

# The Liver: Morphology, Biochemistry, Physiology, Volume 2

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## Physiology of the liver

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### ABSTRACT

In this paper the functions of the liver was summarized which includes firstly, Secretion of bile, the liver assists intestinal digestion by secreting 700 to 1200 ml of bile per day. Bile is an alkaline, bitter-tasting, yellowish green fluid that contains bile salts (conjugated bile acids), cholesterol, bilirubin (a pigment), electrolytes and water. It is formed by hepatocytes and secreted into the canaliculi. Bile salts, which are conjugated bile acids, are required for the intestinal emulsification and absorption of fats. Secondly, Metabolism of bilirubin which is a byproduct of destruction of aged red blood cells and gives bile a greenish black color and produces the yellow tinge of jaundice. Also Vascular and hematologic functions because of its extensive vascular network, the liver can store a large volume of blood. The amount stored at any time depends on pressure relationships in the arteries and veins. Moreover, the liver has hemostatic functions. It synthesizes prothrombin, fibrinogen, and clotting factors. Vitamin K, a fat-soluble vitamin, is essential for the synthesis of other clotting factors. Because bile salts are needed for reabsorption of fats, vitamin K absorption depends on adequate bile production in the liver. Furthermore Metabolism of nutrients, the liver plays essential roles in the metabolism of fat, protein and carbohydrates. Also, Metabolic detoxification, the liver alters exogenous and endogenous chemicals (e.g. drugs), foreign molecules, and hormones to make them less toxic or less biologically active. This process, called metabolic detoxification, diminishes intestinal or renal tubular reabsorption of potentially toxic substances and facilitates their intestinal and renal excretion. In this way alcohol, barbiturates, amphetamines, steroids and hormones (including estrogens, aldosterone, antidiuretic hormone, and testosterone) are metabolized or detoxified, preventing excessive accumulation and adverse effects. Also, Storage of minerals and vitamins, the liver stores certain vitamins and minerals, including iron and copper, in periods of excessive intake and releases them in periods of need. The liver can store vitamins B<sub>12</sub> and D for several months and vitamin A for several years. The liver also stores vitamins E and K. Iron is stored in the liver as ferritin, an iron-protein complex and is released when needed for red blood cell production. Finally, the liver has immunologic functions as the liver contains cells involved in adaptive and innate immunity.

**Keywords:** Liver, Physiology, Functions, Lobule, Hepatocytes.

### INTRODUCTION

The liver is the largest solid organ, the largest gland and one of the most vital organs that functions as a centre for metabolism of nutrients and excretion of waste metabolites [1]. Its primary function is to control the flow and safety of substances absorbed from the digestive system before distribution of these substances to the systemic circulatory system [2]. A total loss of liver function could lead to death within minutes, demonstrating the liver's great importance [3], in view of this, this study was undertaken to review the physiology of the liver with a view to keep it functioning at its optimum and maintaining good health so as to avoid liver

damages such as fatty liver, liver fibrosis and cirrhosis.

### Origin of the Liver

The cells that will eventually make up the adult liver originated during embryogenesis from the ventral foregut definitive endoderm [4]. The different developmental stages of the liver involves establishment of competence for liver formation, after which liver specification, hepatic bud formation, growth and finally differentiation will occur [5]. During the development of the liver, as well as certain duration after partus, the metabolic profile of the young liver is far from that of the adult

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The second volume of this treatise contains 15 chapters and covers a wide range of subjects. An extensive chapter on experimental toxic injury of the liver has. Buy The Liver: Morphology, Biochemistry, Physiology, Volume 2 on artbytheglassllc.com ? FREE SHIPPING on qualified orders. Buy The Liver: Morphology, Biochemistry, Physiology (Volume 2) on Amazon.com ? FREE SHIPPING on qualified orders. The liver: morphology, biochemistry, physiology, Volume 1. Front Cover. Charles The liver: morphology, biochemistry, physiology, Volume 2. Charles Rouiller. The Liver: Morphology, Biochemistry, Physiology, Volume 2. Front Cover. Charles Rouiller. Academic Press, - Liver. The liver: morphology, biochemistry, physiology, Volume 2. Front Cover. Charles Rouiller. Academic Press, - Medical. The Liver: Morphology, Biochemistry, Physiology, Volume I focuses on the advancement of CHAPTER 2 ANATOMY OF THE LIVER. The Liver: Morphology, Biochemistry, Physiology, Volume I and anatomy of the liver, including morphology and physiology of. The Liver: Morphology, Biochemistry, Physiology (Volume 2) () and a great selection of similar New,. Used and Collectible The Liver. Read Online or Download The Liver: Morphology, Biochemistry, Physiology ( Volume 2) PDF. Best Biochemistry books. Handbook of Amylases and Related. The Cell: Biochemistry, Physiology, Morphology, Volume 2. Front Cover. Jean Brachet, Alfred E. Mirsky. Academic Press, - Cells - pages. The Liver: Morphology, Biochemistry, body structure, quantity I makes a Read e -book online Psychophysiology of the Frontal Lobes PDF. The Kidney: Morphology, Biochemistry, and Physiology, Volume IV covers the 2. Renal Effects of Renin and Angiotensin I. Introduction II. Renal Effects of. OMICS International is a scientific organization that drives the progress of research through open access journals Volume 2, Issue 2 download the liver morphology biochemistry within 21 cartographers of the analysis for foundation; Methodology make the foreign engineering Volume always? Latest rights For Sale 3 insulation 2 Bath 18 Aubrey Street, New Plymouth. THE NEW PHYSIOLOGY OF VISION: Chapter XXXII. . Volume 1, Volume 2 by E. N. Willmer (p. . The Liver, Morphology, Biochemistry and Physiology (Vol. 2) . The morphological and functional integrity of the liver is vital to the health of the upon constant maintenance of the numerous biochemical functions of the. of the endoplasmic reticulum in the hepatic parenchymal cell cell: biochemistry, physiology, morphology,. Vol. 5, Part 2. Academic Press, Inc., New. York. IJAPB: Volume: 2; Issue: 1; January Morphology and Histogenesis of developing human liver PHYSIOLOGY AND BIOCHEMISTRY. Full text of "The Cell Biochemistry Physiology Morphology Volume 2" . SRD Biochemistry and Physiology of the Cancer Cell Euane Le Breiov and Y%awe Motle cells and lipid droplets sometimes produced in frozen sections of liver). Buy The Liver: Morphology, Biochemistry, Physiology: Volume 2 by Ch. Rouiller ( ISBN: ) from Amazon's Book Store. Everyday low prices and. 2 Department of Gastroenterology with Endoscopic Unit, Medical University, Biochemical studies indicated that CsA treatment impairs liver function and .. A- induced cardiotoxicity, Journal of Cellular

Physiology, vol. FIG. 1. The lysosome. FIG. 2. Transmission electron microscopy of rat liver showing a range of lysosomes and allow confident morphological identification. Finally. The Cell: Biochemistry, Physiology, Morphology, Volume 2. Jean Brachet, Alfred Ezra Mirsky Snippet view - The cell: biochemistry, physiology, morphology .

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