

HISTOLOGI: JARINGAN OTOT



Oleh:
RL Ambardini
FIK UNY

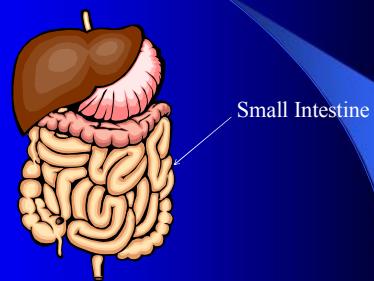
Jaringan Otot

- Mengandung protein kontraktil
- Sel otot & substansi interselularis
- 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)

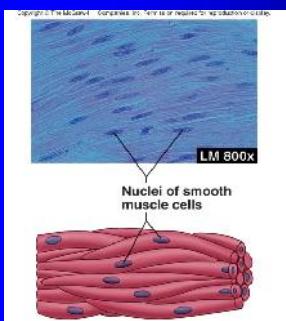
Otot Polos

- 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

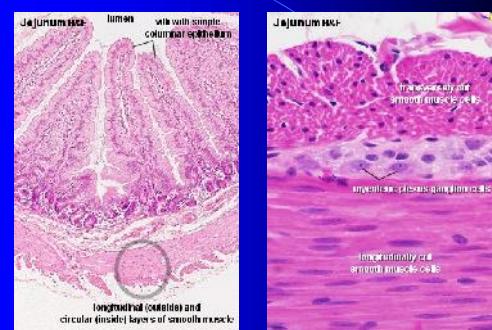
Contoh otot polos



Otot Polos



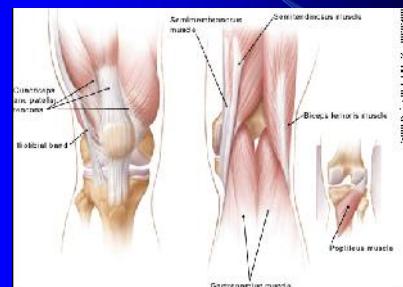
Otot Polos



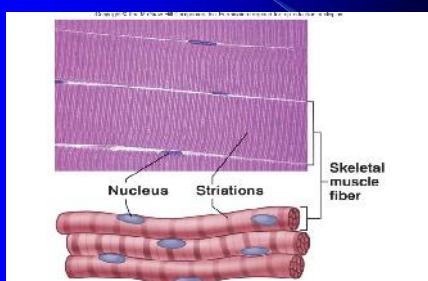
Otot Lurik/Skelet

- 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

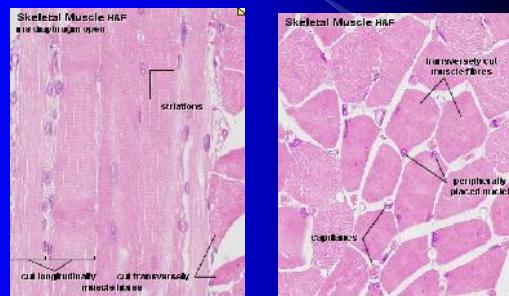
Otot Lurik



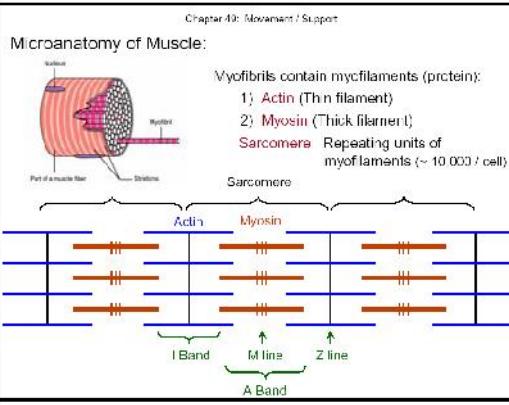
