

10Th Khwarizmi International Award

Feb 1997

Researcher: Dr. Md Rafiqul Islam
Research Title: Oral Rehydration Therapy
Rank: Second
Field: Medical Sciences
Country: Bangladesh



Dr. Md Rafiqul Islam was born in 1936 in Comilla in Bangladesh. He completed his MBBS from Dhaka Medical College and joined icddr,b in the mid-60s. Dr. Islam did his higher studies on tropical medicine and hygiene in England. He involved in the research and invention and has played a very important role in the initial studies on Oral Rehydration Solution (ORS) and is further simplifying the solution using common salt and sugar.

Diarrhea is not a disease; it is a symptom, whose aetiology includes food poisoning, bacterial and other microbial infections, and it can be deadly. The dehydration it causes can quickly destroy the ability of a body to function. Children under the age of five are especially susceptible to diarrhea. More than two decades ago, in Dacca, East Pakistan, and Calcutta, India, physicians had developed the use of an extraordinarily simple solution consisting of sugar, salts, and water to save the lives of severely dehydrated adults, children, and infants.

They began work on effective therapies for cholera-induced diarrhea which was claiming thousands of lives globally during seasonal epidemics. Within six years, these men produced and synthesized physiological evidence that overturned the medical establishment's paradigm for diarrheal treatment. Through determination, intuition, and serendipity, they developed a new therapy which proved effective in clinical trials. Dr. Md Rafiqul Islam invented this method to save the lives of children

An epidemic of cholera broke out among the Bangladeshi refugees, who took shelter in India's West Bengal during the 1971 Liberation War. But as intravenous fluid, the then only medicine of diarrheal diseases, ran out, ORS came as a savior to the refugees, saving many lives.

Eventually, ORS was approved by the World Health Organization (WHO). After the independence of Bangladesh, the solution got widespread publicity. In 1980, Bangladeshi NGO Brac created a door-to-door and person-to-person awareness programme about the ORS for use by mothers at home.

This helped Bangladesh become one of eight countries to have reduced mortality rates of children under five by at least two-thirds since 1990.