

Рефлекторная регуляция сердечно-сосудистой системы

Cardiovascular Regulation

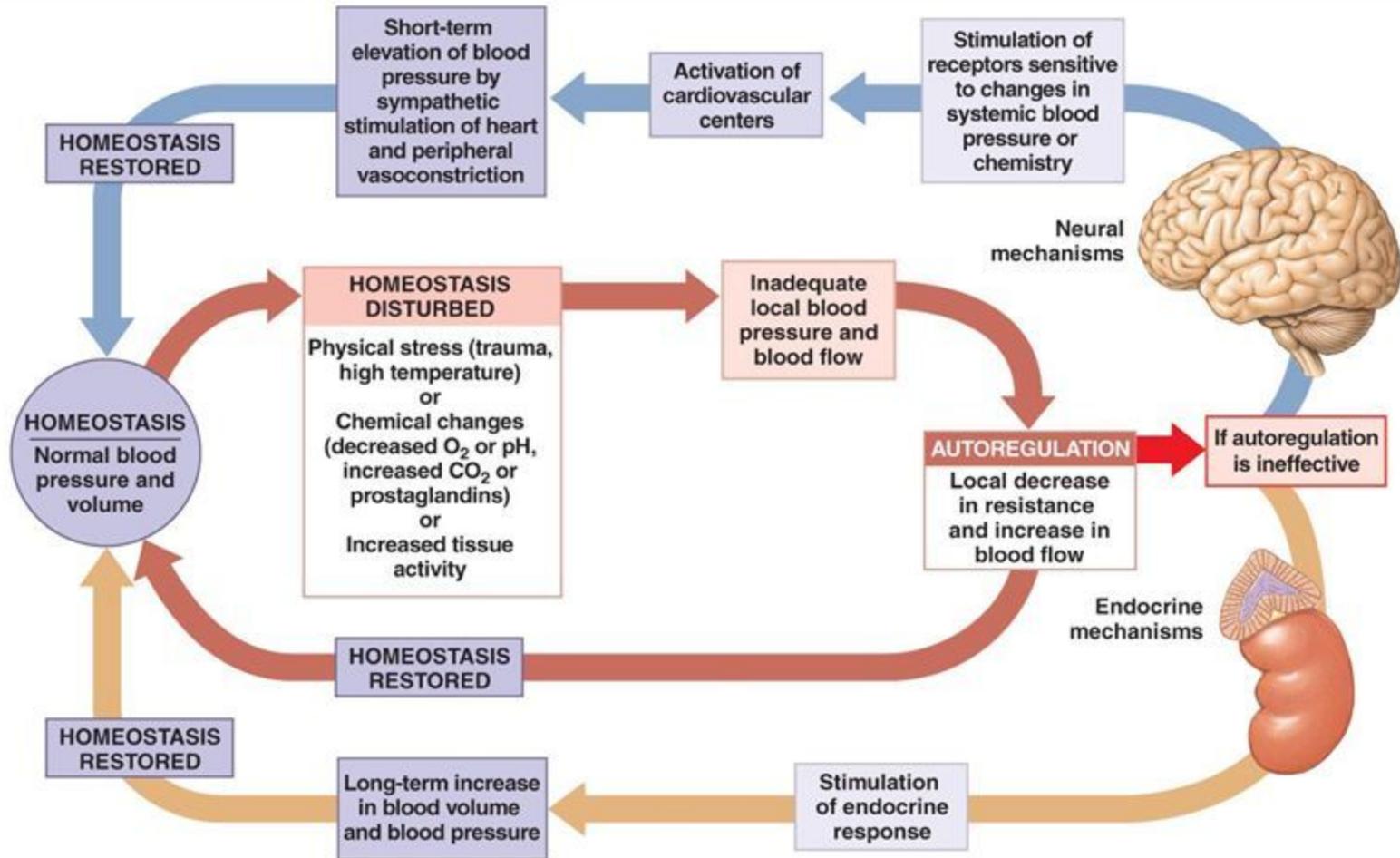
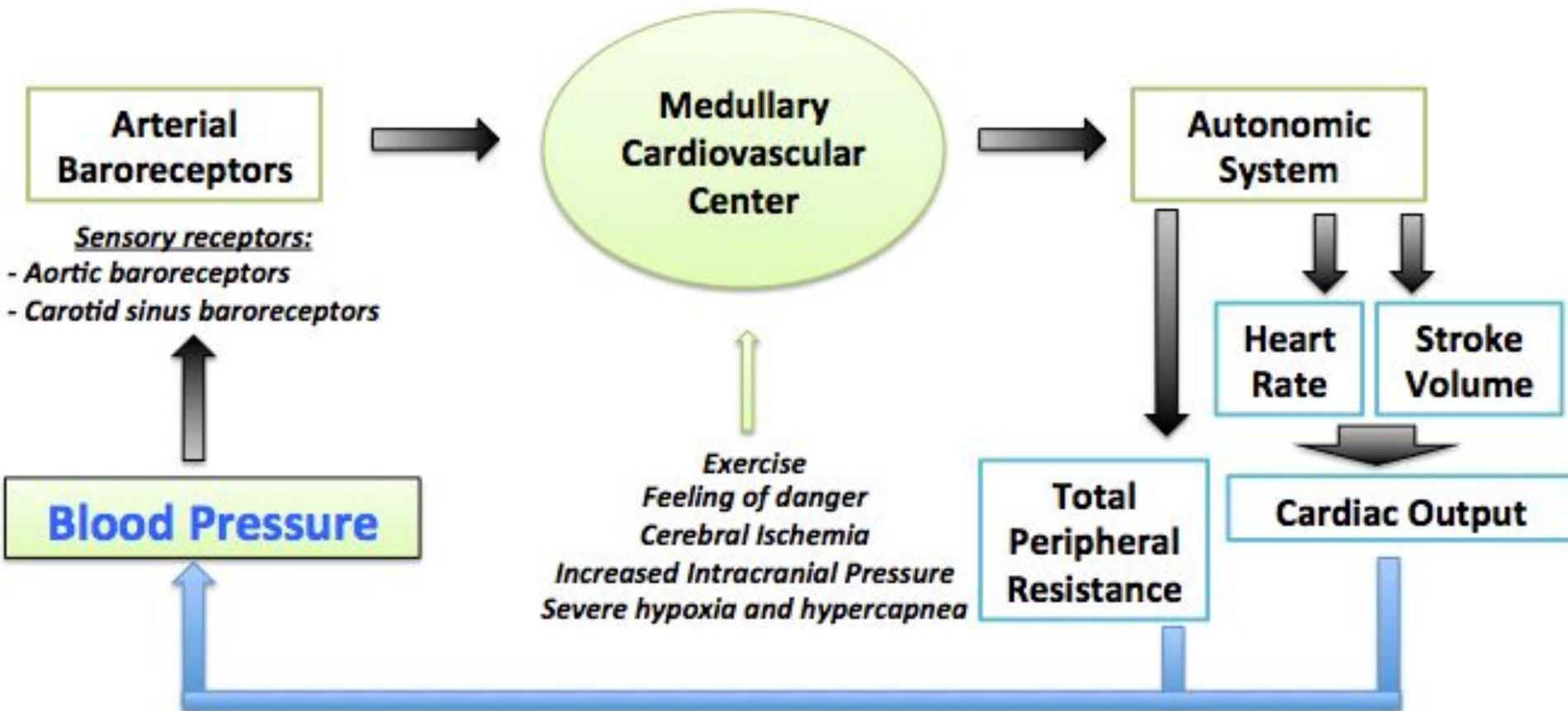


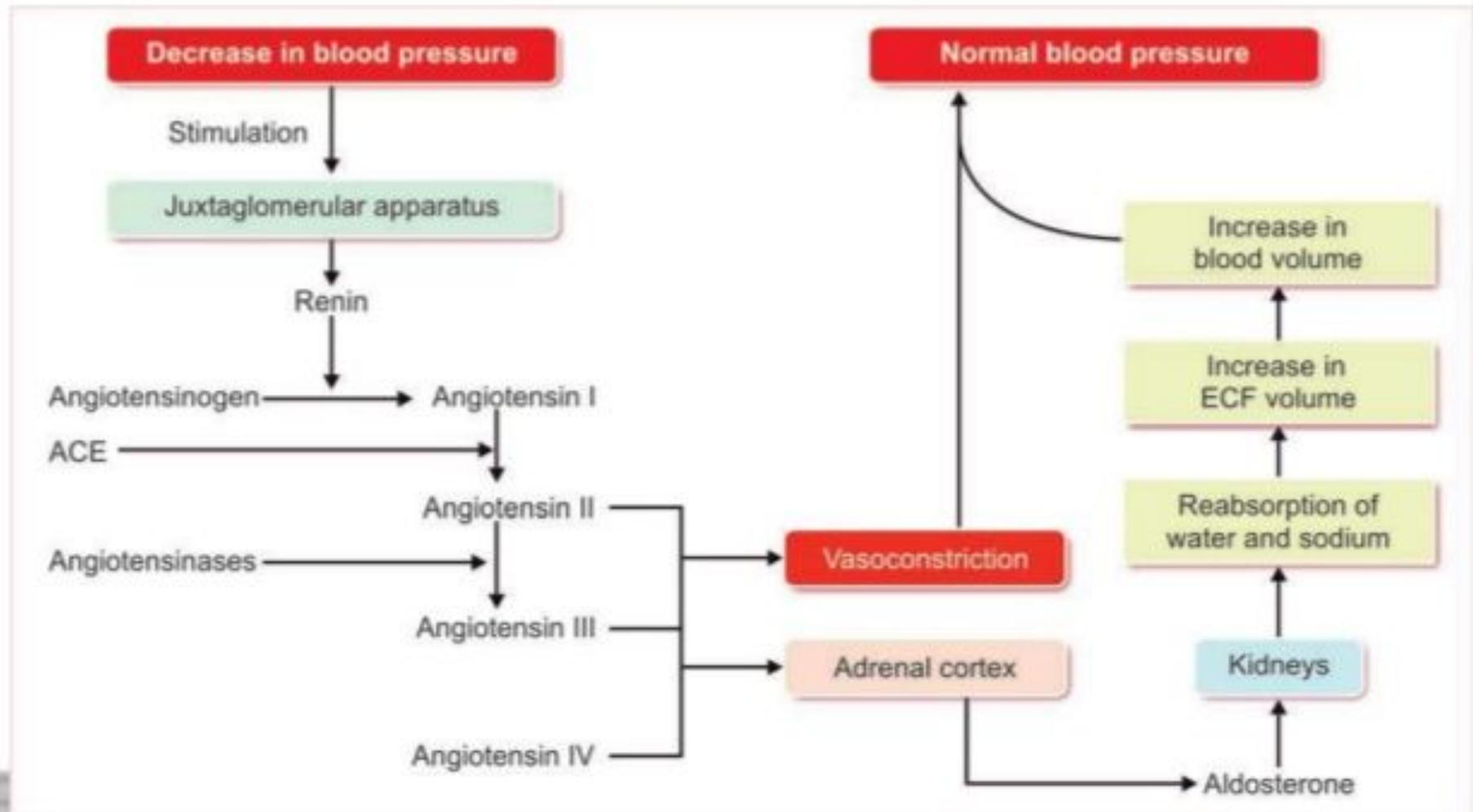
Figure 21–13 Short-Term and Long-Term Cardiovascular Responses