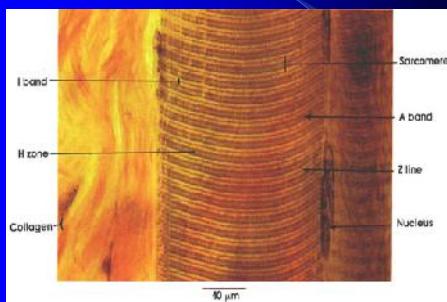
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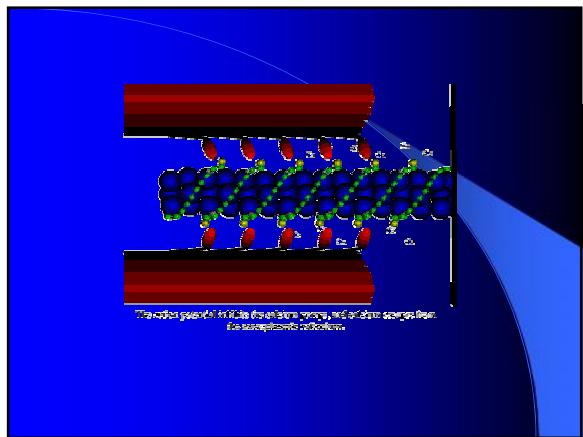
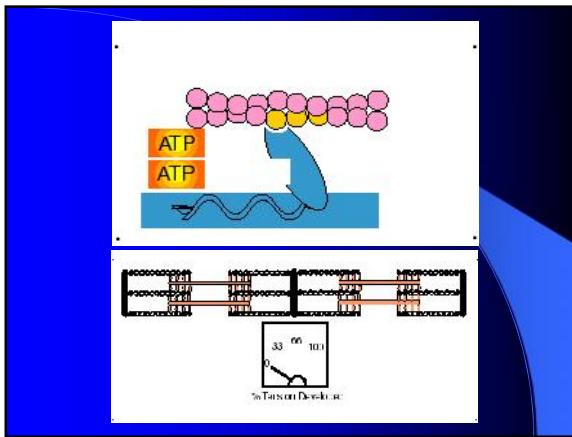
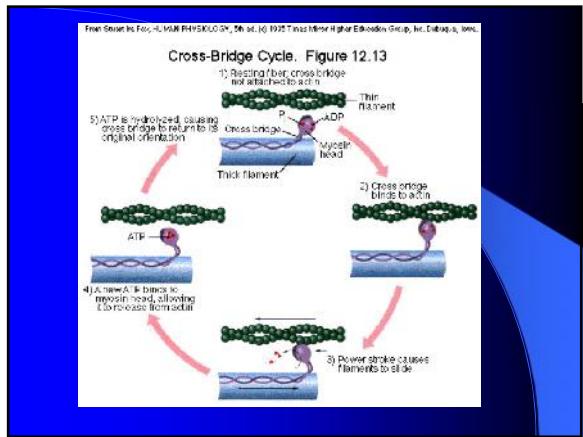
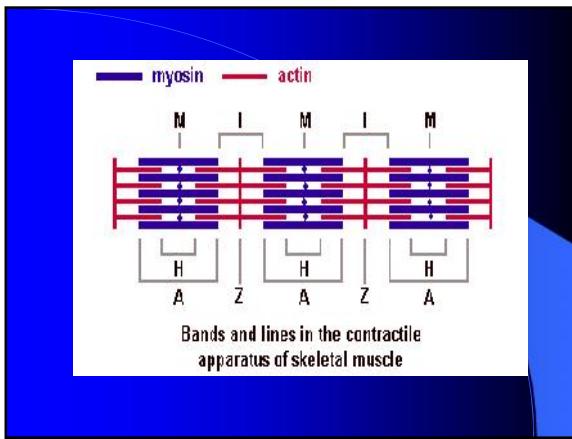
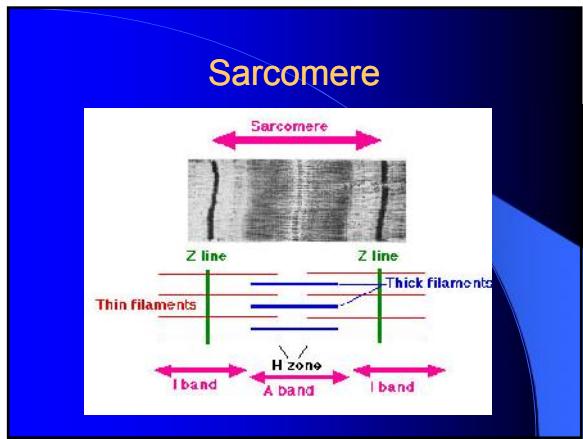


Otot Lurik



Otot Lurik



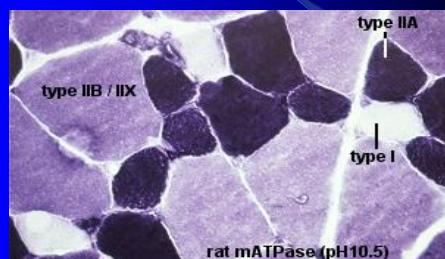


- ### Kontraksi Otot Skelet
- The action potential inhibits the Ca pump & Ca escapes from the sarcoplasmic reticulum.
 - Ca binds to troponin (yellow), causing a conformational change & movement of tropomyosin (green). This exposes the myosin head binding site (white) on the actin (blue).

