

Honors Award Presentation To Josef Warkany, M.D.

I have the distinct honor and privilege to present to you the third recipient of the Honors Award of the American Cleft Palate Association. The By-laws of this Association state that the Honors Award shall represent 'the highest expression of respect and gratitude the Association can bestow, and shall be granted to those rare individuals whose lifetime of service, leadership, and pioneering accomplishments have advanced, or appear destined to advance, significantly and directly, the alleviation or eradication of the problems of cleft lip and palate'. It is without doubt unnecessary to inform those of you gathered here today and knowledgeable people in teratology everywhere that our honored guest generously fulfills all requirements to receive any honor which is in our power to bestow.

Dr. Josef Warkany was born in Vienna, Austria, the son of Jacob and Hermine Warkany. He attended elementary school and the Real-Gymnasium in Vienna before entering medical school at the University of Vienna. He was granted his degree in medicine in January of 1926. He interned at the University Pediatric Clinic in Vienna under Professor Pirquet in 1926-27, and was assistant at the Reichsanstalt for Mothers and Children in Vienna under Professor Moll, 1927-31.

Dr. Warkany was invited to join the staff of the Children's Hospital in Cincinnati, Ohio, by Dr. A. Graeme Mitchell, a man of great stature and foresight, who had the ability to attract men of great promise. He was appointed assistant professor of Pediatrics at the University of Cincinnati, a position he held from 1932-45. He became associate professor in 1945 and full professor of research Pediatrics in 1953. He was a scholar of the Children's Hospital Research Foundation in Cincinnati from 1931 to 1934, and a Fellow since 1935. He has served as attending pediatrician at the Children's Hospital and the Pediatric and Contagious Divisions of the Cincinnati General Hospital for over twenty years.

Not long after his arrival in Cincinnati, Dr. Warkany became known for his ability in squash, his etchings of "the Backs (porches) of Cincinnati," and his profound interest in teratology. His interest in squash terminated abruptly when he sustained a traumatic detached retina, which fortunately was treated successfully. In the face of adversity on

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Josef Warkany

more than one occasion, he has never lost his scintillating humor nor his enthusiasm to pursue scientific truth.

Dr. Warkany founded a Cleft Palate Study Group in Cincinnati of which he was the leader and the catalyst. He gave full support to the Cleft Palate Clinic until he became so involved in his investigative work that his consultations became limited to the unusual patients. His suggestions and challenging questions have stimulated many surgeons and clinicians.

Dr. Warkany's research has been in the field of pediatrics and particularly in the area of congenital malformations. He was on rather new medical ground in the 1930s and the 1940s when he established experimentally that environmental factors can interfere with the normal development of the mammalian fetus. Medicine at that time was oriented chiefly to the post-natal pathogens. The mammalian embryo was thought to be well insulated against external harm, although it was recognized that ionizing radiation could cause damage, and Hale had demonstrated that embryonic development in pigs could be impaired by a diet deficient in Vitamin A.

Dr. Warkany used nutritional deficiency in his attempt to produce congenital malformations. After four years of work, he found that the missing factor in a teratogenic diet he was studying was riboflavin. His work not only stimulated interest in congenital defects, but by use of the small laboratory animal, he demonstrated that many of the congenital malformations known in human pathology can be reproduced in animals with a variety of teratogenic agents. His undeviating path in search of the truth makes less obscure the formidable problem of congenital malformation.

The list of known environmental teratogenic agents is long. Strict separation of environmental and genetic teratogens is academically useful but in reality, as Dr. Warkany has stated, many malformations may result from both influences acting together in a subtle fashion. Dr. Warkany has said that the common denominator between environmental and genetic factors is probably the disturbance of certain enzyme systems, which leads to similar teratological effects.

He has concentrated upon the whole field of teratology and upon the whole child as approached from the pediatric concept. In recent years, Dr. Warkany has manifested an interest in mental retardation as related to malformations of the brain and chromosomal studies of malformed children and their families. His one digression from teratology was a now-recognized investigation he conducted in the 1940s with Donald Hubbard, a chemist at Cincinnati's Kettering Laboratory, establishing that the mysterious and distressing disease acrodynia is caused by exposure to mercury.

Dr. Warkany was originally undecided between a career of medicine and architecture. Fortunately for us and for many children throughout

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the world he chose medicine, but art has continued as an important influence in his life. He once stated that 'malformation is the opposite of good formation'. He is an outstanding artist among artists, with major contributions to art in the form of etchings and paintings and is listed in *Who's Who in American Art*. He has exhibited on many occasions and won awards from the American Physicians Art Association. His paintings reflect a true professional talent and are much sought after by his friends.

Dr. Warkany is a member of the American Medical Association, the American Pediatric Society, The Society for Pediatric Research; an honorary member of the Harvey Society; a corresponding member of The Société de Pédiatrie of Paris, the International Institute of Embryology, the Society for Experimental Biology and Medicine; and a charter member and first president (1960-61) of the Teratology Society. He is a member of the scientific advisory board of the National Association for Retarded Children of New York City, the Study Section on Human Embryology and Development of the National Institutes of Health, the Committee on Research-Basic Sciences of the National Foundation of New York City, program consultant of the National Institute of Child Health and Human Development, the Drug Research Board of the National Academy of Science in Washington, the National Medical and Research Advisory Council, City of Hope Medical Center in Duarte, California, and many other medical societies too numerous to mention. He served as head of the sub-committee on Teratology of the Commission on Drug Safety from 1962-64, in which he and his Committee made notable contributions to the profession and to the public interest. Dr. Warkany's indefatigable energy and pursuit of the scientific truth and his dedication to the dissemination of the benefits of investigation have brought him many rewards. He was granted the Meade-Johnson Award at the Academy of Pediatrics in 1943, the Borden Award in 1950, the Award Medal of the American Association of Plastic Surgeons in 1962, and the distinguished achievement award of Modern Medicine in 1964.

Dr. Warkany is the author of over 100 publications on congenital malformations, deficiency diseases, and experimental teratology, all marked by clarity and logic. His personal modesty about his many contributions, his wholesome scientific skepticism, and a sympathetic understanding have won him a host of friends. His Socratic method of teaching has had a profound effect upon all those close to him.

I might summarize some of that which I have said of Dr. Warkany's work in another way by stating that from the point of view of the small laboratory animal, Dr. Warkany is one of the leading teratogens on the North American Continent.

I have been told by his close friends that he was fortunate and per-

haps wise in choosing Susanne Warkany as his wife. The Warkanys have two sons, Josef, born in 1938, and Stephen, born in 1944.

Dr. Warkany, we are pleased and honored by your presence here today. On behalf of the American Cleft Palate Association, it gives me a great deal of pleasure to present to you this Honors Award for your many contributions as a teacher and a dedicated investigator in the field of Experimental Teratology, Deficiency Diseases and Congenital Malformations.