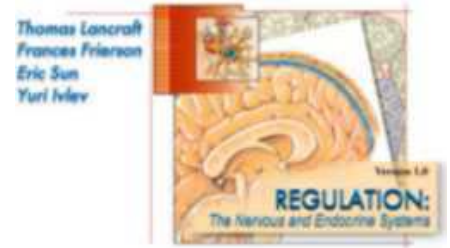


Nervous System: Reflexes

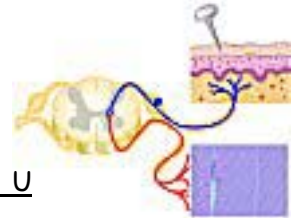


Directions:

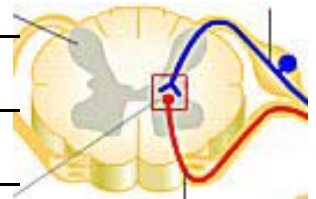
- Insert your *Regulations CD*
- Click the "Contents" button,
- Open the *Nervous System File*,
- Click *Animations*,
- Click *Reflexes*

Introduction

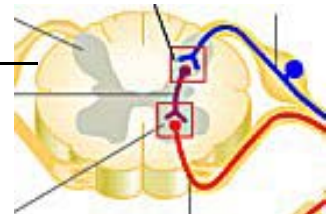
1. Define *somatic reflexes*. _____ U
2. Name the five components of *reflex arcs*. _____



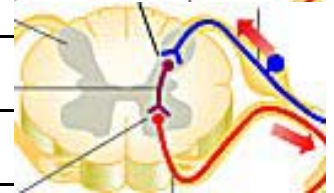
3. Define a *monosynaptic reflex arc*. _____



4. Define a *polysynaptic reflex arc*. _____



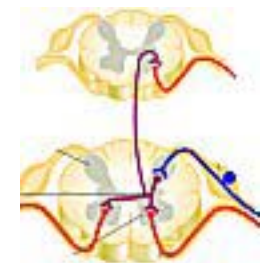
5. Define an *ipsilateral reflex arc*. _____



6. Define a *contralateral reflex arc*. _____



7. Define an *intersegmental reflex arc*. _____



Stretch Reflex



8. Utilizing the terms you just learned, describe a *stretch reflex*. _____

9. Describe the role of the following in a stretch reflex.

Receptors - _____

Sensory neuron - _____

Motor neuron - _____

Inhibitory association neuron - _____

Proprioceptors & Cerebrum - _____

10. Describe *reciprocal innervation*. (This is describe on the CD, but you should check your textbook explanation, too).

11. What is the function of the stretch reflex? _____

Tendon Reflex



12. a. What stimulates tendon reflexes? _____

b. Again, using reflex classification terms you learned earlier, describe tendon reflexes. _____

13. Describe the role of the following in a tendon reflex.

tendon organ receptors - _____

sensory neuron - _____

association neurons - _____

motor neurons - _____

antagonist muscle - _____

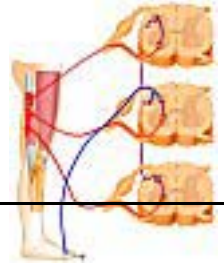
inhibitory association neuron - _____

14. Explain why this is another example of *reciprocal innervation*. _____

15. What is the role of *proprioceptors* with regard to this process? _____

Flexor Reflex

16. Once again, using the reflex classification terms learned earlier, describe *flexor reflexes*.



17. What stimulates flexor reflexes? _____

18. Describe the role of the following flexor reflex components.

receptor - _____

sensory neuron - _____

association neurons - _____

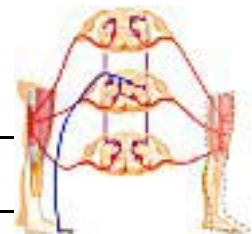
spinal segments - _____

motor neurons - _____

muscles (effectors) - _____

Crossed Extensor Reflex

19. What is the function of *crossed extensor reflexes*? _____



20. One last time, describe crossed extensor reflexes using the reflex classification terminology learned earlier.

21. Describe the role of the following components of a crossed extensor reflex.

pain receptor - _____

sensory neuron - _____

association neurons - _____

spinal segments - _____

motor neurons - _____

muscles - _____

22. a. What makes this reflex *contralateral*? _____

b. How does this maintain balance? _____