

The Complete Book of Vitamins

by the Staff of
Prevention
Magazine

图书情报

31

The Complete Book of VITAMINS

By the Staff of Prevention® magazine

Compiled and Prepared by:

① **Charles Gerras**
Executive Editor

Joseph Golant

E. John Hanna
Senior Editors



Rodale Press Emmaus PA

Copyright © 1977 Rodale Press, Inc.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without the written permission of the Publisher.

Library of Congress Cataloging in Publication Data

Main entry under title:

The complete book of vitamins.

Includes index.

1. Vitamin therapy. 2. Vitamins. I. Gerras, Charles. II. Golant, Joseph. III. Hanna, E. John. IV. Prevention.

RM259.C65 613.2'8 77-1280

ISBN 0-87857-176-0 hardcover

Printed in the United States of America on recycled paper

Table of Contents

BOOK I—VITAMINS IN YOUR DAILY LIFE

1. Vitamins: What They Are and What They Do	3
2. Why We Need Vitamin Supplements	6
3. There's Nothing Average About <i>Your Vitamin Needs</i>	13
4. Spotting Vitamin Deficiencies in the Elderly	19
5. Food Enrichment: Fact and Fallacy	25
6. How to Read Your Vitamin Label	31
7. Guidelines for Choosing a Vitamin Supplement	38
8. Vitamin Antagonists	49
9. Nutritional Freedom: Can the Government Limit Your Vitamin Intake?	53
10. Why Are Vitamins a Touchy Topic in the Doctor's Office?	62
11. Three Approaches to Vitamin Use	67
12. Good Nutrition for the Good Life	77
13. An Important New Theory on Why Extra Vitamins Provide Happy Surprises	90

BOOK II—A GUIDE TO THE INDIVIDUAL VITAMINS

Vitamin A

14. Vitamin A: The Growth Vitamin	99
15. Is It Necessary to Take Supplementary Vitamin A?	104
16. Infectious Illnesses and the Vitamin A Response	112
17. Protein Synthesis is a Basic Vitamin A Function	119
18. More Vitamin A Required in Winter	124
19. Vitamin A and the Senses	127
20. The Value of Vitamin A for Skin, Teeth, and Bones	134
21. The Genetic Code and Vitamin A	138
22. Vitamin A in Reproduction and Sexual Disorders	142
23. Vitamin A's Anticancer Role	147
<i>Common Foods Rich in Vitamin A</i>	152

The B Vitamins	
24. Thiamine, Vitamin B ₁	153
25. Meeting the Needs of Your Nerves	160
26. Thiamine Plays an Important Role in Heart Function	164
<i>Common Foods Rich in Thiamine</i>	168
27. The Role of Riboflavin (Vitamin B ₂) in Human Health	169
28. Are You Getting Enough Riboflavin?	173
29. A Shortage of Riboflavin is a Familiar Cause of Birth Defects	176
<i>Common Foods Rich in Riboflavin</i>	179
30. The Need for Niacin	180
31. The Antipellagra Factor	184
32. Subclinical Pellagra May Be Mistaken for Mental Illness	187
<i>Common Foods Rich in Niacin</i>	192
33. B ₆ , The Unsuspected Benefactor	193
34. Millions Need More B ₆	202
35. The Vitamin of Special Significance for Women in the Prime of Life	208
<i>Common Foods Rich in Pyridoxine</i>	214
36. B ₁₂ : The Miracle Factor in Liver	215
37. B ₁₂ for the Blood, Nerves, Growth, and.... ..	219
<i>Common Foods Rich in Vitamin B₁₂</i>	227
38. Folic Acid, the Other Antianemia Vitamin	228
<i>Common Foods Rich in Folic Acid</i>	235
39. Pantothenic Acid, the Missing Vitamin	236
40. The Antistress Vitamin	241
41. Do You Grind Your Teeth? You Might Need Pantothenic Acid and Calcium	248
<i>Common Foods Rich in Pantothenic Acid</i>	252
42. Biotin—A Necessary Coenzyme	253
<i>Common Foods Rich in Biotin</i>	256
43. Inositol: A Vitamin You “Don’t Need” that is Vital to Your Health	257
<i>Common Foods Rich in Inositol</i>	261
44. Choline, a Vital Link in the Nervous System	262
<i>Common Foods Rich in Choline</i>	268