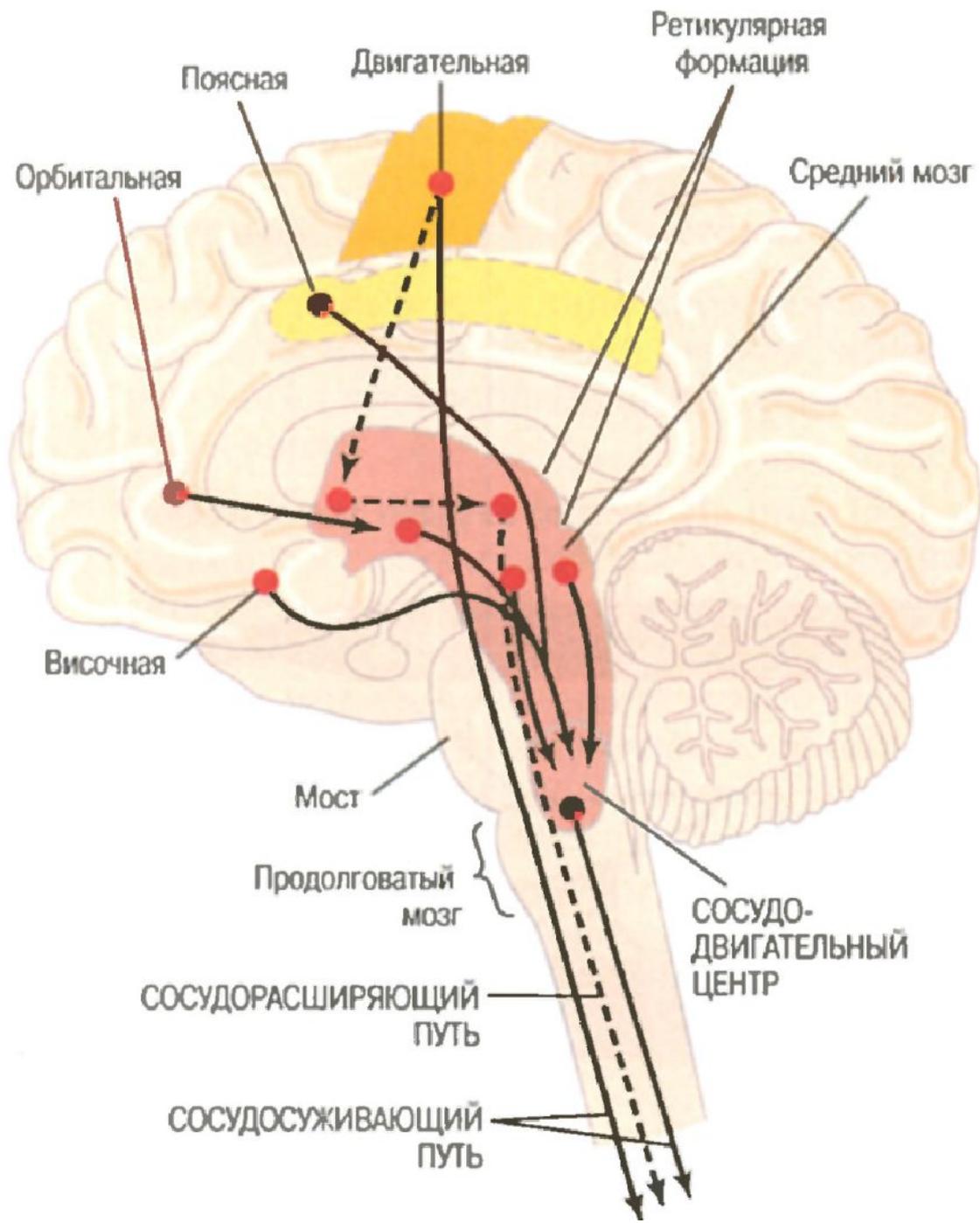
Short Term Regulation of Blood Pressure



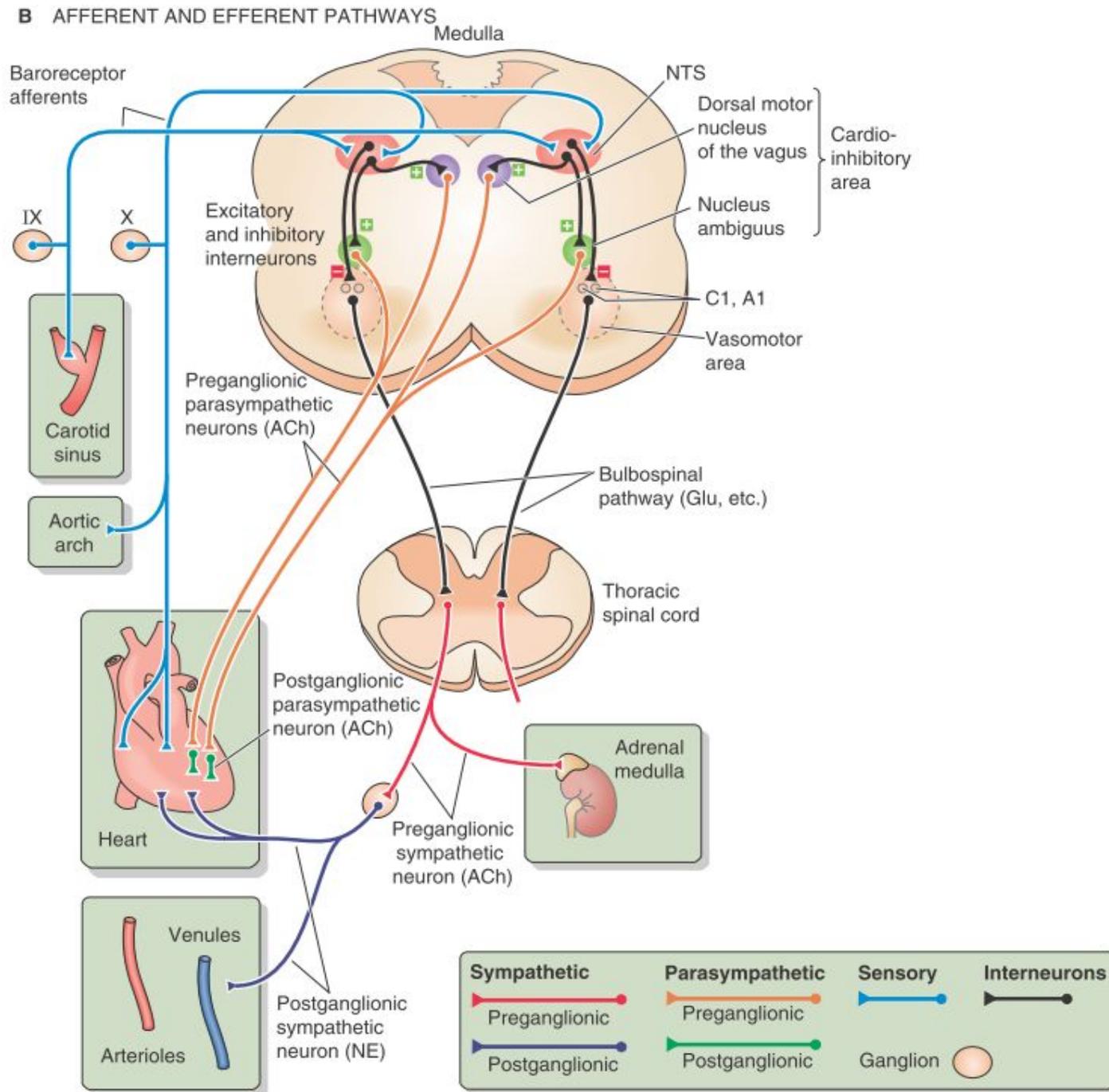
Adapted from Mohrman DE, Heller LJ: Cardiovascular Physiology, 7th edition

