

Unit 3: The Urinary System

The screenshot shows the LabXchange library interface. At the top, there is a search bar and navigation links for 'Explore', 'Library', 'Dashboard', and 'Community'. The breadcrumb trail indicates the path: 'Library catalog > Textbook > Anatomy and Physiology'. The main content area features a card for 'The Urinary System' with 9 favorites and 300 views. The description states: 'This pathway provides an in-depth look at physical characteristics of urine, gross anatomy of urine transport, gross anatomy of the kidney, microscopic anatomy of the kidney, physiology of urine formation, tubular reabsorption, regulation of renal blood flow, endocrine regulation of kidney function, regulation...'. A 'more' link is available. The card also shows it was uploaded on March 27, 2020, and lists metadata: Subject (Physiology +1), Language (English), Background Knowledge (Some), and License (Attribution (CC BY 4.0)). An OpenStax logo and a link to 'View original textbook' are present. A 'Start pathway' button is located at the bottom right of the card.

Learning objectives

1. You will describe the composition of urine.
2. You will label structures of the urinary system.
3. You will summarize the roles of each of the parts of the urinary system.
4. You will illustrate the macroscopic and microscopic structures of the kidney.
5. You will describe the flow of blood through the kidney.
6. You will describe how blood is filtered in the kidney nephron.
7. You will describe symptoms of kidney failure.
8. You will list some of the solutes filtered, secreted, and reabsorbed in different parts of the nephron.
9. You will describe the role of a portal system in the kidney.
10. You will explain how urine osmolarity is hormonally regulated.
11. You will describe the regulation of major ions by the kidney.
12. You will summarize the role of the kidneys in maintaining acid–base balance.