SCIENCE DIMENSION

-

National Research Conseil national Council Canada de recherches Canada

Vol. 11, No. 5, 1979

ISSN 0036-830X

Indexed in the Canadian Periodical Index This publication is available in microform.

CONTENTS

- **4** International Year of the Child The exceptional child – cradled in the arms of research
- **10** Scoliosis Early detection vital
- 14 Dr. Gerhard Herzberg 75th birthday – Christmas day, 1979
- **16 The facts of life in Fundy** Explaining tidal power's changes
- **20** Spinal cord cooling A promising treatment for spinal cord injuries
- 26 Index 1979

Science Dimension is published six times a year by the Public Information Branch of the National Research Council of Canada. Material herein is the property of the copyright holders. Where this is the National Research Council of Canada, permission is hereby given to reproduce such material providing an NRC credit is indicated. Where another copyright holder is shown, permission for reproduction should be obtained directly from that source. Enquiries should be addressed to: The Editor, Science Dimension NRC, Ottawa, Ontario. K1A 0R6, Canada Tel. (613) 993-3041.

Editor-in-chief Loris Racine

Editor Wayne Campbell

Executive Editor Joan Powers Rickerd

Design ACART Graphic Services

Editorial Production Coordinator Patricia Montreuil



International Year of the Child

This year, 1979, has been set aside by the United Nations as the International Year of the Child. In Canada, a national Commission is responsible for promoting observance of the Year and governments at all levels, federal, provincial and municipal, have joined with the private sector in activities designed to "advance the rights, interests and well-being of children in the context of their families and society."

When the United Nations issued the Declaration of the Rights of the Child 20 years ago, the National Research Council was already engaged in an active research program designed to assist both the handicapped child and adult. Over the years, the Council's work has served to reinforce the UN Declaration that the child has the right "to special care if handicapped", "to learn to be a useful member of society and to develop individual abilities", and "to full opportunity for play and recreation". In one NRC Division alone, the program has expanded from the development of a long line of devices to assist the blind to include computer-aided learning for children with learning disabilities, communication systems and techniques for nonvocal cerebral palsy children, and mobility and recreational systems for physically handicapped children. NRC's acquisition last year of the Toronto-based Rehabilitation Technology Center is helping to get laboratory-developed devices out to people who need them.

One of the most unpleasant aspects of infancy is the susceptibility that children

have to disease and to accidental injury. Although most childhood diseases can be controlled by today's vaccines, cerebrospinal meningitis still affects some 400 Canadians a year in susceptible age groups (and more in other parts of the world, particularly in Africa and South America). Council scientists, in collaboration with Health and Welfare Canada. have formulated, for the first time, a vaccine which is being tested on laboratory animals and has been found effective in controlling all the different strains of the bacteria that cause cerebrospinal meningitis - a significant step in preventive medicine.

In other Divisions, researchers have contributed to a unique screening procedure for the detection of scoliosis, a disease of unknown cause which results in a deformed spine; and a procedure for spine cooling has been devised to prevent paralysis resulting from severe injuries incurred in certain types of accidents. Currently, the benefits of the air bed principle for the treatment of burns is being investigated.

This issue of Science Dimension highlights a few of these projects, depicting the Council's work and concern for today's child. There are many others -from work on the preservation of food to architectural design for the disabled, NRC is committed to research that provides technological support of social objectives in areas such as law, public safety, the environment, and quality of Canadian life.