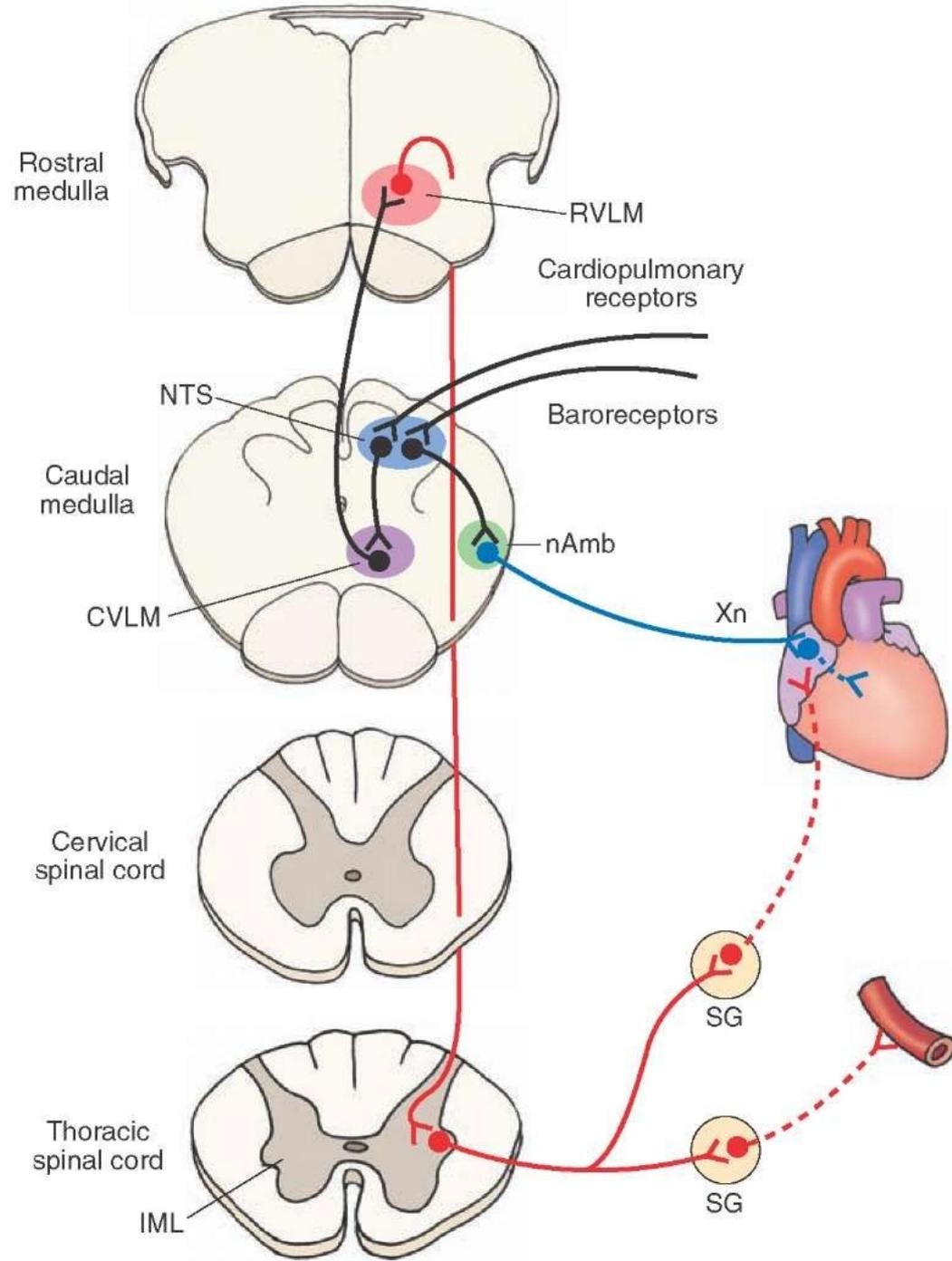
RENAL MECHANISM FOR REGULATION OF BLOOD PRESSURE – LONG-TERM REGULATION



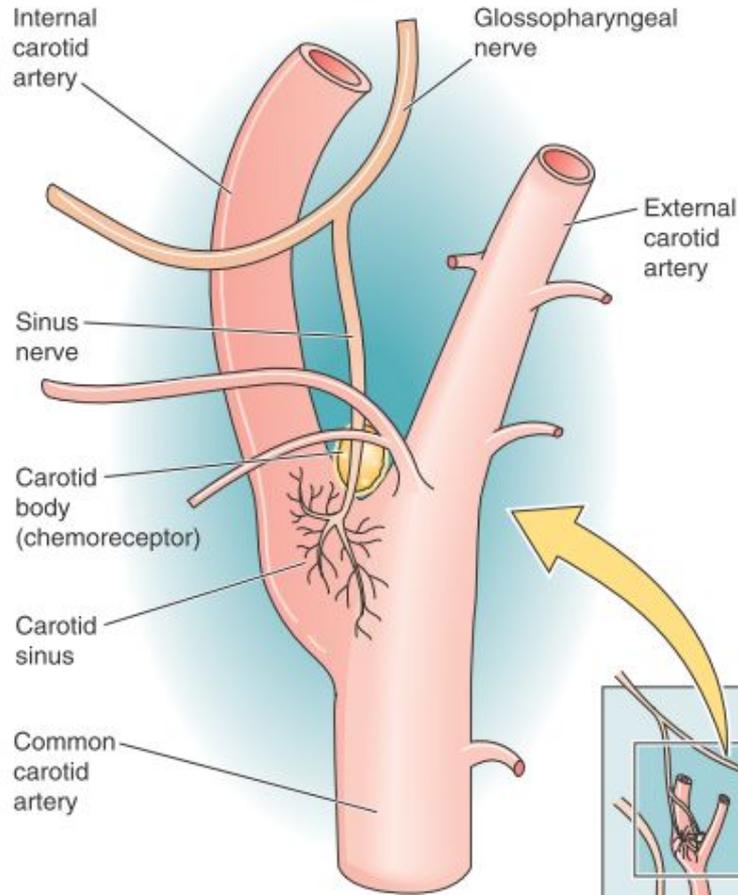


B AFFERENT AND EFFERENT PATHWAYS

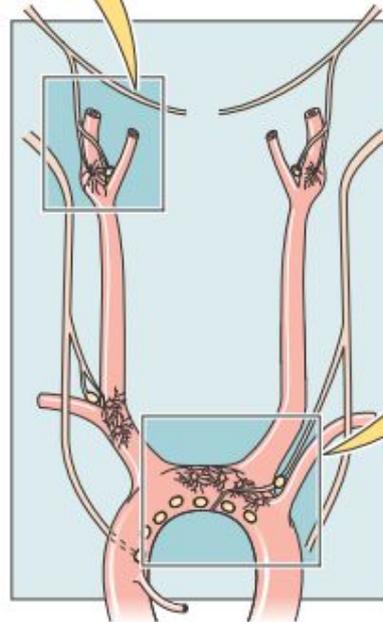
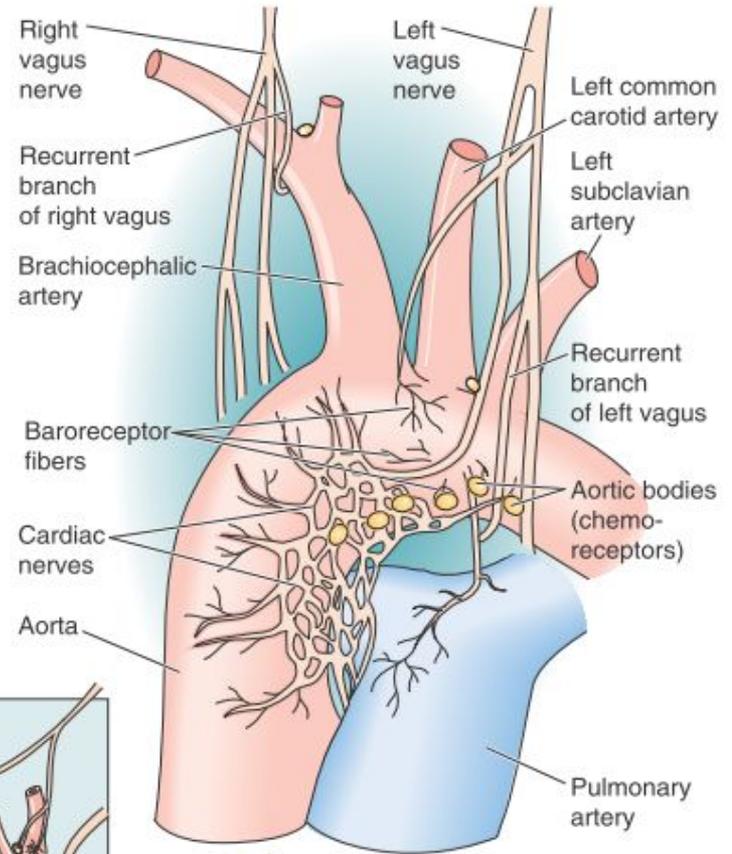


