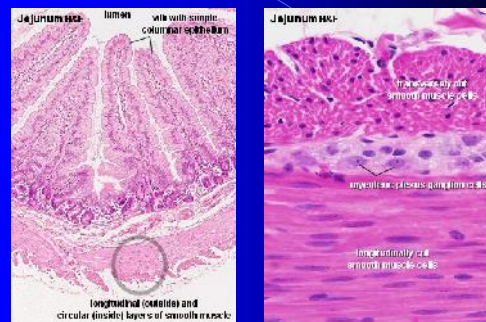
Contoh otot polos



Otot Polos



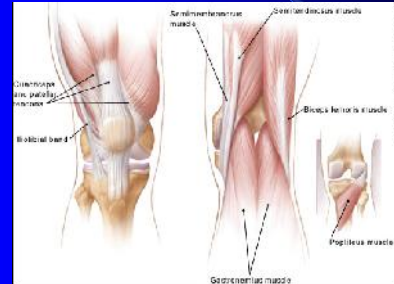
Otot Polos



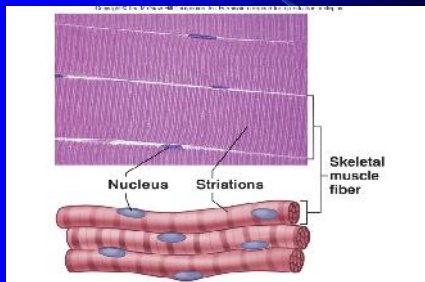
Otot Lurik/Skelet

- Struktur sel otot rangka
- Inti di tepi sel
- Sitoplasma mpy myofibril, pd mikroskop elektron tampak myofilamen
- Pd potongan membujur: sel-sel berdampingan, menunjukkan batas sel yg tdk jelas spt sinsitium, shg nukleus tampak banyak
- Kontraksi: disadari

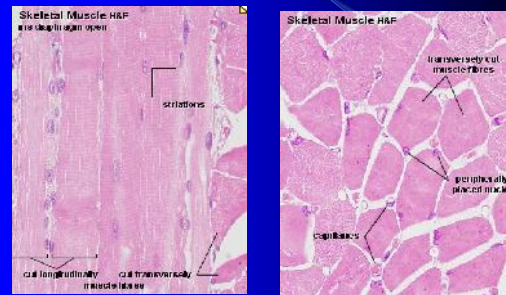
Otot Lurik



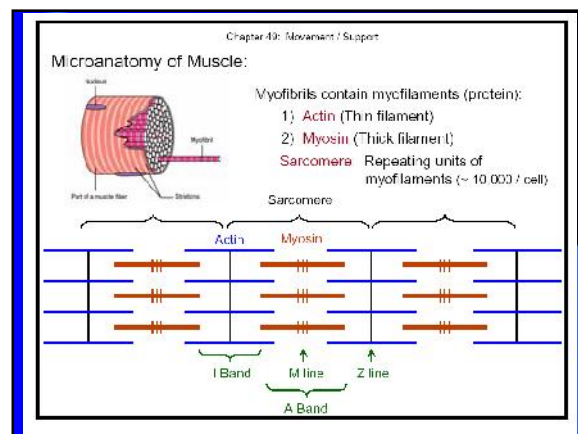
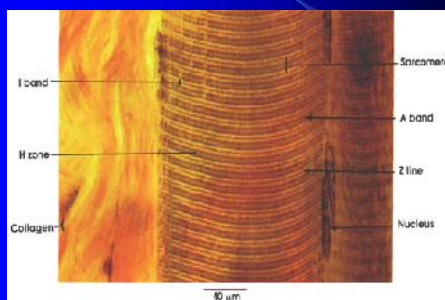
Otot Lurik

