

Arctic Health Problems Challenge Soviet Medical Science

By YURI SHNITNIKOV
Novosti Press Agency (APN)

Since the intensive development of productive forces in the Soviet Union is drawing to the North populations from other climatic zones, this circumstance is confronting specialists with a number of new problems, including those of a medical and biological nature. One of the odd scientific and educational institutions of the Soviet Union tackling medical problems of the North within the framework of the "Human Adaptation" programme, is the Arkhangelsk Medical Institute.

This is the northernmost higher educational medical institution in the Soviet Union, the zone of whose research spreads over an enormous territory of the European North, between Scandinavia and the Urals Ridge. The region is known as a land of well-developed forest, cellulose and paper, and mining industries. Geological explorations of the past few years have also made it a prospectful fuel base of the land, for discovered here are resources of coal, petroleum and gas. Now that residents from other parts of the country are coming North, the problem of their adaptation to the severe conditions is the main trend of research in the Arkhangelsk Institute.

Human Adaptation

Rational regime of work and life, unfailing high spirits, proper nourishment and adequate clothes for cold weather—all this is included in the concept of human adaptation and is therefore studied by the doctors. They have already introduced many scientific recommendations. In Arkhangelsk and other cities of the North drinking water, which contained insufficient minerals, is now fluoridated. The psychiatrists of the Institute offer advice to newcomers who cannot sleep during the white summer nights. For a long time, some 800 Arkhangelsk seamen and fishermen working under high humid conditions have been under the doctors' observation. The latter's finds have enabled them to form the principles of personnel recruitment and elaborate methods for treating blood circulation disorders characteristic of the North.

The scientists are systematically making expeditions to the aborigines of the Extreme North. Lyudmila Nekrasova, Med., has made it her specialty to study natural infections and

their effect of man. Travelling throughout the Soviet zone of the Arctic spaces, from Norway to Alaska, she came upon quite a few reservoirs, Arctic animals and birds ailing from one or another infectious disease. Whereas hunters, fishermen and reindeer-breeders who use this water and process the skins of animals manage to evade infectious diseases. Nekrasova has drawn the conclusion that the aborigines are immune to natural infections, whose study is important to further medical practice in the North.

Climatic Diet Correction

Another doctor, Lyubov Kotolevskaya, M.Med., has been studying the peculiarities of the meals eaten by Nenets children in their boarding schools. She has recommended "climatic corrections" to the daily menus of the school canteens.

"Soviet medical service is called a system of health protection," says Professor Nikolai Bichikhin, Rector of the Arkhangelsk Medical Institute. "We strive to make medical practice prophylactical first and foremost. But, of course, if diseases occur, the doctor must be able to fight them. In the North diseases are specific, and every doctor must know them."

It may be added that Professor Bichikhin is a graduate of the same institute, a surgeon, who shows his disciples how to save the lives and health of each man down to the last. Several years ago he noted that 25-40 per cent of the patients in the Arkhangelsk hospitals are over 60 years of age, and even 80-year olds are operated upon. What kind of meals must these patients get? What kind of treatment? How reduce the risk of operations?

