Nestlé Nutrition Workshop Series Volume 4
IRON NUTRITION
IN INFANCY AND CHILDHOOD
Iron deficiency is a widespread condition affecting hundreds of millions of people throughout the world. Although poorer populations suffer most, lack of iron remains one of the few nutritional deficiencies prevalent in affluent societies.

Severe iron deficiency is easy to recognize, and its effects on health have long been appreciated. However, as is true of other nutritional deficiencies, the milder forms are the most prevalent and difficult to diagnose. The negative effects on health of marginal iron deficiency, if any, have so far escaped a precise definition.

Infants, children, and women of childbearing age are the groups most affected by this condition. The focus of this book is on iron nutrition in infancy, an area in which considerable progress in our knowledge has been made in recent years. New laboratory techniques and the refinement of older methods have facilitated diagnosis of iron deficiency in individuals and populations. Developmental changes, not only in hemoglobin concentration but in other laboratory parameters, are now recognized. However, interpretation of results obtained with these new techniques is not always easy, and the precise diagnosis of mild iron deficiency is still difficult to establish.

Our understanding of factors affecting the availability of dietary iron has progressed steadily. The role of breast milk iron in the nutrition of the young infant is now well defined, and a better comprehension of the way infants absorb this iron may shed important light on factors determining dietary iron absorption.

Iron deficiency develops almost universally in low-birth-weight infants if preventive measures are not taken. The increasing survival rate of these infants, particularly very-low-birth-weight infants, is uncovering new problems and interesting new knowledge in this area of nutrition.

In recent years, international agencies and other groups have shown renewed interest in attacking the problem of iron deficiency. At the same time, the factors that determine dietary iron absorption have been better defined, resulting in new and more successful strategies for preventing iron deficiency. Food fortification has gained a central status among these strategies as technological advances have improved the absorbability and bioavailability of dietary supplements.

The recent interest in the health consequences of iron deficiency and the new information that has been generated hold great promise. However, much remains to be learned. The considerable costs of detecting and preventing the milder forms of this deficiency demand a rational basis for intervention. To make these decisions wisely, nutritionists and physicians need a more precise definition of the effects of iron deficiency on health. New knowledge of the kind presented in this volume undoubtedly will influence these decisions in the future.
This volume will be of interest to pediatricians, obstetricians, internists, and general practitioners, as well as specialists in nutrition and epidemiology.

I would like to express my gratitude to Professor Florentino S. Solon and the Nutrition Center of the Philippines, who were our hosts, and Nestlé Nutrition S.A., who initiated and made possible the development of this volume as part of the Nestlé Nutrition Workshop Series.

ABRAHAM STEKEL, M.D.
Foreword

The importance of iron deficiency in infancy and childhood is now well recognized. Methods of diagnosis and treatment are discussed in this fourth book in the *Nestlé Nutrition Workshop Series*. The key to prevention of iron deficiency in infancy begins with an adequate diet for pregnant and breast-feeding mothers. The food industry has a role to play in ensuring an adequate iron supply for children who are not breast-fed and for breast-fed children during the weaning period. Many technological advances have been made in the recent past, and work is under way to improve the absorbability of added iron in prepared foods. We hope that this volume will prove helpful to our colleagues confronted with this very widespread deficiency.

Among the many people responsible for making the meeting on which this book is based a success, I would especially like to thank Professor Florentino S. Solon of the Nutrition Center of the Philippines.


Pierre R. Guesry, M.D.
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