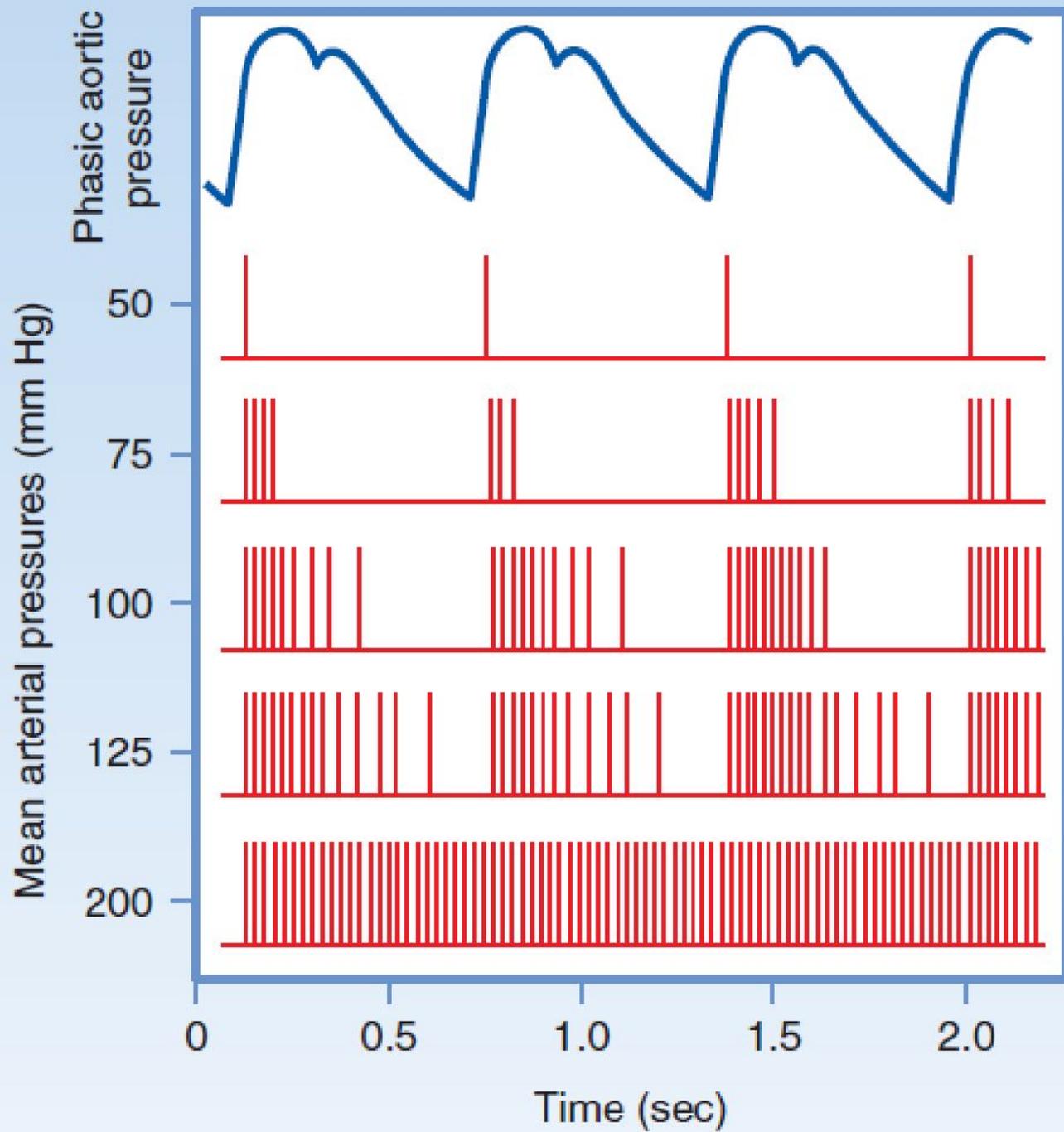


A INNERVATION OF CAROTID SINUS AND BODY

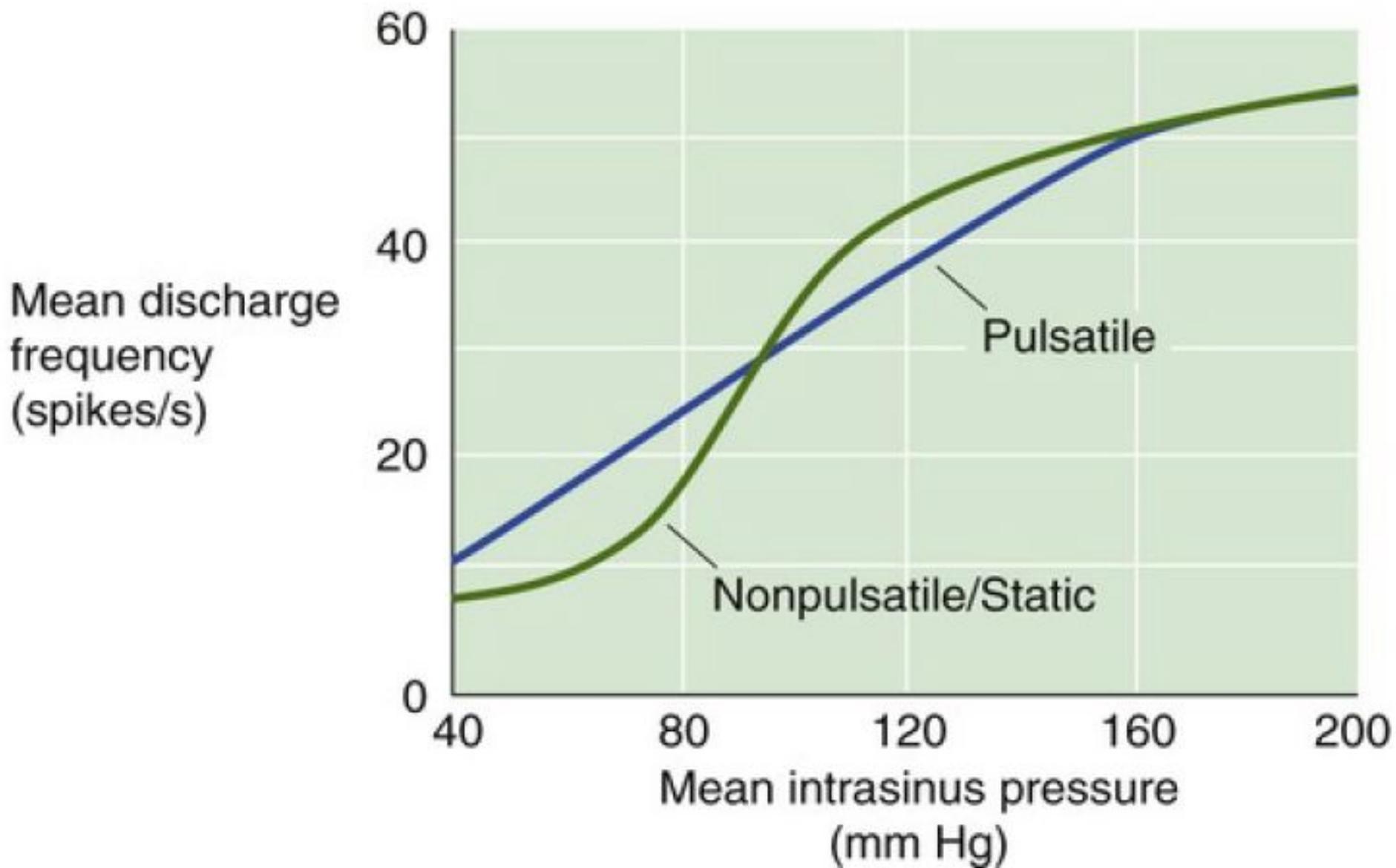


B INNERVATION OF AORTIC ARCH AND BODIES





B PRESSURE-ACTIVITY RELATIONSHIPS

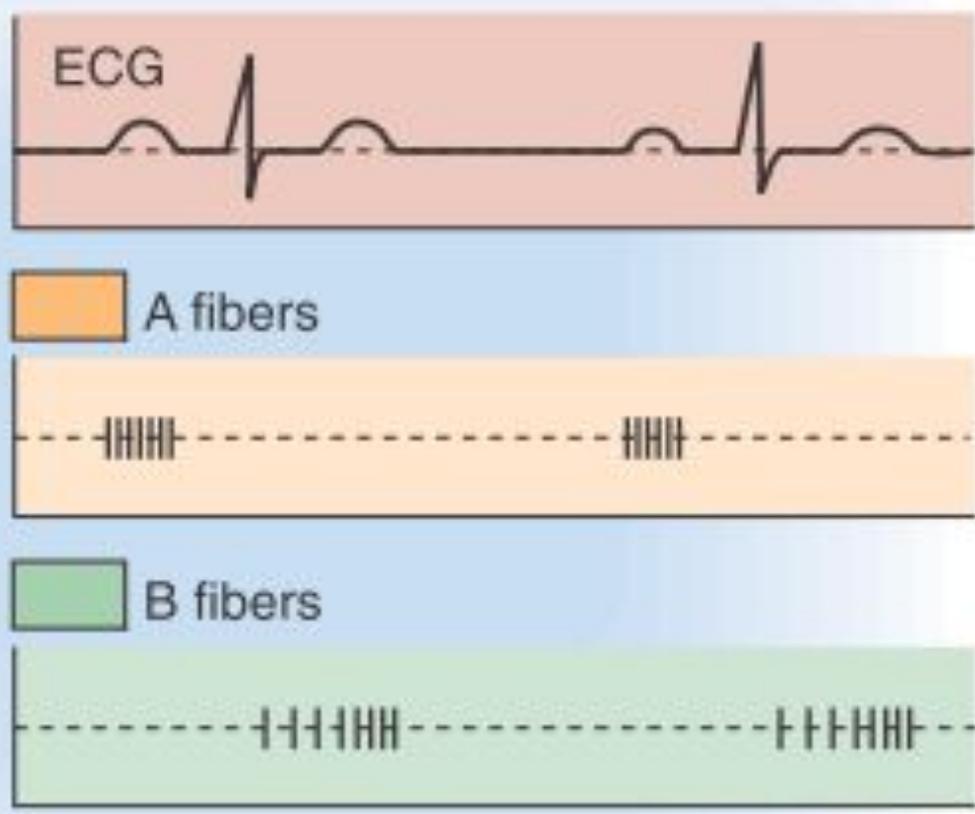
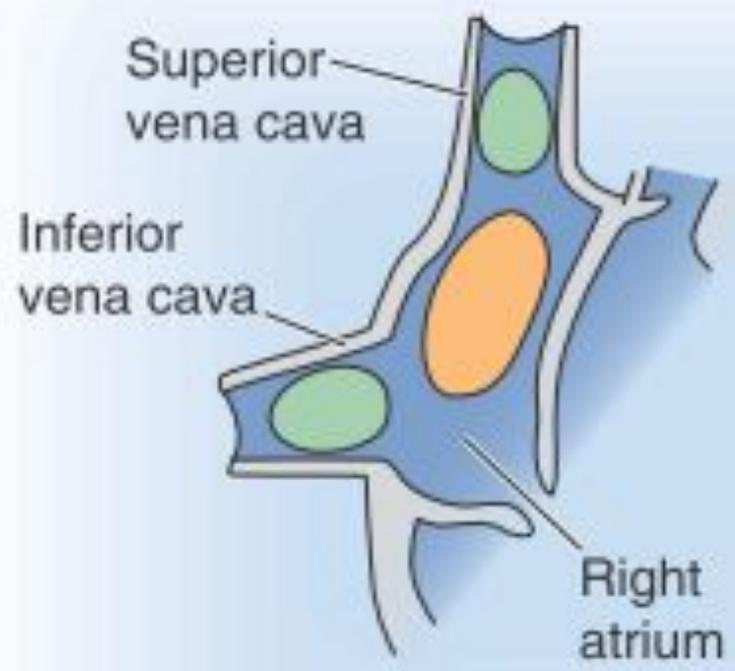


В отличие от каротидных
барорецепторов

аортальные барорецепторы:

- имеют более высокий порог как статического (~110 мм рт.ст. против ~50 мм рт.ст), так и динамического ответа;