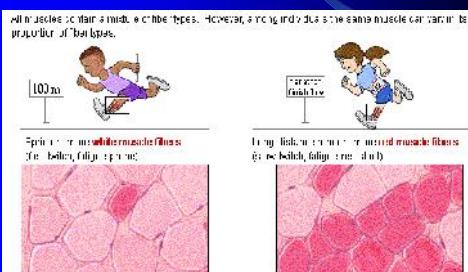
Kontraksi Otot Skelet

- 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



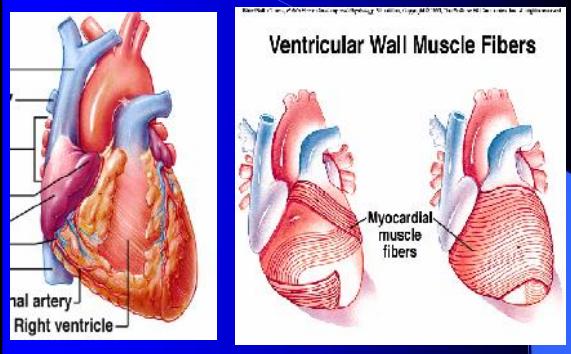
Tipe Serabut Otot Skelet



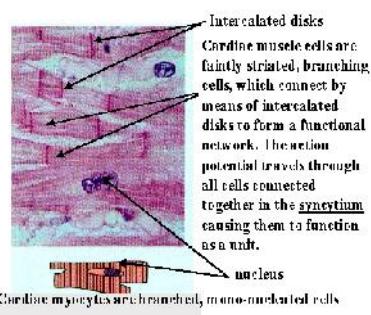
Otot Jantung

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

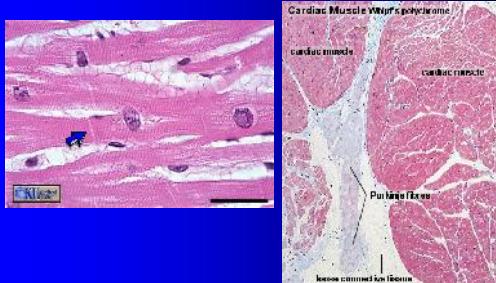
Jantung



Cardiac Muscle Characteristics



Otot Jantung

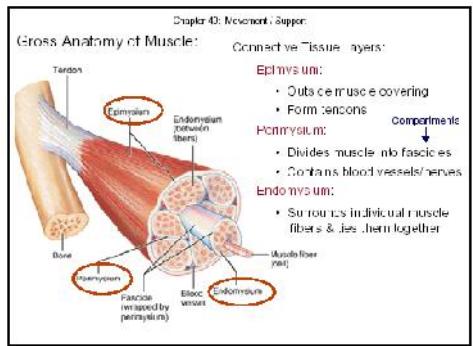


Selubung Otot

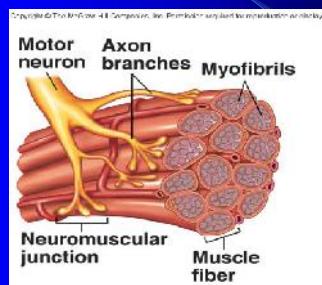
- Merupakan serabut penyusun otot, terakit menjadi berkas-berkas yg rapi
- Yg disebut muskulus (makroanatomii): gabungan berkas otot yg dibungkus oleh jaringan kolagen padat

Jenis Selubung Otot

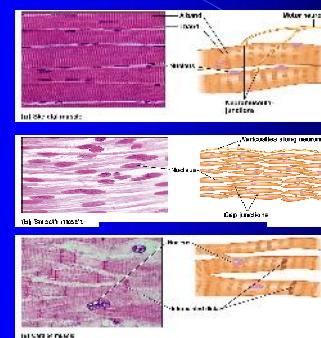
- Epimisium:** bungkus yg terletak di luar muskulus. Pd makroanatomi: fascia profunda.
- Perimisium:** percabangan epimisium, merupakan sekat yg membungkus kesatuan otot yg lebih kecil. Pd makroanatomi: fascia muscularis
- Endomisium:** percabangan perimisium, menyelubungi berkas otot yg lebih kecil. Dikenal dg: myofibra (disusun oleh sasisitum sel otot)



Neuromuscular Junction



Summary Muscle Tissue Type



Questions?

