6.1: Cardiovascular and Renal System Introduction

Learning Objectives

- Cite the classifications and actions of cardiovascular drugs
- Cite the classifications and actions of renal system drugs
- Give examples of when, how, and to whom cardiovascular system drugs may be administered
- Give examples of when, how, and to whom renal system drugs may be administered
- Identify the side effects and special considerations associated with cardiovascular and renal system drug therapy
- Identify considerations and implications of using cardiovascular system medications across the life span
- Identify considerations and implications of using renal system medications across the life span
- Apply evidence-based concepts when using the nursing process
- Identify and interpret related laboratory tests

The heart is the powerhouse of the body, providing oxygenated blood to organs so that they can conduct the vital processes needed to keep the body functioning. Without a properly functioning heart to ensure blood flow, cells are in jeopardy of oxygenation starvation, impairment, and subsequent death.

Did you know that the average adult human heart contracts approximately 108,000 times in one day, more than 39 million times in one year, and nearly 3 billion times during a 75-year lifespan? Each heartbeat ejects approximately 70 mL blood, resulting in 5.25 liters of fluid per minute and approximately 14,000 liters per day. Over one year, that means over 2.6 million gallons of blood are sent through roughly 60,000 miles of vessels in the adult body. It is no wonder that the heart is the most important muscle of the body! This chapter will review important concepts and disorders related to the heart and cardiovascular system before discussing common medication classes. It is vital for nurses to understand...
how these cardiovascular medications work to provide safe, effective care to the patients who take them.

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