- медленнее насыщаются (сохраняется реакция на большие значения давления);
- при равных величинах давления лучше реагируют на повышение давления, чем на снижение

B RESPONSE OF ATRIAL A- AND B-TYPE RECEPTORS



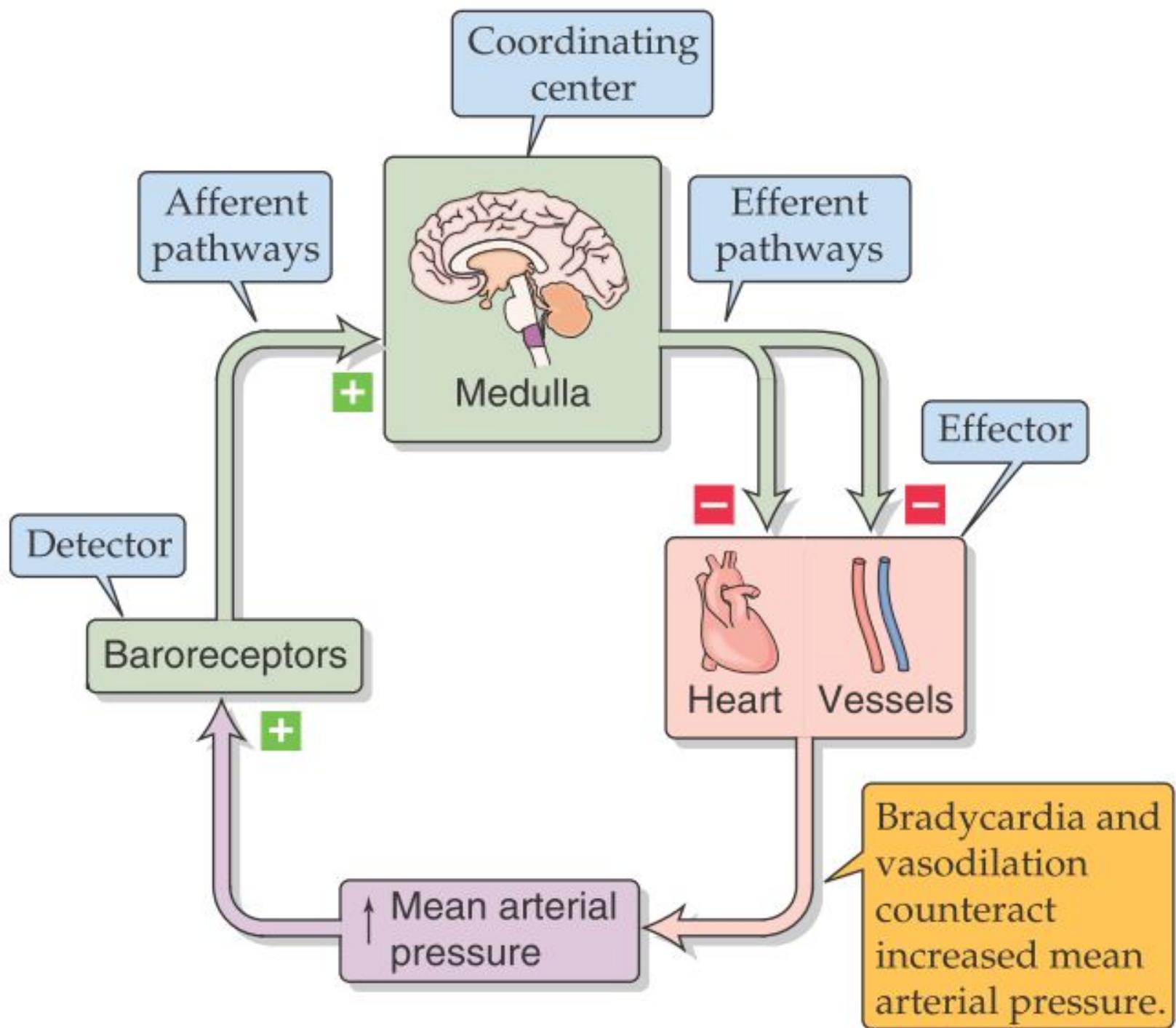
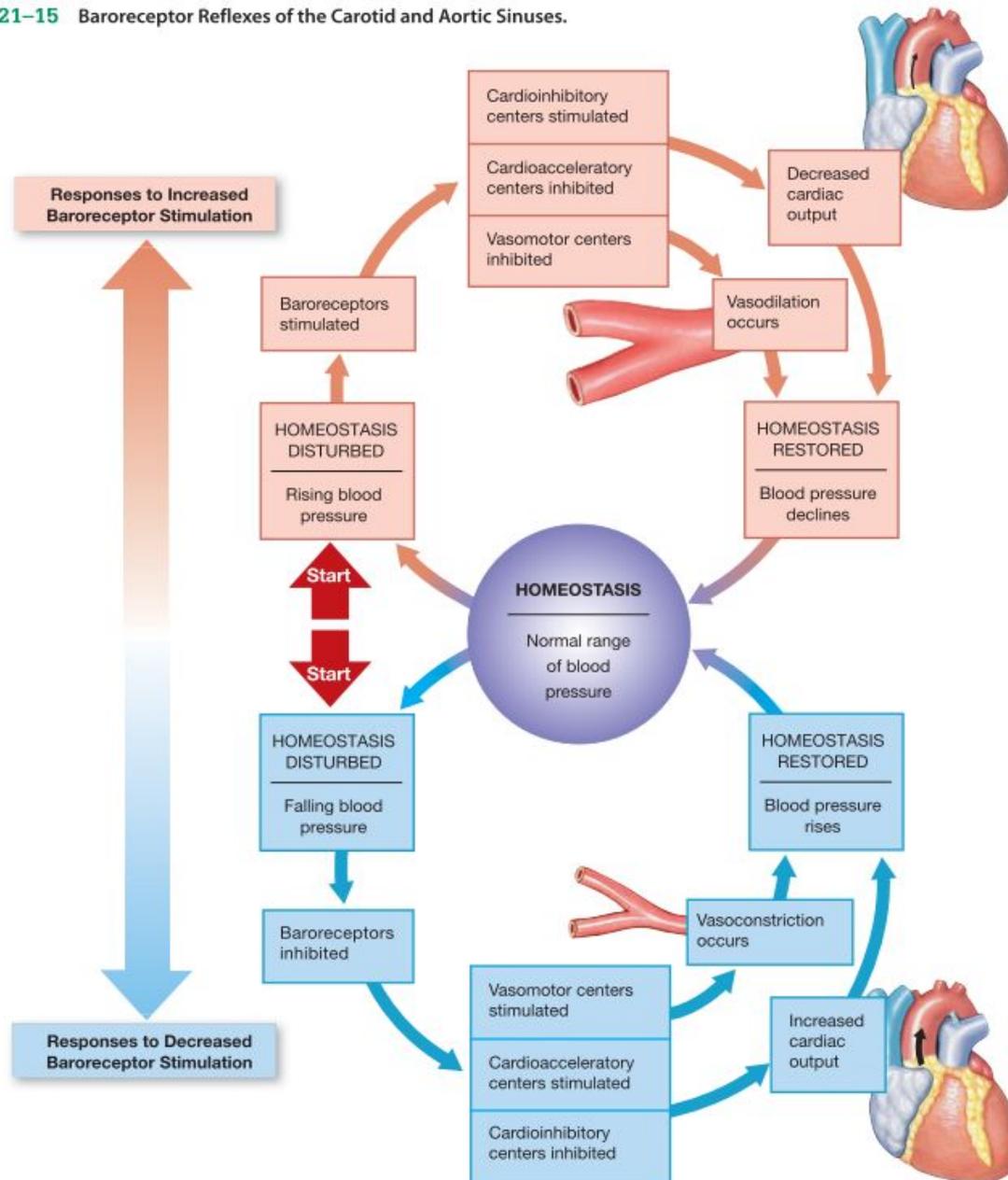
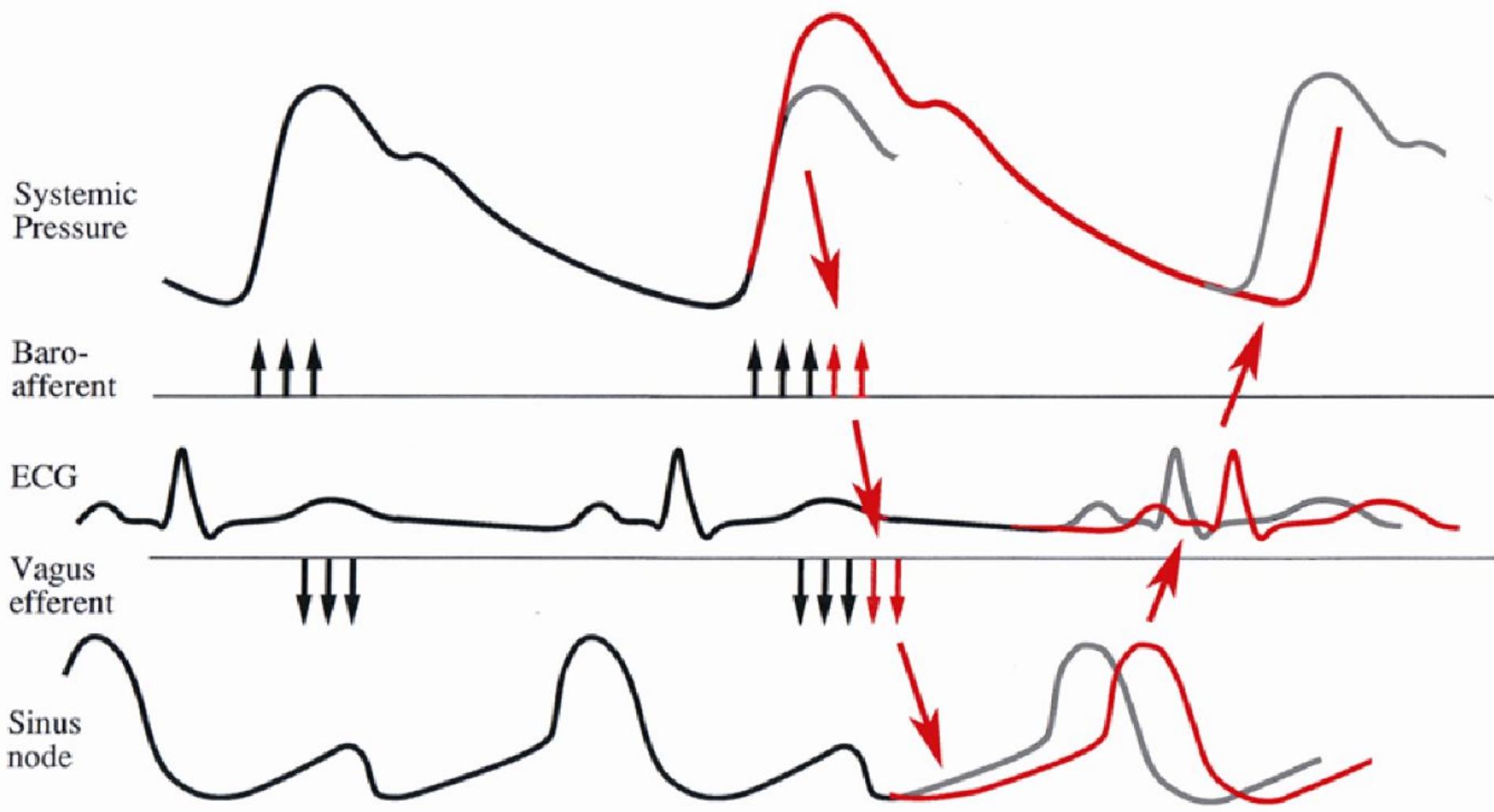
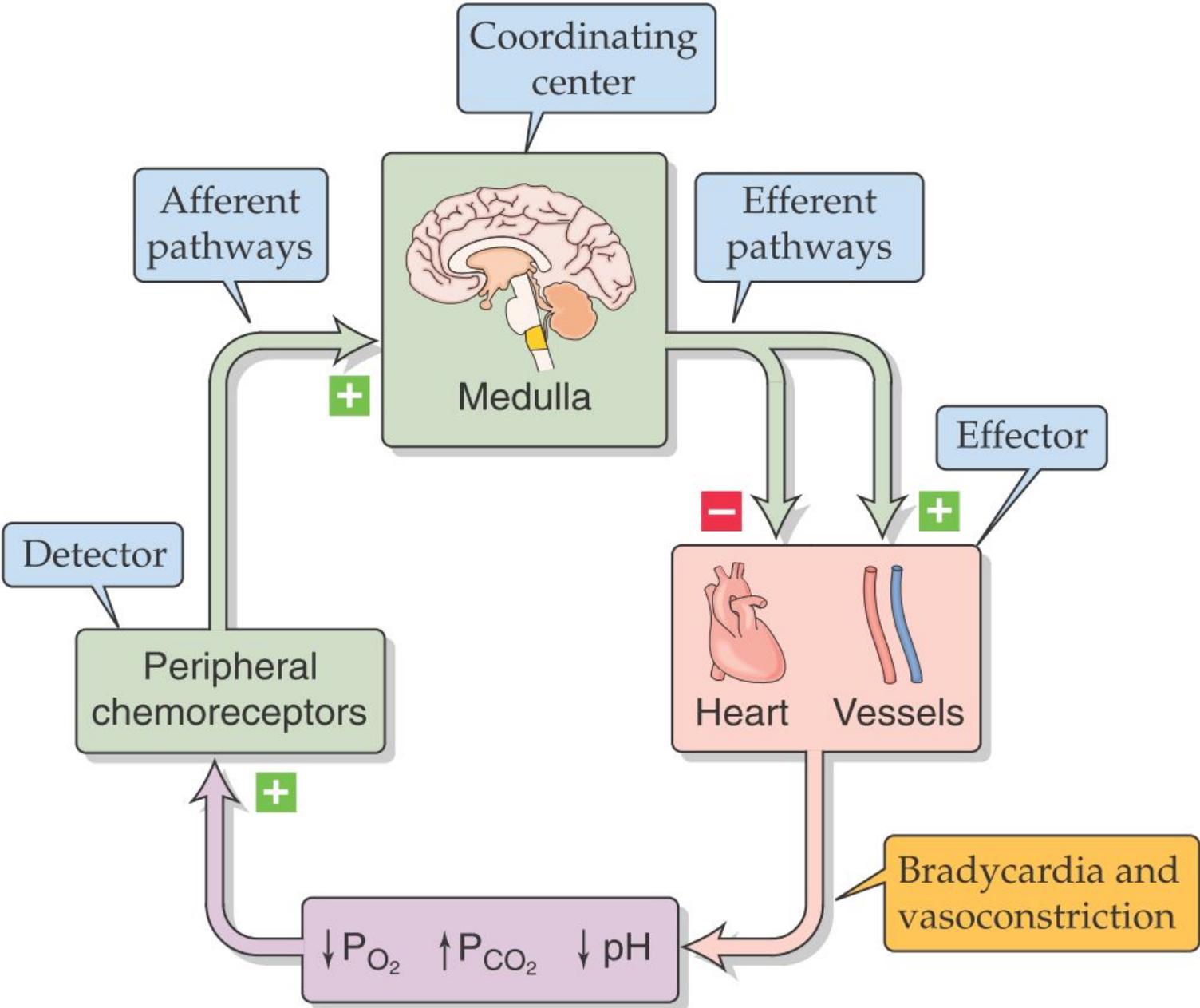