45. PABA, the Vitamin within a Vitamin	269
<i>Common Foods Rich in Para-aminobenzoic Acid</i>	270

Vitamin C and the Bioflavonoids

46. The Universal Antitoxin	271
47. This Physician Names Megadoses As the Norm	276
48. How the Blood Uses Vitamin C	282
49. Does It Really Prevent Colds?	288
50. The Perfect Pair for Powerhouse Protection Against Colds	298
51. Who Are the People with Special Needs for More Vitamin C?	301
52. The Teenage Tendency Toward Deficiency	304
53. Advancing Years Demand Extra Vitamin C	308
54. Atherosclerosis—A Disease of Vitamin C Deficiency	314
55. Vitamin C Protects Against High Blood Cholesterol	325
56. More Vitamin C, Less Chance of Gallstones	333
57. A Key to Better Brain Power	336
58. Protection Against Poisoning from Toxic Substances in the Environment	341
59. Minimize Drug Toxicity	347
60. The Answer to Internal Bleeding in Aspirin Users	349
61. A Barrier to Bladder Cancer	353
62. Frostbite Preventive	358
<i>Common Foods Rich in Ascorbic Acid</i>	362
63. Bioflavonoids: The “Useless” Vitamin We Need	363
<i>Common Foods Rich in Bioflavonoids</i>	375

Vitamin D

64. Vitamin D—The Sunshine Vitamin	376
65. Some Consequences of Severe Vitamin D Deficiency	383

66. Regular Heartbeat Requires Vitamin D and Calcium	395
67. Vitamin D Combats Harmful Drug Effects	397
<i>Common Foods Rich in Vitamin D</i>	400

Vitamin E

68. The Great Vitamin E Controversy	401
69. The Vitamin E Story	410
70. How Much Vitamin E Do You Really Get from Food?	429
71. Special Requirements of a Low Cholesterol Diet	437
72. A Dynamic Weapon Against Wrinkles and Aging	444
73. How Vitamin E Works to Keep Cells Younger Longer	450
74. Improving Your Energy and Endurance	459
75. A Valuable Antianemia Agent	466
76. Vitamin E Also Reduces the Danger of Blood Clots	471
77. Now You Can Breathe Easier	473
78. Women Feel Better with Vitamin E	478
79. The Pill Is a Vitamin E Antagonist	486
<i>Common Foods Rich in Vitamin E</i>	489

Vitamin K

80. Vitamin K—It Keeps You from Bleeding to Death	490
81. Unseen Causes of Vitamin K Deficiencies	497
<i>Common Foods Rich in Vitamin K</i>	501

BOOK III—VITAMIN THERAPY FOR DISEASE

82. The Antianemia Action of Vitamin C	505
83. Arthritics Need Vitamin C	509
84. Vitamin B ₆ Brings Relief from Rheumatism	517
85. An Answer for Those Aching Backs	534
86. Weak and Brittle Bones	538
87. Asthmatic Children Can Turn to Vitamin B ₆ for Relief	543

88. Vitamin C and Cancer	547
89. Nonsurgical Treatment of Precancerous Polyps	557
90. Vitamins Against Skin Cancer	562
91. Folic Acid Treatment Combats Circulatory Problems	569
92. Vitamin E for Varicose Veins	573
93. Vitamin E for Painful Legs and Feet	580
94. A Surgeon's Success Story: Vitamin E as a Treatment for Intermittent Claudication	585
95. Vitamin E Calms Restless Legs	591
96. Phlebitis	597
97. Vitamins That Help Clean the Blood	601
98. Niacin Therapy Lowers Blood Cholesterol	608
99. A Natural Heart Medicine	611
100. Vitamin E—The Better Treatment for Angina	618
101. Vitamins Protect Against Childhood Diseases	622
102. Vitamin E, the Other Half of Diabetes Control	628
103. B ₁₂ Prevents Tobacco Amblyopia (Tobacco Blindness)	634
104. A Nutritional Approach to Hay Fever	637
105. B ₆ Teams Up with Magnesium to Prevent Kidney Stones	647
106. Niacin Relieves the Misery of Migraine and Meniere's Syndrome	653
107. Pioneering Megavitamin Therapy for Schizophrenia	660
108. There's Psychotherapy in the B Vitamins	663
109. Schizophrenics—How Do They Respond to Megavitamins?	673
110. Adjusting Biochemistry with Vitamins	682
111. Vitamins Offer Hope for Autistic Children	685
112. Vitamin Treatment Reduces Learning Disabilities	691
113. The Vitamin A Effect on Acne	696
114. Vitamin E for Special Skin Problems	701
115. Psoriasis Responds to Vitamin A Applications	705
116. A Vitamin for Vitiligo	708

