

SCHOOL AND INDUSTRIAL HYGIENE

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649544103

School and Industrial Hygiene by D. F. Lincoln

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

D. F. LINCOLN

**SCHOOL AND
INDUSTRIAL
HYGIENE**

The American Health Primers.

EDITED BY W. W. KEEN, M. D.,

Fellow of the College of Physicians of Philadelphia.

This series of American Health Primers is prepared to diffuse as widely and cheaply as possible, among all classes, a knowledge of the elementary facts of Preventive Medicine, and the bearings and applications of the latest and best researches in every branch of Medical and Hygienic Science. They are intended to teach people the principles of Health, and how to take care of themselves, their children, pupils, employees, etc.

Handsome Cloth Binding, 50 cents, each.

Sent, postpaid, upon receipt of price, or may be obtained from any bookstore.

HEARING, AND HOW TO KEEP IT. With Illustrations. By CHAS. H. BURNETT, M. D., Aurist to the Presbyterian Hospital, Professor in the Philadelphia Polyclinic.

LONG LIFE, AND HOW TO REACH IT. By J. G. RICHARDSON, M. D., Professor of Hygiene in the University of Pennsylvania.

THE SUMMER, AND ITS DISEASES. By JAMES C. WILSON, M. D., Lecturer on Physical Diagnosis in Jefferson Medical College.

EYESIGHT, AND HOW TO CARE FOR IT. With Illustrations. By GEO. C. HARLAN, M. D., Surgeon to the Wills (Eye) Hospital, and to the Eye and Ear Department, Pennsylvania Hospital.

THE THROAT AND THE VOICE. With Illustrations. By J. SOLES COHEN, M. D., Lecturer on Diseases of the Throat in Jefferson Medical College, Philadelphia, etc.

THE WINTER, AND ITS DANGERS. By HAMILTON OSGOOD, M. D., of Boston, Editorial Staff *Boston Medical and Surgical Journal*.

THE MOUTH AND THE TETH. With Illustrations. By J. W. WHITE, M. D., D. D. S., of Philadelphia, Editor of the *Dental Cosmos*.

BRAIN WORK AND OVERWORK. By H. C. WOOD, JR., M. D., Clinical Professor of Nervous Diseases in the University of Pennsylvania.

OUR HOMES. With Illustrations. By HENRY HARTSHORNE, M. D., of Philadelphia, formerly Professor of Hygiene in the University of Pennsylvania.

THE SKIN IN HEALTH AND DISEASE. By L. D. BULKLEY, M. D., of New York, Physician to the Skin Department of the Dermitt Dispensary and of the New York Hospital.

SEA AIR AND SEA BATHING. By JOHN H. PACKARD, M. D., of Philadelphia, Surgeon to the Pennsylvania and to St. Joseph's Hospitals.

SCHOOL AND INDUSTRIAL HYGIENE. By D. F. LINCOLN, M. D., of Boston, Chairman Department of Health, American Social Science Association

"Each Volume of the 'American Health Primers' *The Inter-Ocean* has had the pleasure to commend. In their practical teachings, learning, and sound sense, these volumes are worthy of all the compliments they have received. They teach what every man and woman should know, and yet what nine-tenths of the intelligent classes are ignorant of, or at best, have a scattering knowledge of."—*Chicago Inter-Ocean*.

"The series of American Health Primers deserves hearty commendation. These handbooks of practical suggestion are prepared by men whose professional competence is beyond question, and for the most part, by those who have made the subject treated the specific study of their lives."

SCHOOL AND INDUSTRIAL
HYGIENE.

BY

D. F. LINCOLN, M.D.,

Chairman Department of Health, Social Science Association.

PHILADELPHIA:
P. BLAKISTON, SON & CO.,
No. 1012 WALNUT STREET.
1896.

K-LB3405
L63
Biol
Lulu

131

CONTENTS.

PART I.—SCHOOL HYGIENE.