Figure 21-15 Baroreceptor Reflexes of the Carotid and Aortic Sinuses.

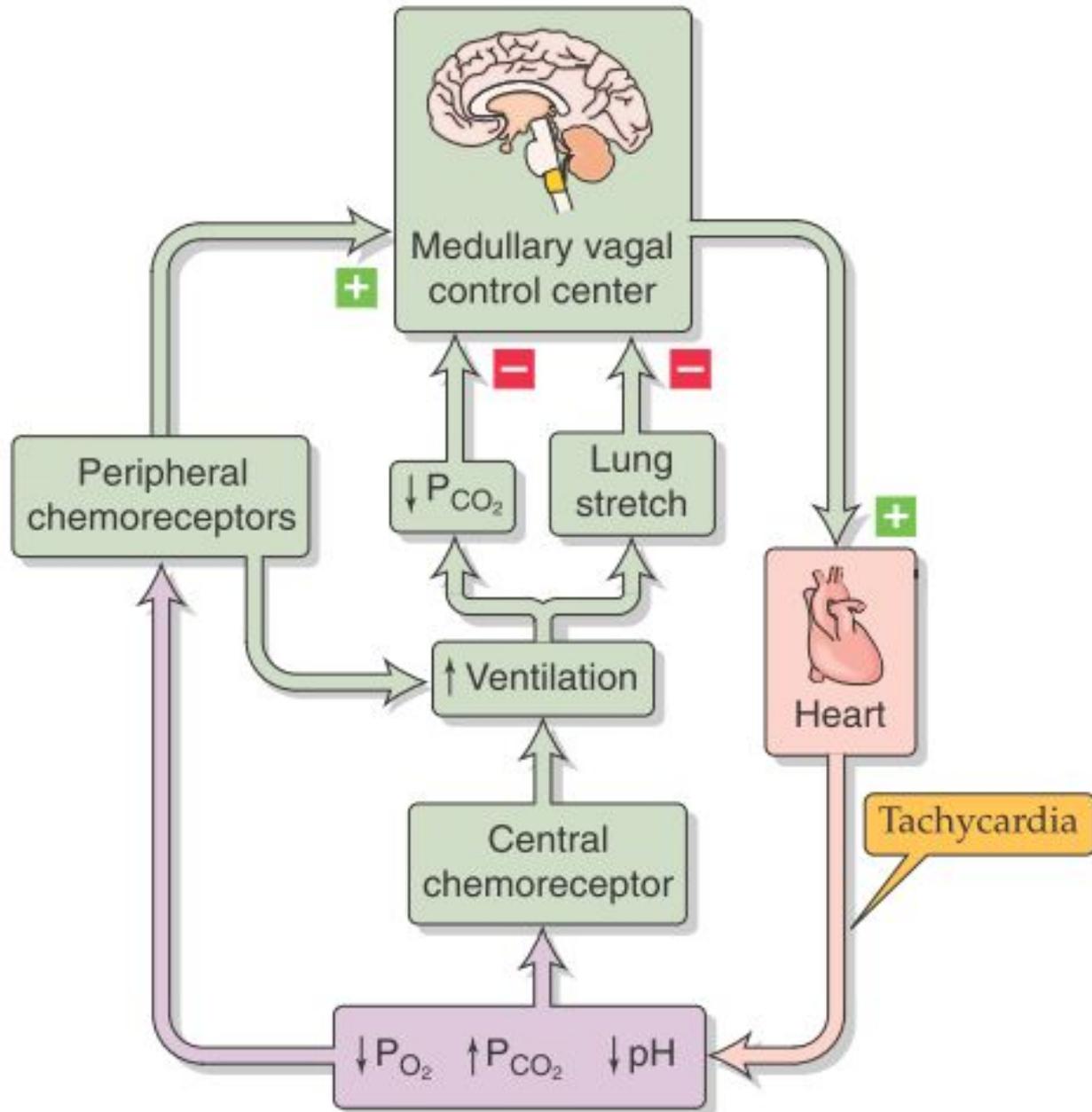


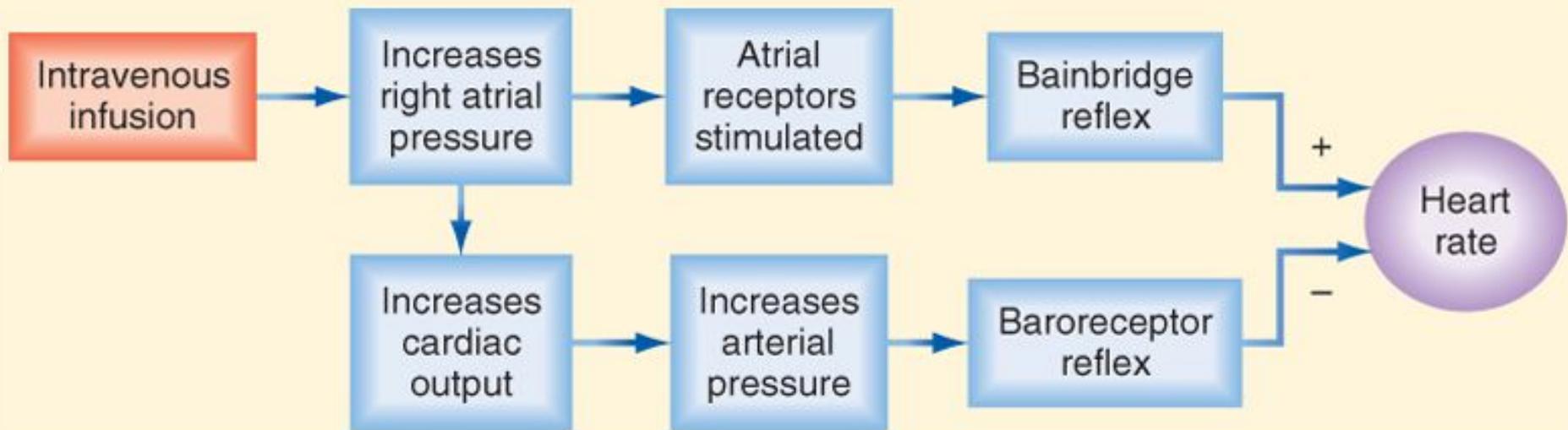


A INTRINSIC CARDIOVASCULAR RESPONSE



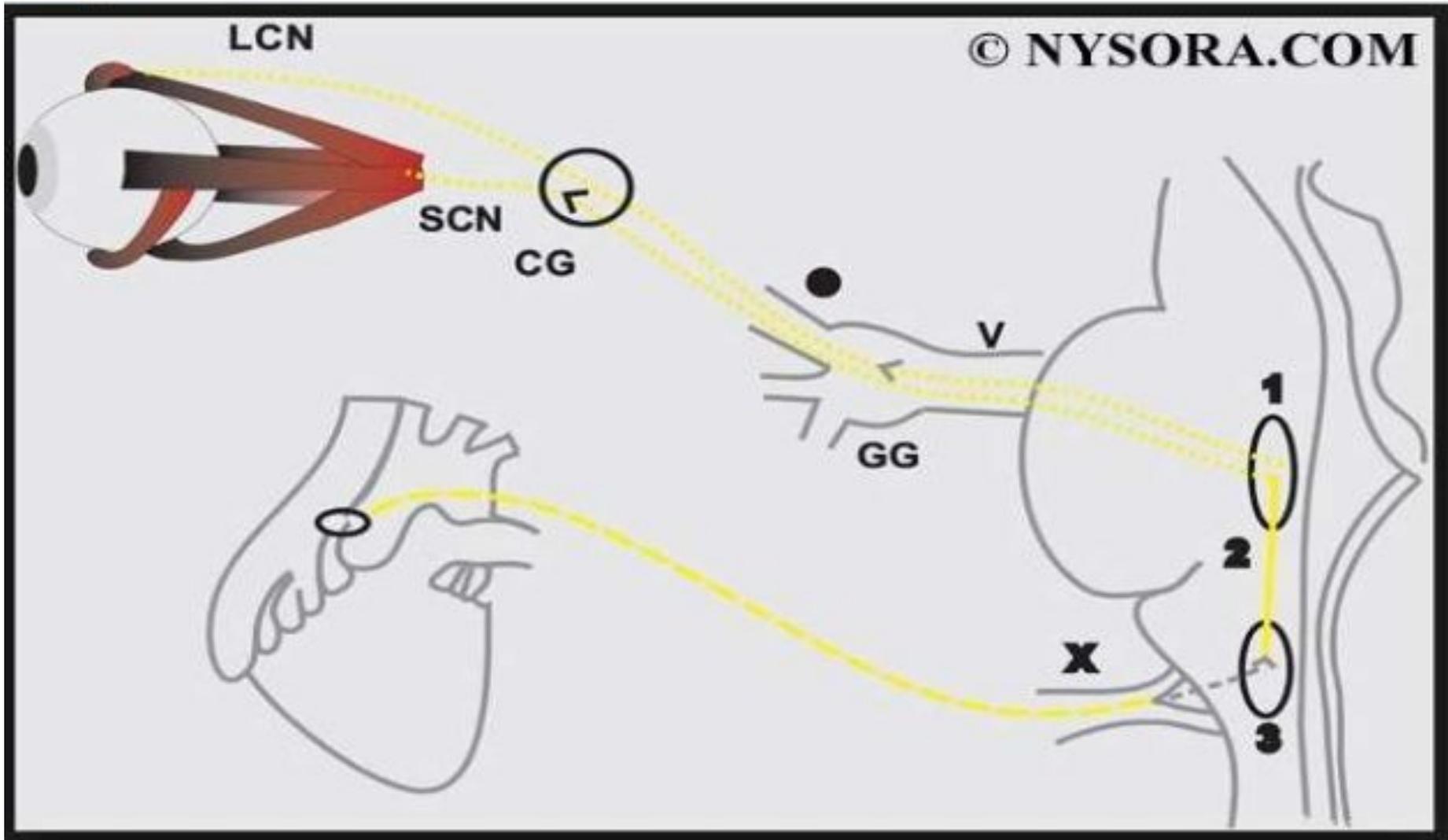
B INTEGRATED RESPONSE





Koepfen & Stanton: Berne and Levy Physiology, 6th Edition.
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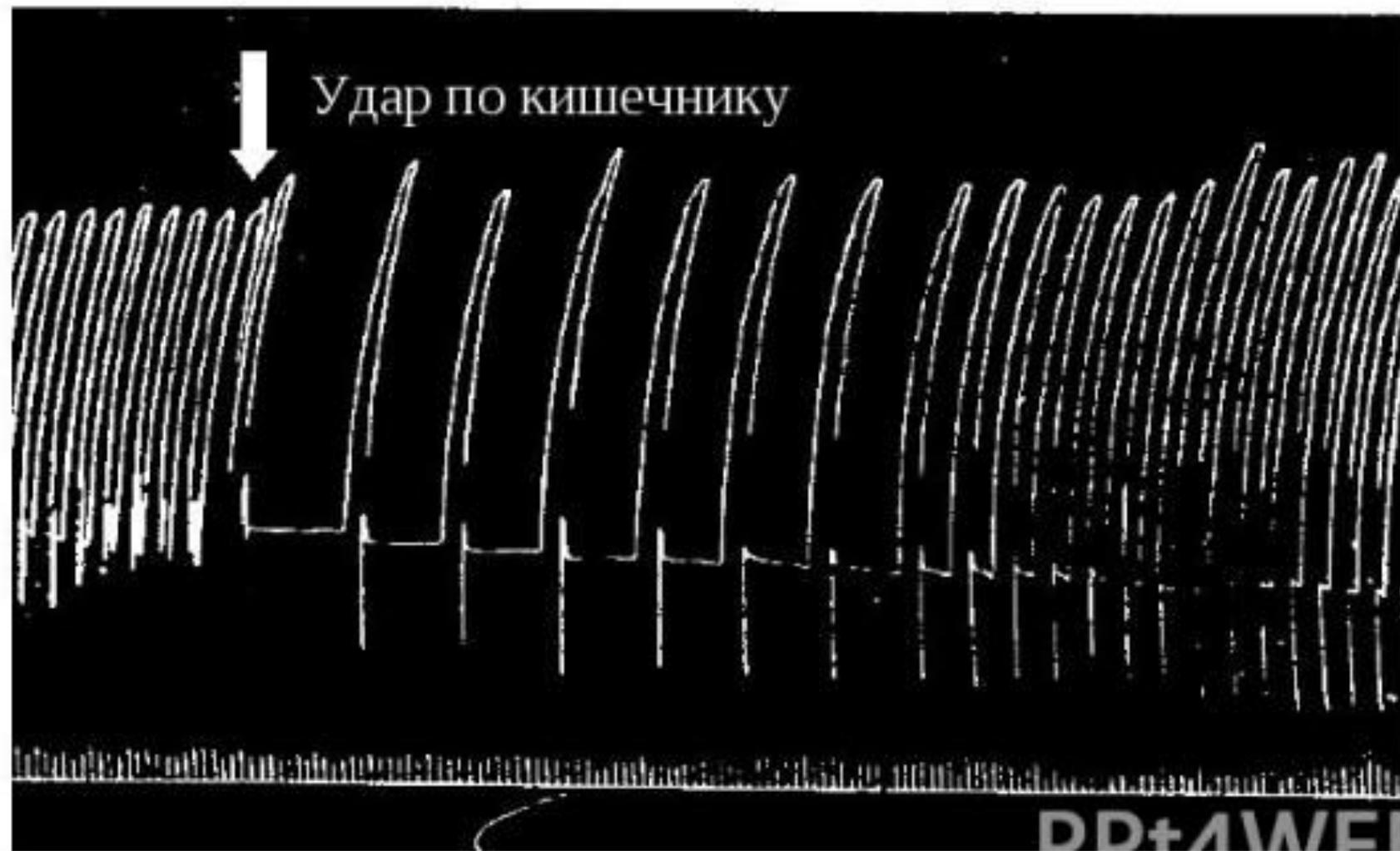
Oculo cardiac reflex