117. Warts: A Virus You Can Guard Against	711
118. Shingles Treatment	714
119. Vitamin C Relieves Prickly Heat	717
120. Vitamin E for Those Unexplained Bruises	721
121. Vitamin A Hastens Wound Healing	726
122. To Ease the Effects of Severe Burns	729
123. Bedsores Heal Twice as Fast with Vitamin C	731
124. Vitamin C as an Orthodontic Tool	734
125. Vitamin Insurance Against Ulcers	737
126. Vitamins That Help Repair the Ravages of Smoking and Drinking	744
127. Powerful Virus Inactivator	749

APPENDICES

VITAMINS AT A GLANCE (CHART)	756
---	------------

SYMPOSIUM: THE FUTURE

ROLE OF NUTRITION

IN HEALTH CARE	773
-----------------------------	------------

INDEX	799
--------------------	------------

BOOK I

**VITAMINS
IN YOUR DAILY LIFE**

CHAPTER 1

Vitamins: What They Are and What They Do

Despite all the talk about vitamins today, few people actually know what they are and why they are so important. Vitamin research goes on constantly, new discoveries are reported from time to time, but scientists are all too aware that they don't know all of the facts about all of the vitamins. Today 15 vitamins have been recognized and analyzed. Scientists believe that again as many probably exist and are essential for our health.

Vitamins are organic food substances—that is, substances that occur naturally only in living things, plant or animal. They exist in foods in minute quantities; they are absolutely necessary for proper growth and the maintenance of health. Plants manufacture their own vitamins. Animals obtain theirs from plants or from other animals that eat plants. Some animals manufacture in their own bodies some of the vitamins they need.

It was around the turn of the century that someone first suspected there might be more in foodstuffs than fats, proteins, carbohydrates, and minerals. Laboratory experiments showed that even when all those elements were present in the diet, laboratory animals could still die of malnutrition. Scientists began to search for this important missing link. They discovered vitamins. The name comes from *vita* (life) plus *amine* (the chemical compounds that were originally thought to be vitamins).

Vitamins are not foods in the sense that carbohydrates, fats, and proteins are foods. They are not needed in bulk to build muscle or tissue. Carbohydrates, fats, and proteins are broken down into other substances which the body uses in the process of metabolism. Not so with vitamins. They retain their original form in the body and are built into body structure, where they are important parts of the machinery of all cells. Just by their presence in the cells they bring about certain changes and processes. For example, the B vitamins do not cause an increase in weight, as large amounts of certain foods might do. But a very thin individual suffering from some digestive complaint might bring about an increase in weight by taking B vitamins because the presence of the B complex in the digestive tract helps to digest and utilize food completely. Like hormones, vitamins regulate body processes. As in the case of trace minerals such as iodine, the presence or absence of vitamins in very small amounts means the difference between good and poor health.

The green leaves of plants are the laboratories in which plant vitamins are manufactured. So the green leaves and stalks of plants are full of vitamins. Foods that are seeds (beans, peas, kernels of wheat and corn, etc.) also contain vitamins which the plant has provided to nourish the next generation of plants. The lean meat of animals contains vitamins; the organs (heart, liver, etc.) contain even more, which the animal's digestive system has stored there. The yolks of eggs contain vitamins which the mother animal provides for the use of her young. Fish store vitamins chiefly in their livers.

Basically there are two classifications of vitamins—fat-soluble vitamins and water-soluble vitamins. These terms refer to a basic structural difference within the two kinds of vitamins which determines some of their properties. Fat-soluble vitamins are soluble in a solution of alcohol and are more easily stored within the body; water-soluble vitamins will dissolve in water, and are lost much more easily by the body through normal elimination.

The fat-soluble vitamins are vitamins A, D, E, and K. The

water-soluble vitamins include all the B vitamins, vitamin C, and the bioflavonoids (also known as vitamin P).

