

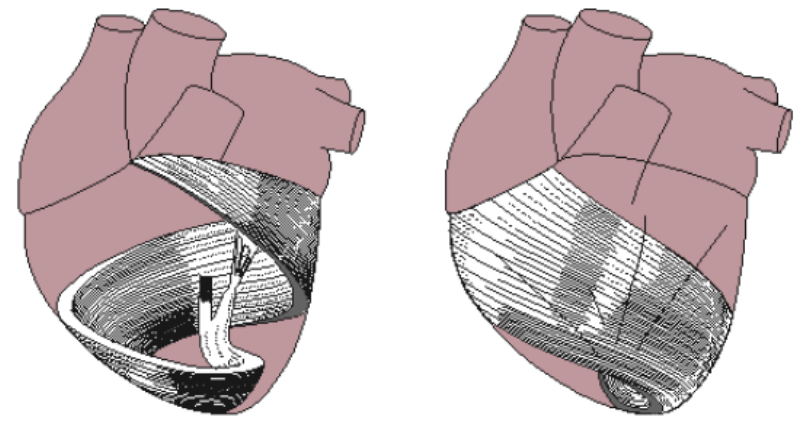
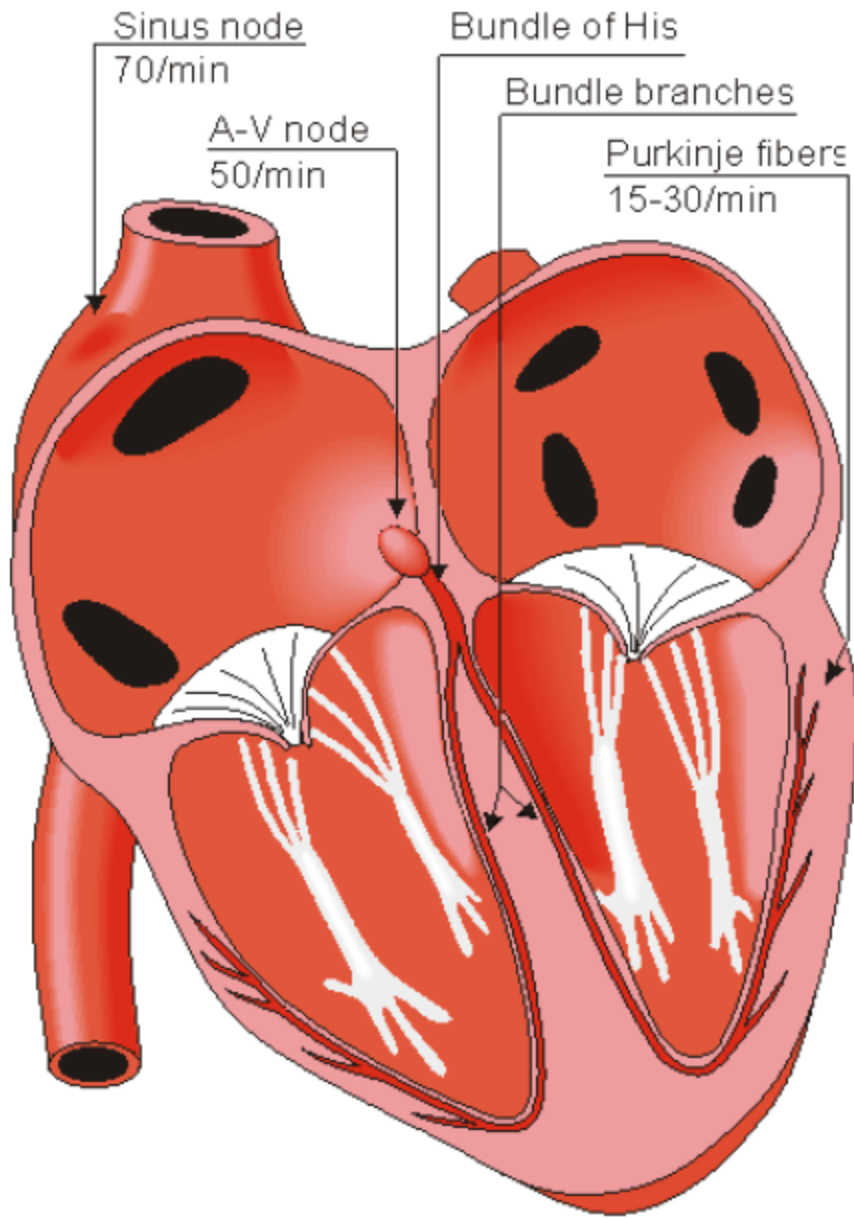
# قلب