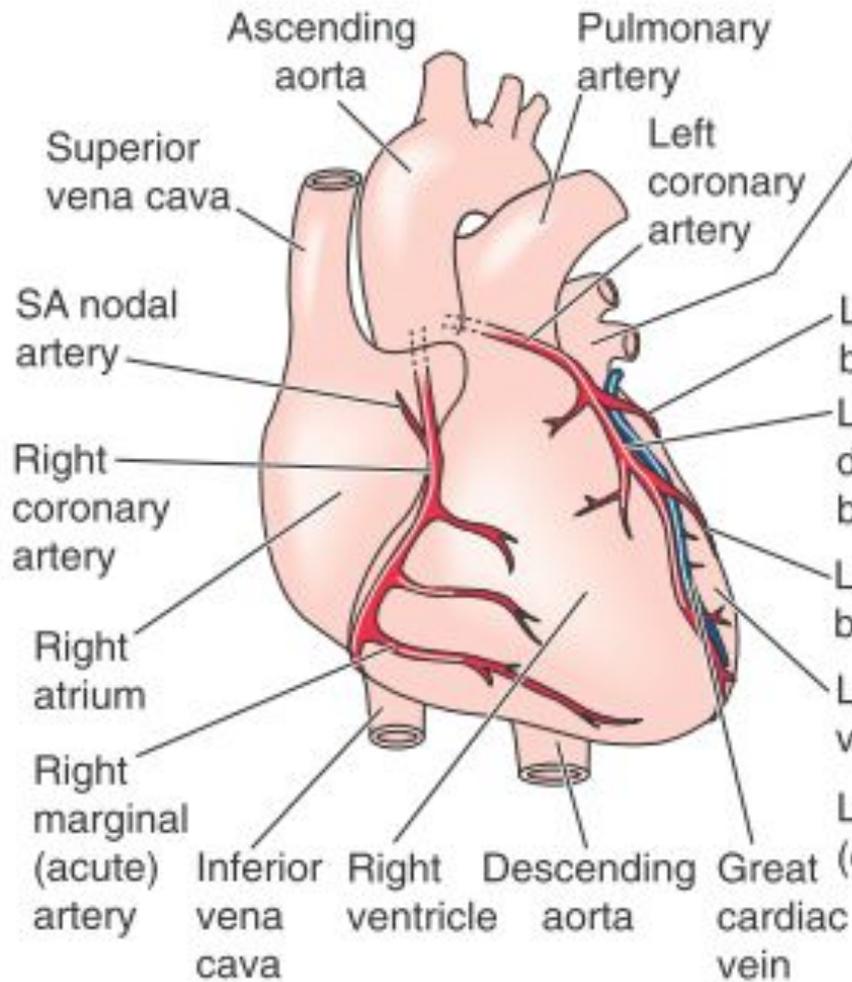
Рефлекс Гольца



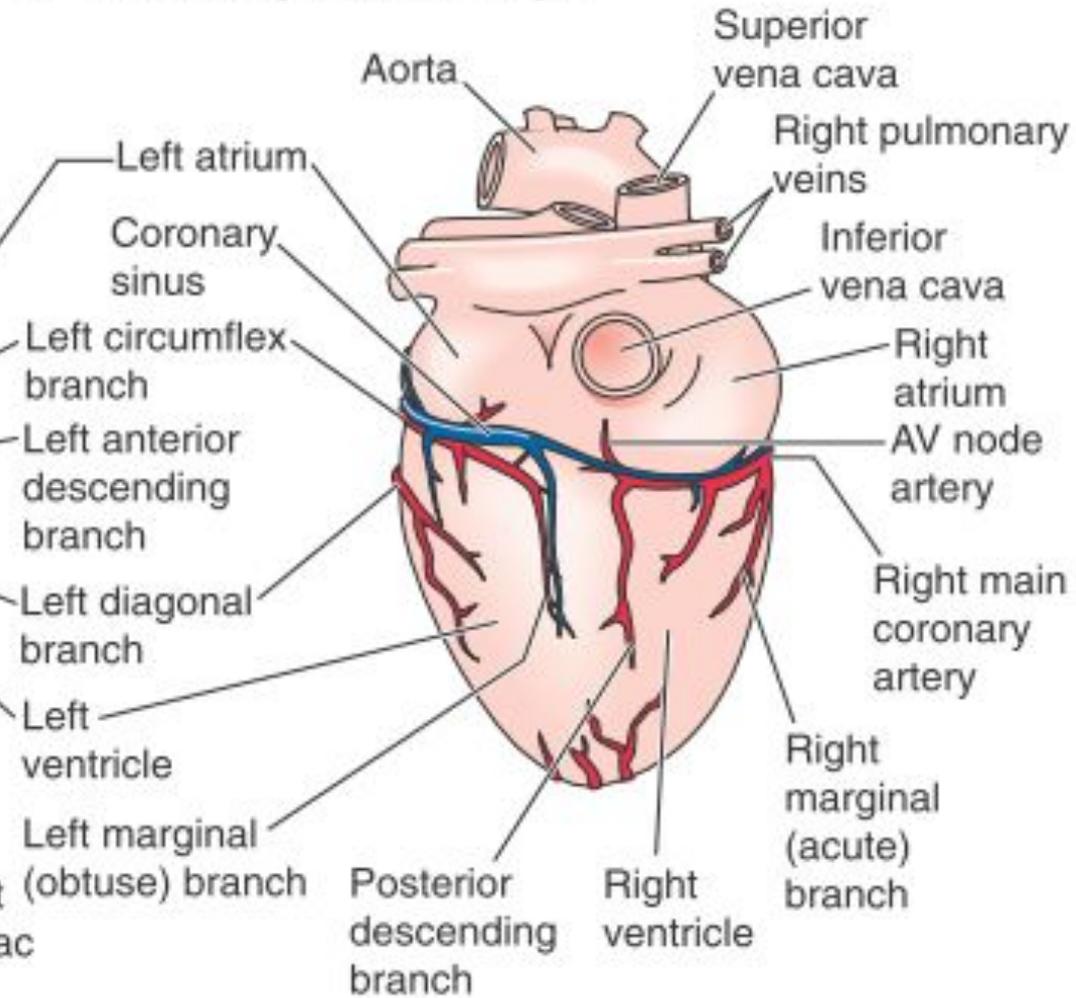
Рефлекс Гольца у лягушки



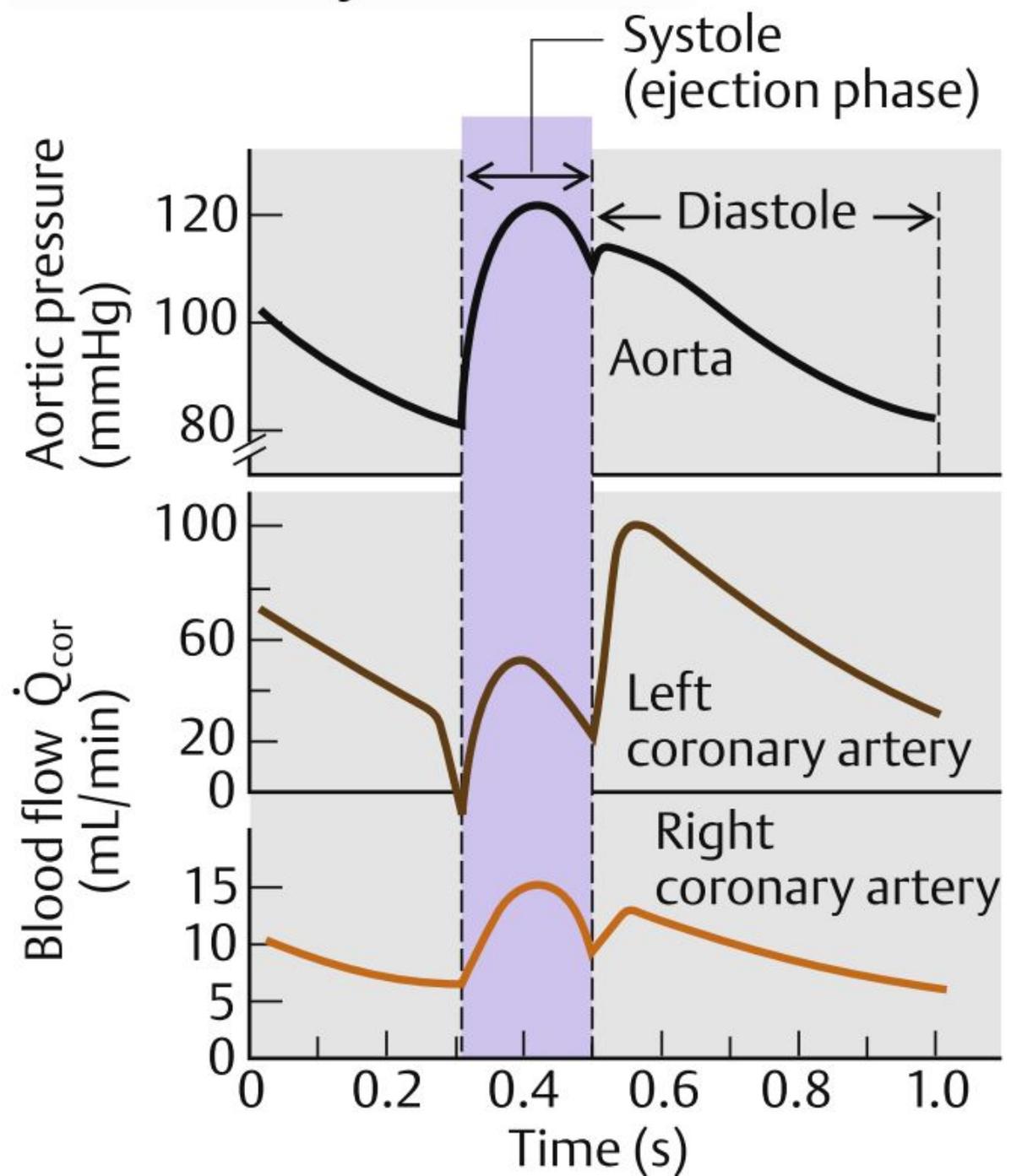
A VIEW FROM FRONT

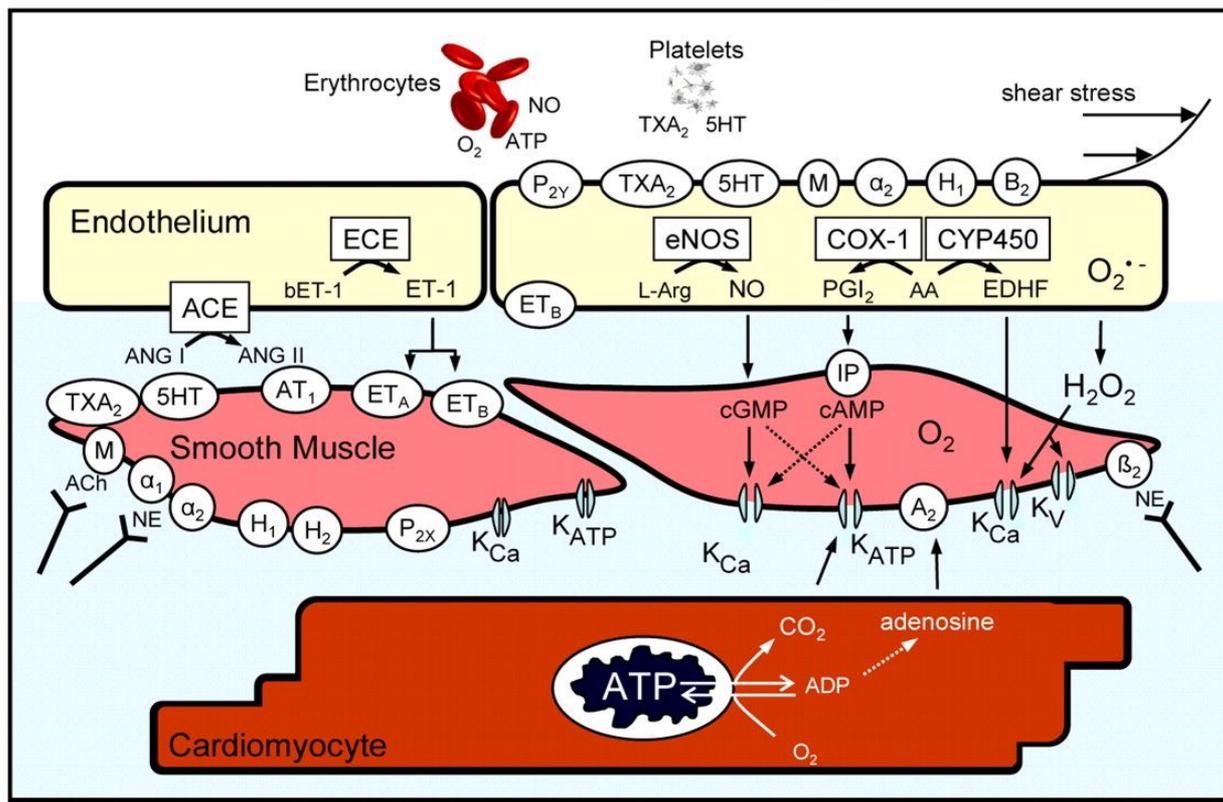
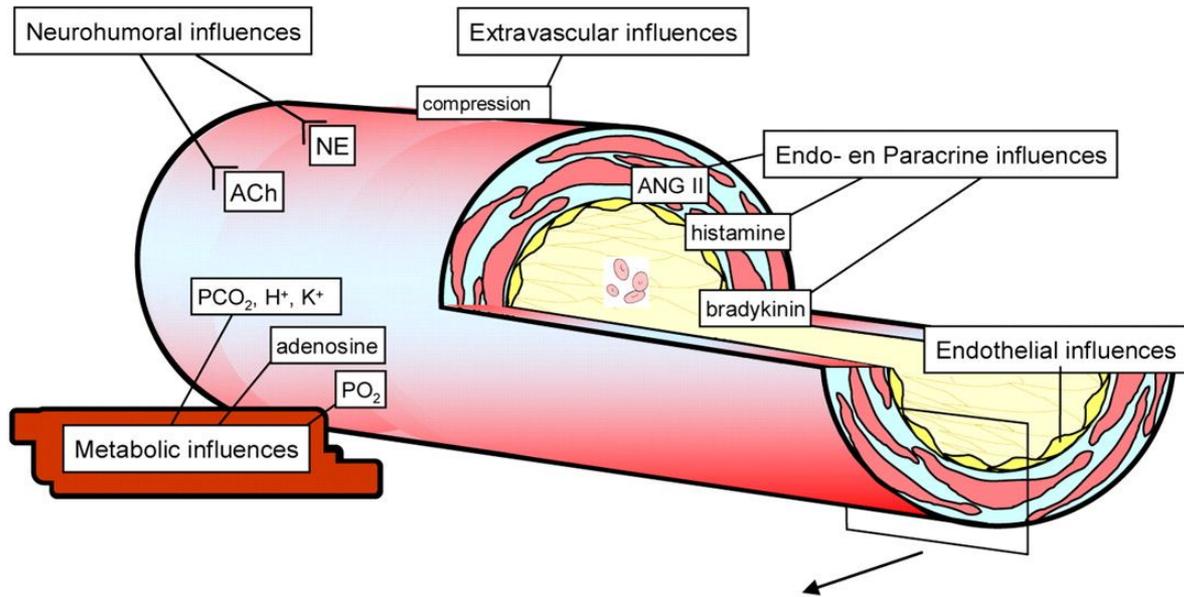


