

## Chapter 22-Biosynthesis of Amino Acids, Nucleotides, and Related Molecules

### 22.4 Biosynthesis and Degradation of Nucleotides

The following sub-sections are important:

- De Novo Purine Nucleotide Synthesis Begins with PRPP
- Purine Nucleotide Biosynthesis Is Regulated by Feedback Inhibition
- Pyrimidine Nucleotides Are Made from Aspartate, PRPP, and Carbamoyl Phosphate
- Pyrimidine Nucleotide Biosynthesis Is Regulated by Feedback Inhibition
- Nucleoside Monophosphates Are Converted to Nucleoside Triphosphates
- Ribonucleotides Are the Precursors of Deoxyribonucleotides
- Thymidylate Is Derived from dCDP and dUMP
- Degradation of Purines and Pyrimidines Produces Uric Acid and Urea, Respectively
- Purine and Pyrimidine Bases Are Recycled by Salvage Pathways
- Excess Uric Acid Causes Gout
- Many Chemotherapeutic Agents Target Enzymes in Nucleotide Biosynthetic Pathways