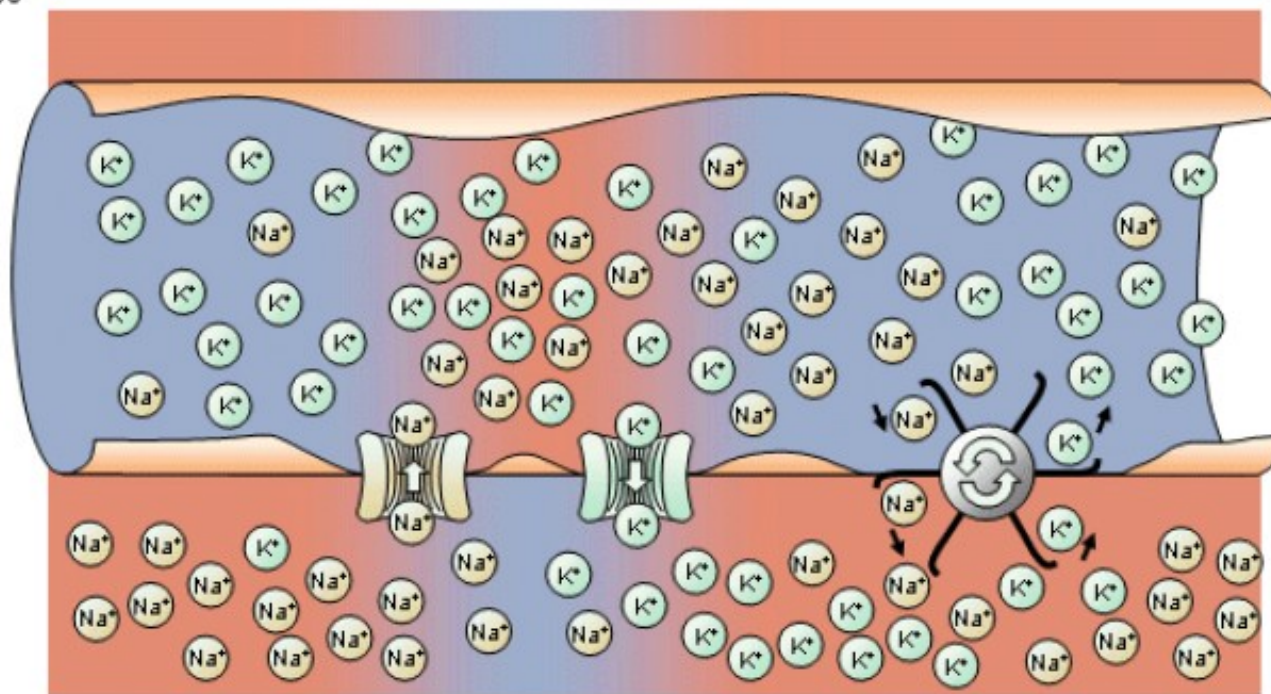
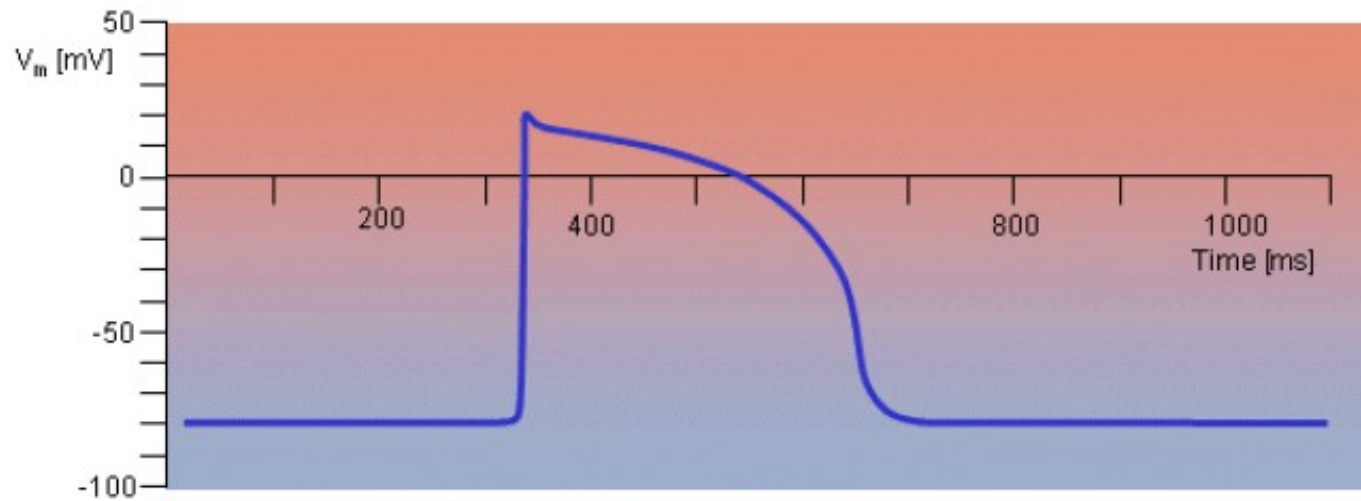
دانسته‌های ما در مورد کارکرد الکتریکی