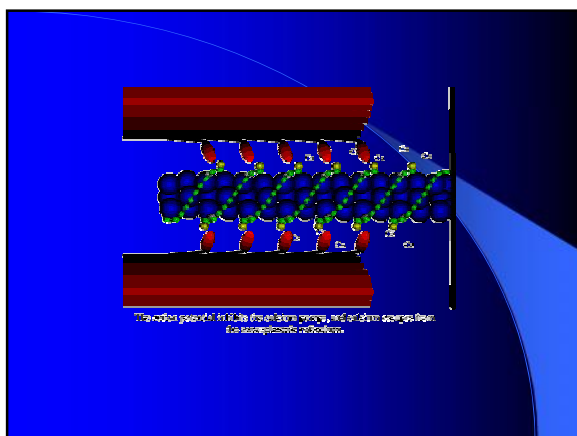
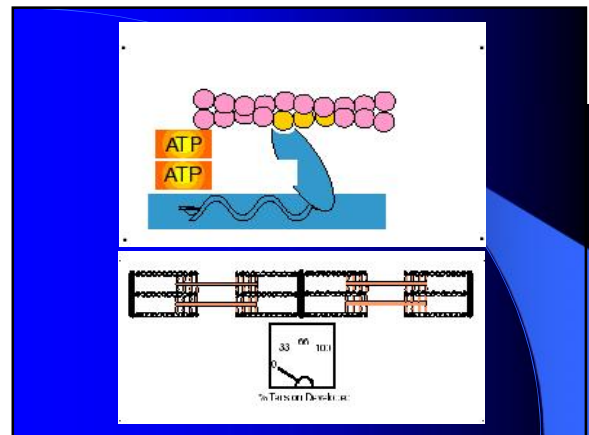
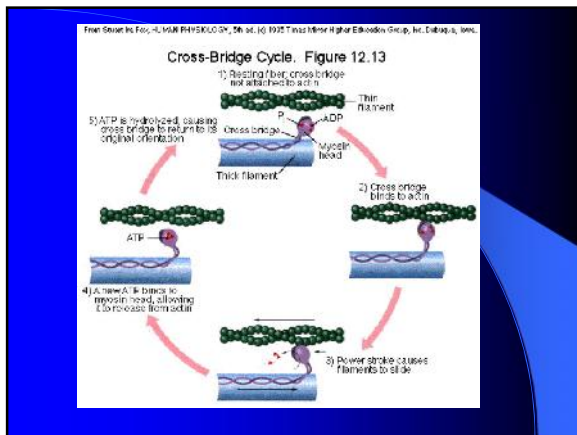
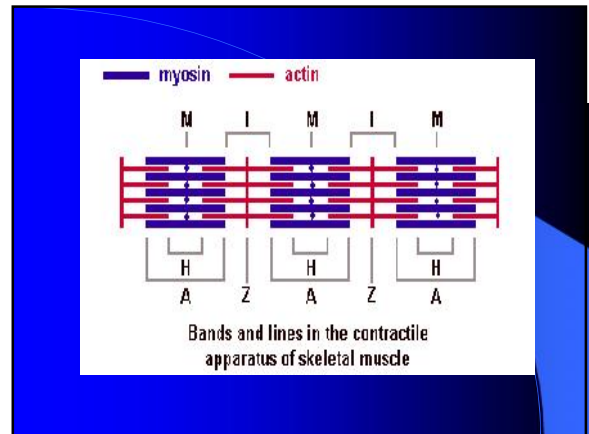
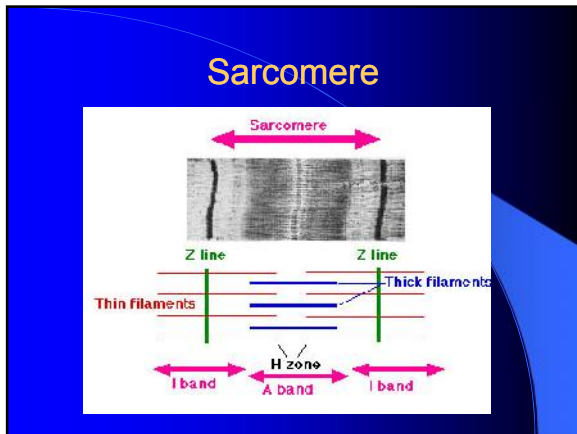


Otot Lurik



Otot Lurik





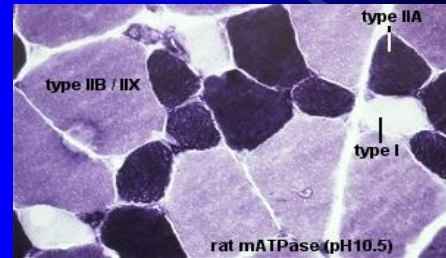
Kontraksi Otot Skelet

- The action potential inhibit the Ca pump & Ca escapes from the sarcoplasmic reticulum.
- Ca binds to troponin (yellow), causing a conformational change & movement of tropomyosin (green). This exposes the myosin head binding site (white) on the actin (blue).

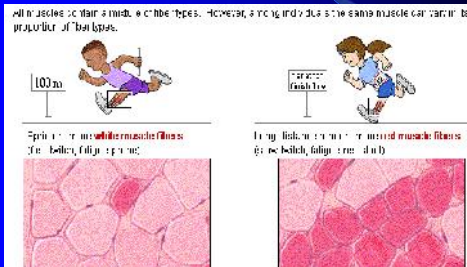
Kontraksi Otot Skelet

- After the myosin head (red) binds to the actin, the energy from ATP is necessary to produce movement of the myosin head. This process repeats itself many times in a single contraction, pulling the Z-lines (black line) closer together.

Tipe Serabut Otot Skelet



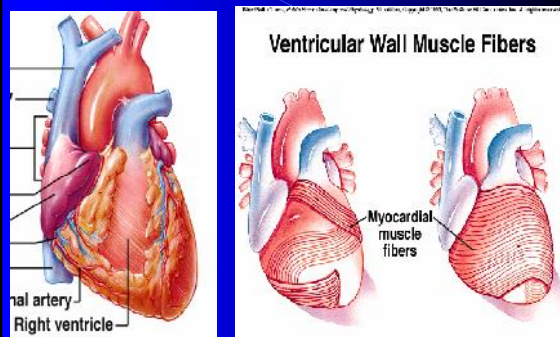
Tipe Serabut Otot Skelet



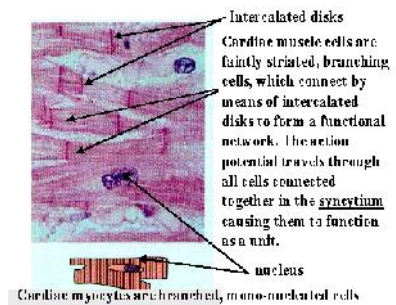
Otot Jantung

- Sel-sel berbentuk silinder, saling berhubungan dg hubungan khusus → discus intercalatus
- Sitoplasma mirip otot rangka
- Nukleus terlihat jelas, di pusat sel

Jantung



Cardiac Muscle Characteristics



Questions?

