

**THE URINE, IN HEALTH AND
DISEASE, OR, A SIMPLE
EXPLANATION OF THE PHYSICAL
PROPERTIES, COMPOSITION,
AND USES OF THE URINE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649533893

The Urine, in Health and Disease, or, a Simple Explanation of the Physical Properties, Composition, and Uses of the Urine by Arthur Hill Hassall

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

ARTHUR HILL HASSALL

**THE URINE, IN HEALTH AND
DISEASE, OR, A SIMPLE
EXPLANATION OF THE PHYSICAL
PROPERTIES, COMPOSITION,
AND USES OF THE URINE**

THE URINE,
IN HEALTH AND DISEASE.

THE URINE,
IN HEALTH AND DISEASE;

OR,

A Simple Explanation

OF

THE PHYSICAL PROPERTIES, COMPOSITION, AND USES
OF THE URINE,

OF

THE FUNCTIONS OF THE KIDNEYS,

AND OF

THE TREATMENT OF URINARY DISORDERS.

WITH ENGRAVINGS.

BY

ARTHUR HILL HASSALL, M.D.,

AUTHOR OF "A PRACTICAL COURSE OF LECTURES ON URINARY DISORDERS, EMBRACING THEIR DIAGNOSIS
AND TREATMENT"; OF "VARIABLES IN URINE: THEIR CHEMISTRY AND PATHOLOGY OF
THE URINE"; "URINE AND ITS DISORDERS, ETC. ETC. ETC."



LONDON:

JOHN CHURCHILL, NEW BURLINGTON STREET.

MDCCLXIX.

B

H35
1859

PREFACE.

THE object of this little work is, to afford an explanation, as simple as possible, free from all unnecessary detail and complication, of the physical properties, composition, and uses of the urine; of the functions of the kidneys; and, more especially, of the principles of treatment of the chief urinary disorders.

By its means, it is hoped that the student and practitioner will be enabled, with little application or chemical knowledge, to become acquainted with the chief facts, scientific and practical, connected with the urine. This result is one of some importance; for it is certain that the great majority of medical men neglect to acquaint themselves with this class of diseases—being frequently deterred by the elaborate

manner in which the subject is treated, and, especially, by the extent of the chemical inquiries and reasonings intermixed with it.

Larger and more elaborate works are, undoubtedly, of great value, but are less suited for the student or general practitioner, who merely desires to acquaint himself with the chief facts connected with the subject.

74, WIMPOLE STREET,
CAVENDISH SQUARE.

November 22nd, 1858.

CONTENTS.

CHAPTER I.

Utility of works descriptive of the functions of organs, page 1; Intimate functional connexion between the skin and kidneys, 2; Functions of the skin and of the kidneys described, 4; Composition of the perspiratory fluid; Quantity and solid constituents of, 5; Importance of functions of the skin, 6; Mr. Wilson's calculations, 6; Composition of the urine, 7; Classification of constituents, 8; Sources of the chief constituents of healthy urine, 8; Sources of the principal abnormal constituents, 11; Anatomy of the kidneys, 13.

CHAPTER II.

Physical properties of the urine, page 15; Its quantity, and causes of variation of, 15; Estimation of the quantity of urine voided, 17; Density, and causes of variation of, 17; Estimation of the solids of the urine, 18; Reaction, and causes of variation of, 22; Colour, and causes of variation of, 25; Smell, 25; Characters of the urine in health, 28.

CHAPTER III.

Deposits occurring in urine, page 29; Excess of urea, 29; Creatine, 30; Creatinine, 30; Hippuric acid, 30; Sugar, 30; Albumen, 31; Classification of deposits, 31; Uric acid deposits and urates, 32; Cystine, 32; Deposits of phosphates, 33; Triple phosphate of ammonia and magnesia, 33; Bibasic phosphate of ammonia and magnesia, 33; Phosphate of magnesia, 33; Phosphate of lime, 33; Carbonate of lime, 33; Oxalate of lime, 34; Kieselstein, 34; Organized deposits, 34; Mucus, 35; Pus, 36; Blood, 36; Seminal fluid, 36; Epithelial scales and tubes of the kidneys, 37; Renal casts, 37; Sugar fungus, 37.

CHAPTER IV.

Practical facts and conclusions deducible from a knowledge of the functions of the kidneys and of the composition of the urine, page 38; Recapitulation of the functions of the kidneys and uses of the urine, 38; Increased frequency of diseases of the kidneys, 41; Causes of this increase, 41; On the preservation of the functions of the kidneys in a natural and healthy condition, 45; Necessity of attention to the skin, air, exercise, suitable clothing, bathing, and friction, 45; Necessity of attention to the quantity and nature of the fluids consumed, 48; Necessity of attention to the composition of the urine, and the state of the system as affecting the quantity of the urine, 49; Indications of treatment afforded by the density of the urine, 50; Indications of treatment afforded by the reaction of the urine, 50; Indications afforded by the colour of the urine, 51.

CHAPTER V.

Principles of treatment of the chief urinary constituents and deposits, page 54; Treatment of excess and deficiency of urea, 54; Treatment of excess of creatine and creatinine, 56; Treatment of hippuric acid, 56; Treatment of sugar, or diabetes, 58; Treatment of albumen, 60; Treatment of uric acid deposits, 62; Treatment of deposits of cystine, 64; Treatment of deposits of the earthy phosphates, 65; Treatment of deposits of carbonate of lime, 67; Treatment of deposits of oxalate of lime, 68; Organized deposits, 70; Treatment of mucus, 70; Treatment of pus, 70; Treatment of blood, 71; On seminal fluid in the urine, and on the treatment of spermatorrhoea, 73; On the medical treatment and diagnosis of stone in the bladder, 76.

THE URINE, IN HEALTH AND DISEASE.

CHAPTER I.

Utility of works descriptive of the functions of organs—Intimate functional connexion between the skin and kidneys—Functions of the skin and of the kidneys described—Composition of the perspiratory fluid; quantity and solid constituents of—Importance of functions of the skin—Mr. Wilson's calculations—Composition of the urine—Classification of constituents—Sources of the chief constituents of healthy urine—Sources of the principal abnormal constituents—Anatomy of the kidneys.

UTILITY OF WORKS DESCRIPTIVE OF THE FUNCTIONS OF ORGANS.

No medical or physiological writings have been productive of greater service to mankind than those which treat of the functions of the human body. We would refer, in particular, in support of this statement, to the benefits which have ensued from the publication of essays and treatises on the functions of the lungs and on those of the skin.

Not many years since, prior to the writings of Combe and Wilson, the mass of the people were in nearly total