دکتر مهرداد ساویز

پاییز ۱۳۹۵

# قلب





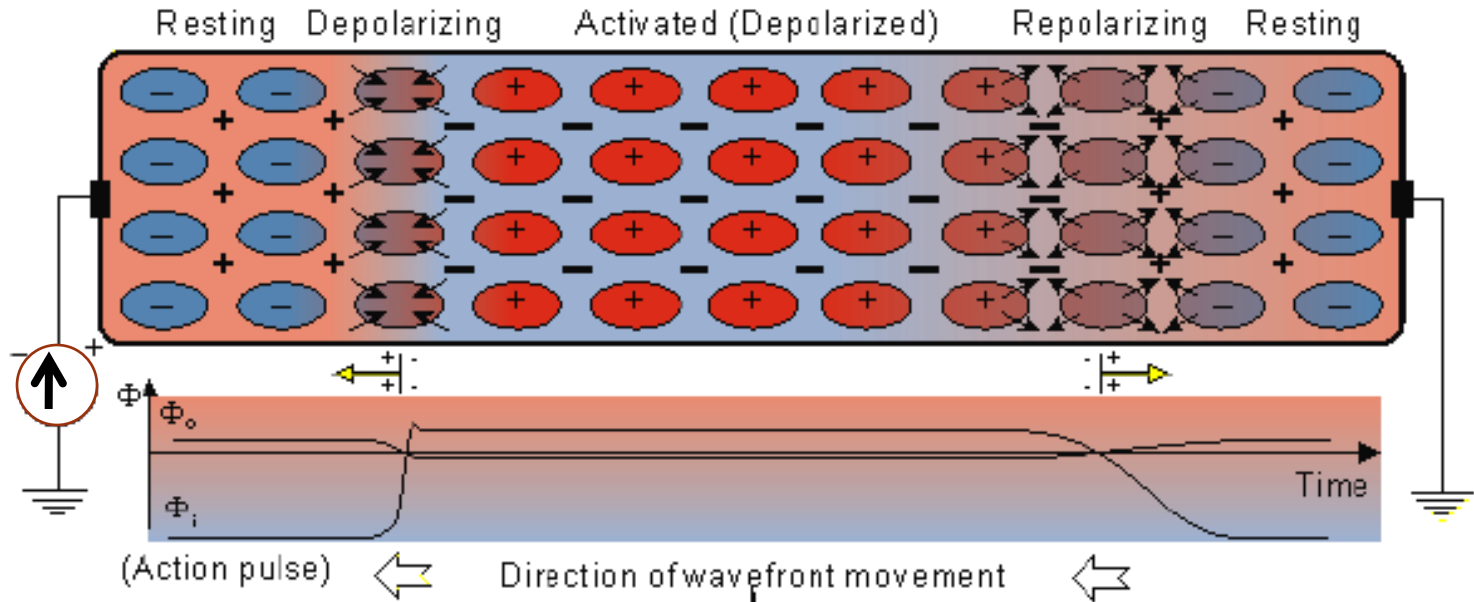
**DEPOLARIZATION    REPOLARIZATION    RESTORATION OF IONIC BALANCE**

## DEPOLARIZATION

Positive ions ( $\text{Na}^+$ ) flowing into the depolarizing cells make  $\Phi_o$  (outside the cells) more negative.

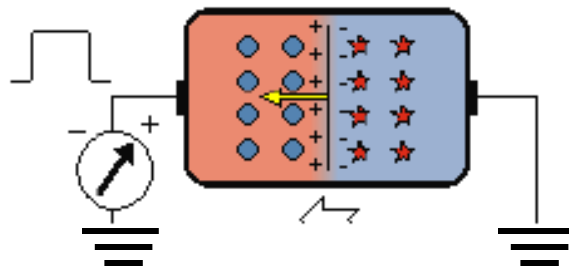
## REPOLARIZATION

Positive ions ( $\text{K}^+$ ) flowing out from the repolarizing cells make  $\Phi_o$  (outside the cells) more positive.



