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Nutrition and E. V. McCollum

The development and application of knowledge of nutrition has been one of the most significant achievements in human history. Among several pioneers who shaped this change, the foremost in total effectiveness was Elmer Verner McCollum, the centennial of whose birth is observed this year. As Jean Mayer and Johanna Dwyer have written, "he changed our understanding of nutrition in much the same way as Albert Einstein (also born in 1879) revolutionized the study of the universe."

From 1907 to 1917, at the University of Wisconsin, McCollum brought into focus disparate facts and views and, in effect, formulated the basic concepts of modern nutrition. To satisfy nutritional requirements it was necessary, he stated, "to solve the problem of what, in chemical terms, constitutes the minimum quota of chemical substances on which an animal (and man) can function normally." His earliest work included establishment of the first rat colony for experimental nutrition studies. He found that certain fats, including milk fat, contain an indispensable nutrient (vitamin A). His introduction of the biological method for the analysis of foods yielded astonishing and fruitful results. The method quickly became a major tool in the discovery and understanding of other indispensable nutrients.

McCollum became the first faculty member of the new School of Hygiene and Public Health at Johns Hopkins in 1917, where he continued to gain recognition as a leader in research and in shaping public, institutional, and industrial attitudes and practices in nutrition. Through their discovery of vitamin D, McCollum and his associates made a significant contribution to unraveling problems concerning rickets, and his leadership became a force in the almost complete eradication of that condition. Under his direction other dietary essentials were discovered and knowledge of specific effects of nutrient insufficiency and imbalance was advanced. He also focused attention on the role of nutrition in dental health.

In 1916 McCollum began an extensive program of writing and speaking to encourage general awareness of the importance of good nutrition. His widely acclaimed book *Newer Knowledge of Nutrition* was published 2 years later and, in the next 21 years, went through four more editions. McCollum greatly influenced the food industry and the public in making milk and other "protective foods" regular ingredients of the diet. He was always scrupulously objective and avoided generalizing beyond well-demonstrated evidence. He held in disdain organizations and individuals who exaggerate facts and deal in pseudoscience, thus deceiving the public.

As stated in a resolution by the American Institute of Nutrition after his death in 1967, McCollum "was one of the first to see the unique and important contribution that could result from the collaborative approach of medically and biochemically oriented scientists to nutritional problems."

Among numerous distinguished recognitions is the annual McCollum Award sponsored by the National Dairy Council for "distinctive research in the area of clinical nutrition" and administered by the American Society for Clinical Nutrition. The McCollum-Pratt Institute was established in support of basic research at Johns Hopkins University by gifts from the late J. L. Pratt, professorships were named after him at Johns Hopkins and at the University of Wisconsin, and McCollum Hall at the University of Kansas was named for McCollum and his brother Burton.

The centennial of McCollum's birth is an occasion for grateful remembrance and constructive appraisal. Various functions are being held to commemorate his work. A highlight was the beginning of an E. V. McCollum international lectureship program, whose first meeting took place at the National Academy of Sciences on 9 March; Jean Mayer was the principal speaker. In honoring the memory of E. V. McCollum, we are reaffirming the importance of imaginative research and sound applications of knowledge in the public interest. These were the hallmarks of his contributions, and they should challenge all today.—HARRY G. DAY, *Professor Emeritus of Chemistry, Indiana University, Bloomington 47405*