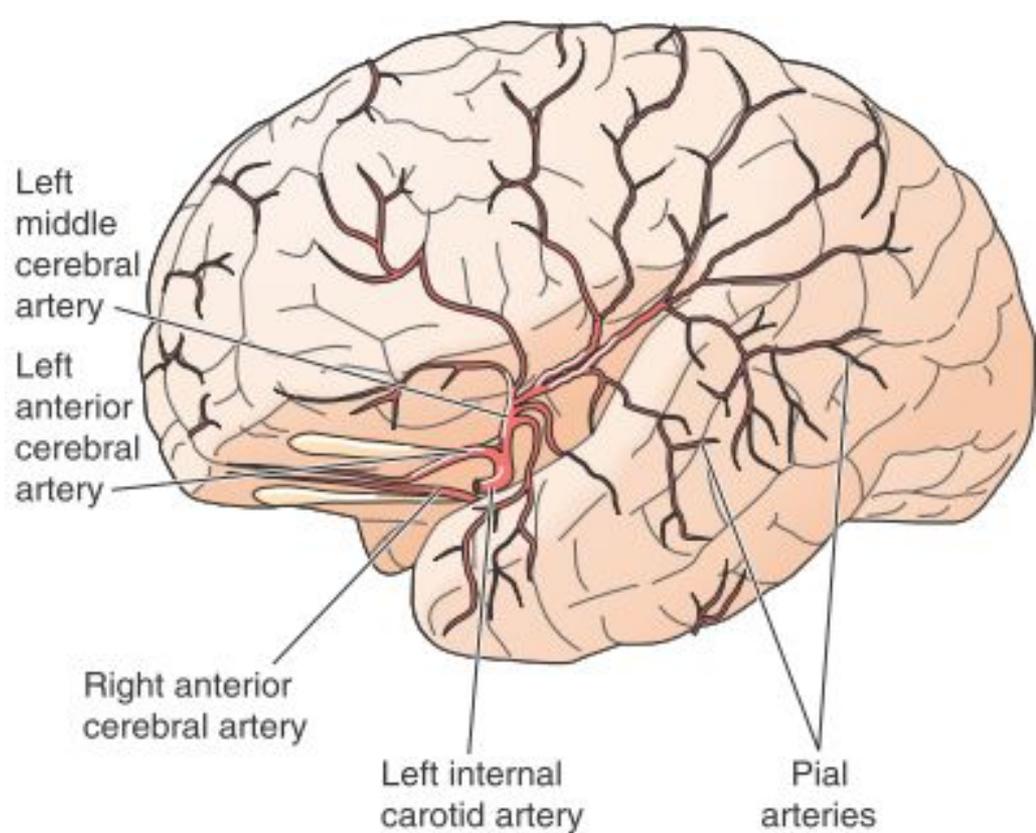
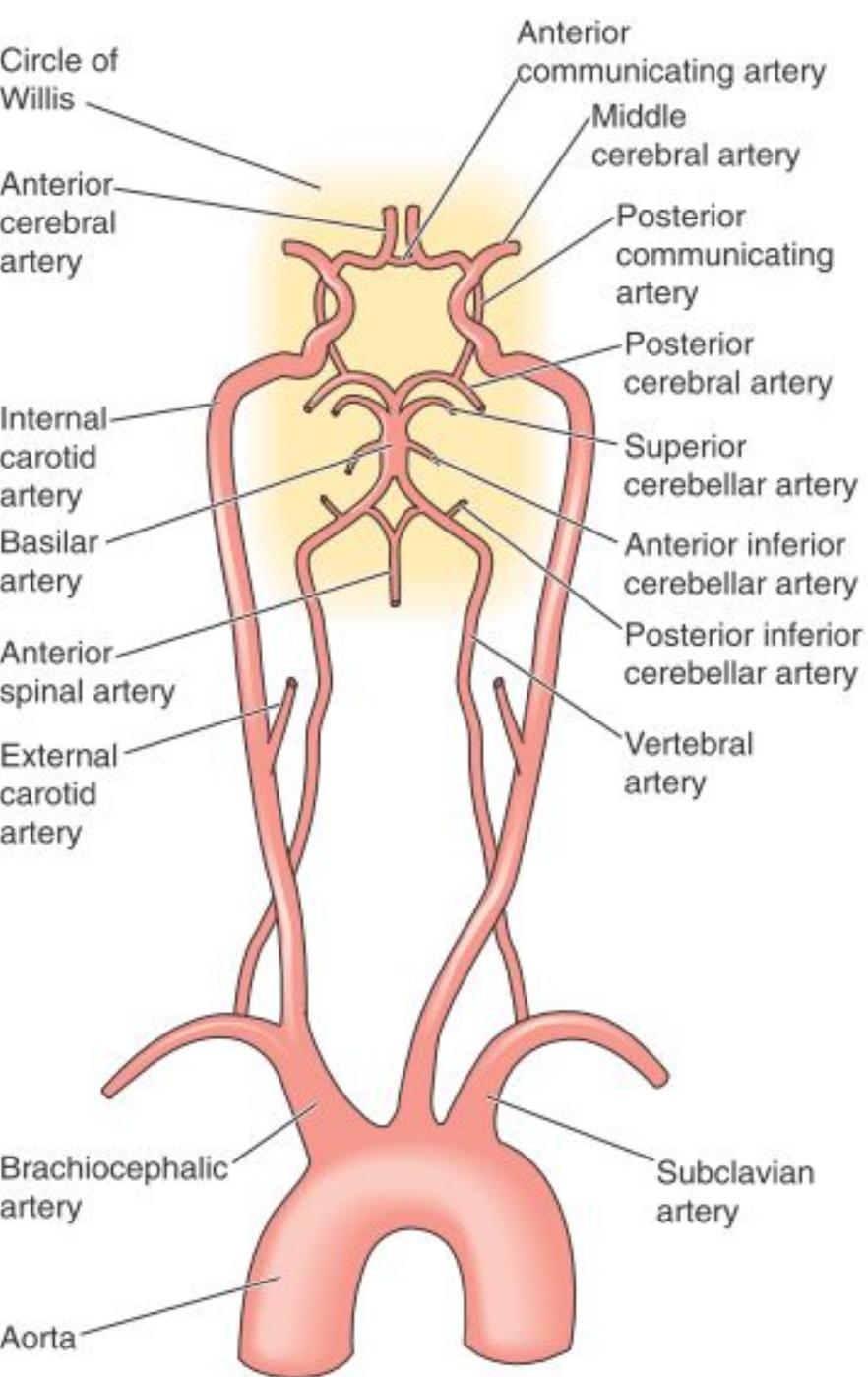
B VIEW FROM DIAPHRAGM

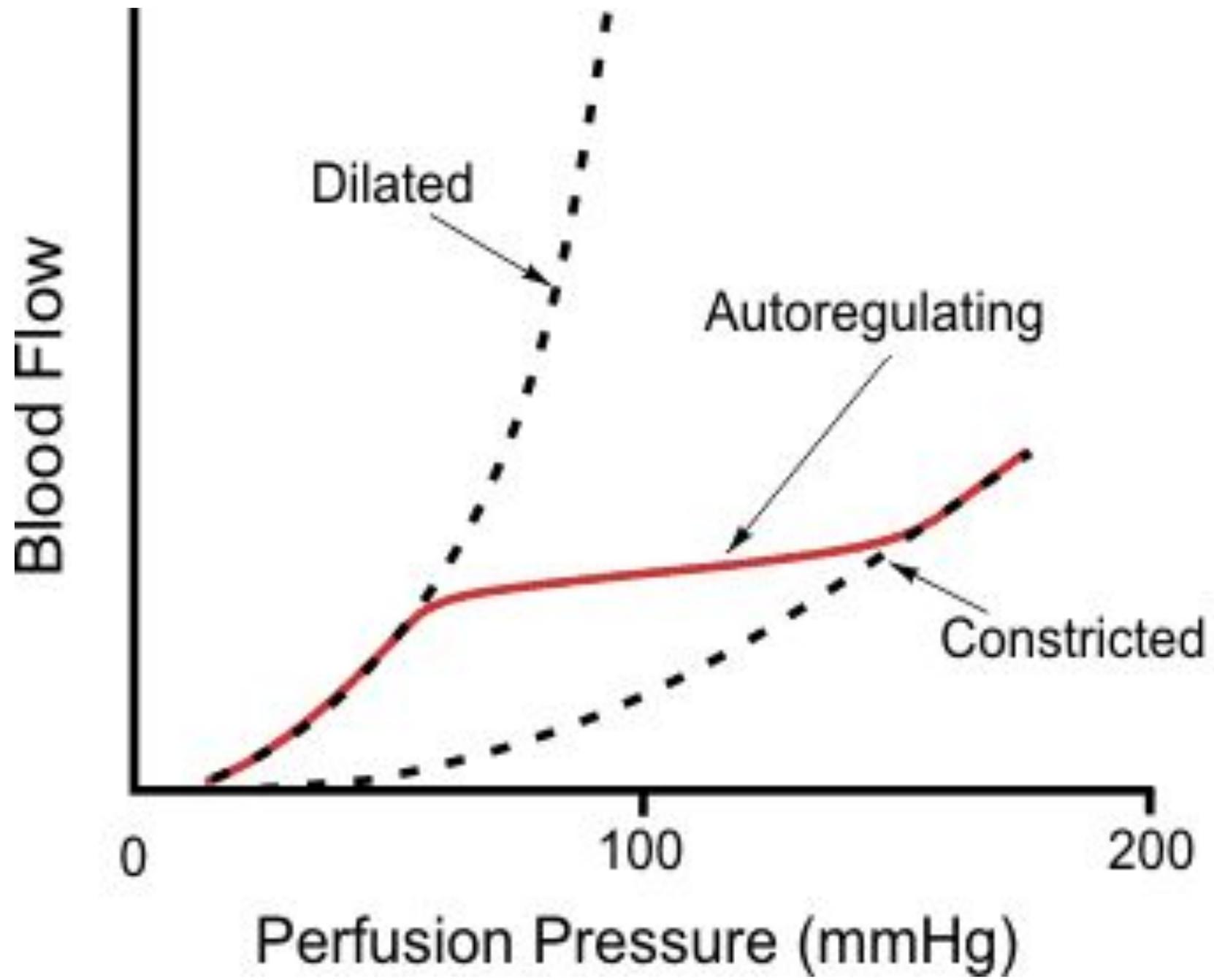


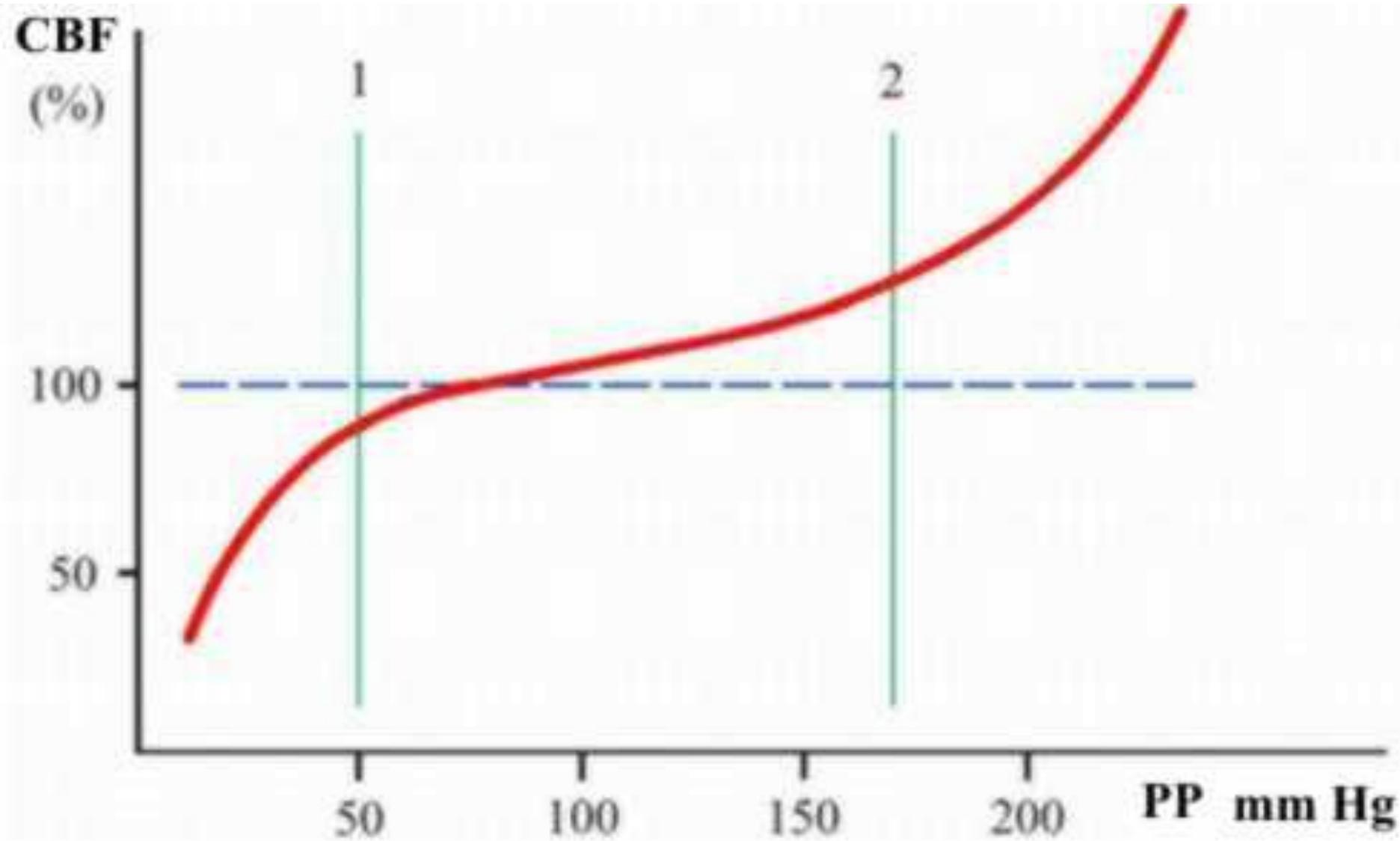
B. Coronary blood flow











HEAD INJURY

Increased intracranial pressure

Pressure on cerebral arteries

CEREBRAL
BLOOD FLOW

BLOOD
PRESSURE

Normal

BARORECEPTOR REFLEX

VAGAL TONE

HEART RATE

Sympathetic tone

CUSHING'S REFLEX

CNS ISCHAEMIA

PO_2 ↓

PCO_2 ↑

Stagnant
hypoxia

(+) SYMPATHETIC

OUTFLOW