Researchers have established approximate estimates of the daily requirements of most of the vitamins for perfect health. These amounts are usually spoken of in terms of milligrams (A milligram is 1/1000 of a gram. A gram is 1/28 of an ounce.) You may also find daily requirements of vitamin A expressed in terms of International Units, which are a measure of activity, not just quantity (see Chapter 6).

CHAPTER 2

Why We Need Vitamin Supplements

In the abundance of misinformation on the subject of food and nutrition, there is one steady theme: Modern American food is the best there is. It's nutritious, it's health-giving. No one needs food supplements (vitamins or minerals) as long as he eats a "good diet."

The "good diet" is not spelled out. We are given a list of general categories of food. "Eat some of these every day and you can't help but be healthy," say the nutrition columnists, the syndicated M.D. columns, the women's magazines, and the TV commercials.

If indeed the American diet is everything we need, how can we account for the astounding incidence of chronic disease?

A solid answer to the claim that we don't need food supplements appeared in the *American Journal of Digestive Diseases* (March 1953), written by Morton S. Biskind, M.D., a careful researcher and a practicing physician. In spite of the passage of time, the statement is just as valid, the arguments just as clear and convincing as when they were first presented.

All Important Food Elements Have Not Been Isolated

"Several misconceptions . . . have become increasingly prevalent," wrote Dr. Biskind. "One common misconception is

that all the important nutritional elements have already been isolated and indeed, that a number of those currently available are not significant in human nutrition. The extremely conservative attitude of the Federal Food and Drug Administration which requires disclaimers on labels of vitamin preparations for the vitamins they consider not adequately studied in human nutrition has further fostered the assumption that administration only of the pure factors thus far considered 'important' is sufficient for satisfactory nutritional therapy." Consumers want to know why, beside many of the vitamins and minerals listed on their food supplements, this statement appears: "Need for in human nutrition is not established." This is what Dr. Biskind meant. Any substance not studied for years and not officially accepted as being necessary to life in certain minimum amounts must be listed on labels as being "not established" as a necessary part of human nutrition.

A Single Deficiency Is Impossible

Furthermore, said Dr. Biskind, experts talking about nutrition are inclined to speak of deficiencies of one or another vitamin—"thiamine deficiency," "riboflavin deficiency," etc. This is entirely incorrect, he said, for such a thing simply never happens. In a laboratory an animal may be put on a diet completely free of vitamins. Then all known vitamins except thiamine are added. Whatever symptoms are produced in the animal are then said to be due to deficiency of thiamine. But, of course, they are due to lack of thiamine, and all the other *unknown* vitamins as well.

Once thiamine is lacking, other food elements are lost from the body stores, so the condition finally produced involves the loss of all these known and unknown substances.

"In the human being, how much more unlikely that deficiency of single factors should occur," said Dr. Biskind. "Not only are deficiencies multiple but the administration of single nutritional factors or even of a combination of a few of them may actually lead to serious disturbance of a tenuous nutritional equilibrium

and precipitation of new avitaminotic lesions”—that is, new symptoms of deficiency.

For many years, he went on, investigators have stressed the need for complete therapy—which includes, of course, giving the deficient patient a source of all those as yet unidentified essential food factors. Dr. Tom Spies, a famous worker in nutritional fields, suggested many years ago that a “basic formula” be worked out which would include all those B vitamins discovered up to that time, which could be given to patients, along with a natural source of the unknown vitamins. But somehow, according to Dr. Biskind, people began to think of this as a “complete formula” and soon it was given to patients as the only source of nutritional elements aside from their meals. The impression rapidly spread that this basic formula contained *all* the important vitamins. He wrote that, time and again, conditions which do not respond at all to the taking of such a preparation improve overnight when a food source of the other, as yet undiscovered vitamins, is given.

“Simply adding desiccated liver or suitable liver fraction to the regime invariably has resulted in a dramatic and lasting improvement often evident within a few days,” he said.

A final misconception occurs, he continued—that the average American diet contains all the necessary nutritional elements; that nutritional deficiency, when it does occur, results only from deficiency in the diet and that all that is necessary to cure such a deficiency is a “good diet.”

We Are Not Getting Full Nourishment From Our Food

Dr. Biskind's answer to the misconception that our diets supply all nutritional needs includes these six points:

1. Depletion of much of the soil on which food is grown has produced crops that are nutritionally inferior.
2. The increasing use on crops of toxic insecticides which leave harmful residues in and on food and further harm the soil by killing necessary microorganisms and earthworms.