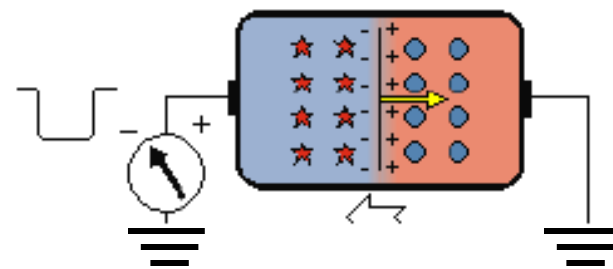
**A** ★

Resting    Activated

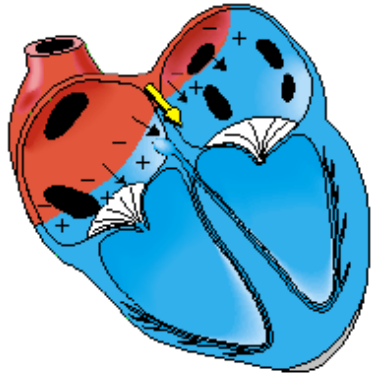


**C**

Still activated    Resting again



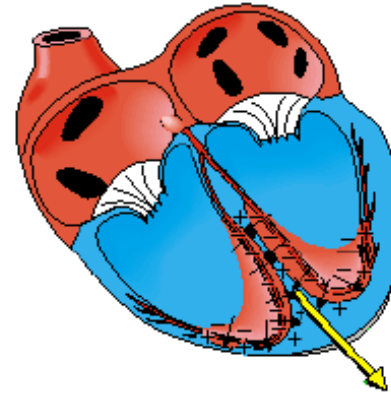
ATRIAL  
DEPOLARIZATION  
80 ms



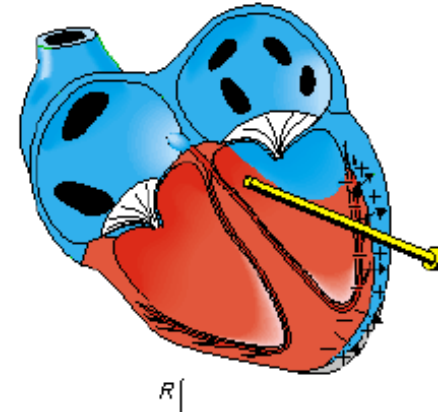
SEPTAL  
DEPOLARIZATION  
220 ms



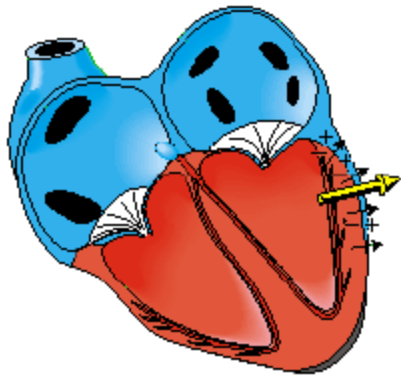
APICAL  
DEPOLARIZATION  
230 ms



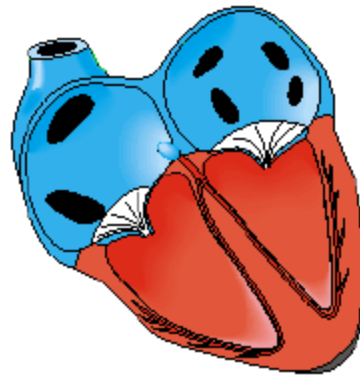
LEFT VENTRICULAR  
DEPOLARIZATION  
240 ms



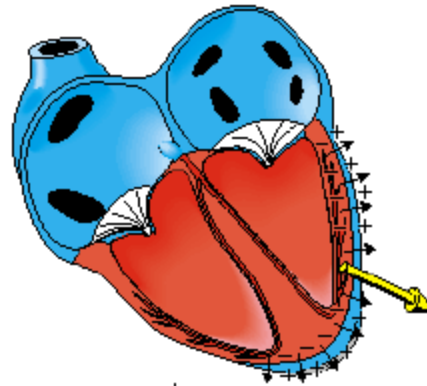
LATE LEFT VENTRICULAR  
DEPOLARIZATION  
250 ms



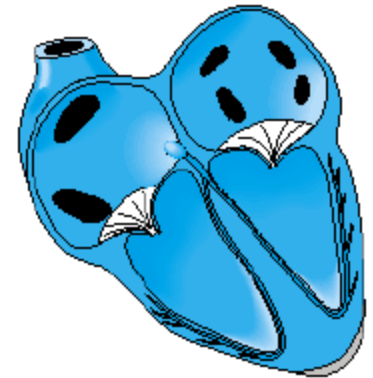
VENTRICLES  
DEPOLARIZED  
350 ms



VENTRICULAR  
REPOLARIZATION  
450 ms



VENTRICLES  
REPOLARIZED  
600 ms



مرجع:

فصول ۴ و ۶ و ۸ و ۱۱ و ۱۵ از کتاب درسی

Bioelectromagnetism (Malmivuo, Plonsey)

در این بخش مورد استفاده قرار گرفته‌اند.