CHAPTER.	PAGE
I.—GENERAL REMARKS	7
II.—EMOTIONAL AND MENTAL STRAIN	14
III.—FOOD AND SLEEP	19
IV.—BODILY GROWTH	24
V.—AMOUNT OF STUDY	28
VI.—EXERCISE	34
VII.—CARE OF THE EYES	48
VIII.—SCHOOL-DESKS AND SEATS	64
IX.—A MODEL SCHOOL-ROOM	79
X.—VENTILATION AND HEATING	85
XI.—SITE, DRAINAGE, ETC.	94

M354613

CHAPTER.	PAGE
XII.—PRIVATE SCHOOLS	98
XIII.—COLLEGES	102
XIV.—CONTAGIOUS DISEASE	105

PART II.—INDUSTRIAL HYGIENE.

I.—INJURIOUS EFFECTS OF INHALING DUSTY AND POISONOUS SUBSTANCES	107
II.—INJURIES FROM ATMOSPHERIC CHANGES	120
III.—INJURIES FROM OVER-USE OF CERTAIN OR- GANS	127
IV.—INJURIES FROM ACCIDENTS	133
V.—REGULATION OF HOURS OF LABOR	136
VI.—DURATION OF LIFE IN VARIOUS OCCUPA- TIONS	142
NOTE	145
INDEX	146

School and Industrial Hygiene.

PART I. SCHOOL HYGIENE.

CHAPTER I.

GENERAL REMARKS.

THE period at which we live is witnessing great changes in the theory and practice of education, from the lowest to the highest grades. The nature of the child's mind has been studied, his powers gauged, and his growth measured by a Pestalozzi, a Froebel, a Combe, a Chadwick, a Bowditch. Everybody knows that children do not like to sit still long at a time; that their minds easily wander; that they have an instinctive dislike to certain studies. This restlessness of mind and body, this dislike to certain mental foods, were regarded by the old masters as simply undesirable elements in character, to be curbed and chained, and overcome by force of dis-

cipline. The modern tendency is in a very different direction; it studies the natural behavior of children, and deduces from multiplied observations certain laws regarding their natural powers and aptitudes, to which all educational processes are subordinated.

To some extent the old masters were right; curbs have their use, and "old-fashioned" hard work ought not to be forgotten. Nor is the newer education free from grave faults of its own; or let us rather say, that right principles are not yet fully adopted by all. A great many teachers have found that emulation is a more than effectual substitute for the rod. This is one of the most characteristic of modern improvements; but its potency has no sooner been discovered than it is abused, and many a promising child, within the past thirty years, has wrecked his physical endurance for life, or has permanently enfeebled his mind by excess of study performed under the spur of emulation or an unregulated sense of duty.

No theory of education is satisfactory that does not claim the whole child. The State must leave a great many things to the parents in education; but it is her duty to attend to such things as parents cannot be made to attend to. Religion is a thing which the State does not try to teach, assuming that parents and churches can more safely attend to it; but morality must be taught at school. All schools assume

the immorality of falsehood and brutality, and the paramount obligation to perform school-tasks. It would be easy to take classes of ignorant, poor children, before they reach the age of street ruffians (which so many become after leaving the public school), and not only to show them, but to convince them of the necessity for truth, peaceable behavior, and respect for law, and of the necessary connection between duty or work performed and the prosperity of one and all.* In our public schools, I think this is hardly attempted. And yet, setting aside the moral, and assuming the sanitarian, ground as our sole basis, it is assuredly true that these branches of morals, and others that might be named, as punctuality, cleanliness, politeness, and faithfulness to engagements, are not things which can be neglected.

Again: the food and sleep of the child are mainly beyond the control of public schools. They are not wholly so, however; and it is a teacher's duty to discourage working in improper hours. Still more imperatively is it his duty to regulate the child's needs in school-time, to see if he is faint from want of food, to encourage and teach good habits, and to give opportunity for bodily exercise.

No lower aim should content the child's teacher than that of improving all his faculties and powers—

* For admirable illustrations of this kind of teaching, see George Combe's "Education," edited by Wm. Jolly, 1879.