Sensory, Motor and Integrative Systems
Receptors

- Exteroceptors – near the body surface
- Interoceptors – in blood vessels, viscera
- Proprioceptors – in muscles, tendons, joints
- Mechanoreceptors – detect pressure
- Thermoreceptors – temperature
- Nociceptors – physical or chemical change
- Photoreceptors – light
- Chemoreceptors – chemicals
- Osmoreceptors – pressure of body fluids
- Baroreceptors – blood pressure
Referred Pain

Liver and gallbladder
Lung and diaphragm
Heart
Pancreas
Stomach
Liver and gallbladder
Gallbladder
Small intestine
Ovary
Kidney
Appendix
Ureter

(a) Anterior view
(b) Posterior view

15.03
Reticular Activating System
Sleep Patterns

(a) EEG waves during sleep stages

(b) Pattern of NREM and REM sleep over one sleep period
Terms

• Learning and Memory
• Paraplegia
• Hemiplegia
• Quadraplegia
• Parkinson’s Disease
• Coma
• Insomnia
• Narcolepsy
• Sleep apnea
• Phantom pain