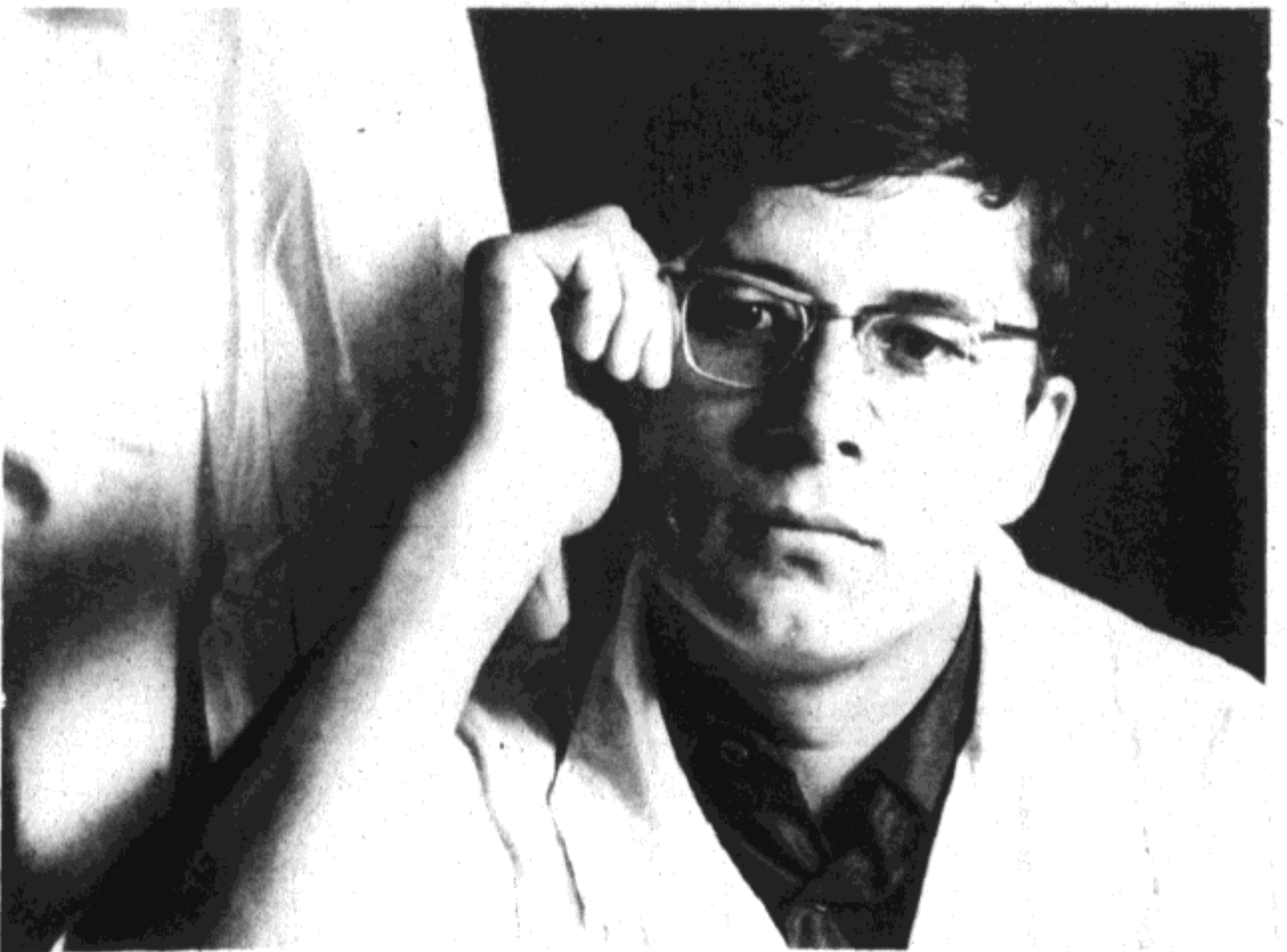
He replied to these questions in a paper based on years of observations over 1,300 patients. His work has aroused the interest of colleagues not only in the USSR, but in the USA, Canada and Finland as well.

Arctic Farms and Industry

In the Arctic tundras and taigas there are 2,000 industrial enterprises, some 600 collective farms, state farms and hunting artels. In the Tenth Five-Year Plan period almost 40,000 million roubles are allotted for promoting the productive forces of only the remotest parts of the Extreme North. The doctors are working shoulder to shoulder with the conquerors of the "land of the cold". Academician Vlai



ARCTIC AMBULANCE — In the Nenets Nation area of the Soviet Union, a helicopter ambulance takes off, carrying an ailing reindeer herder to the area hospital for medical treatment.



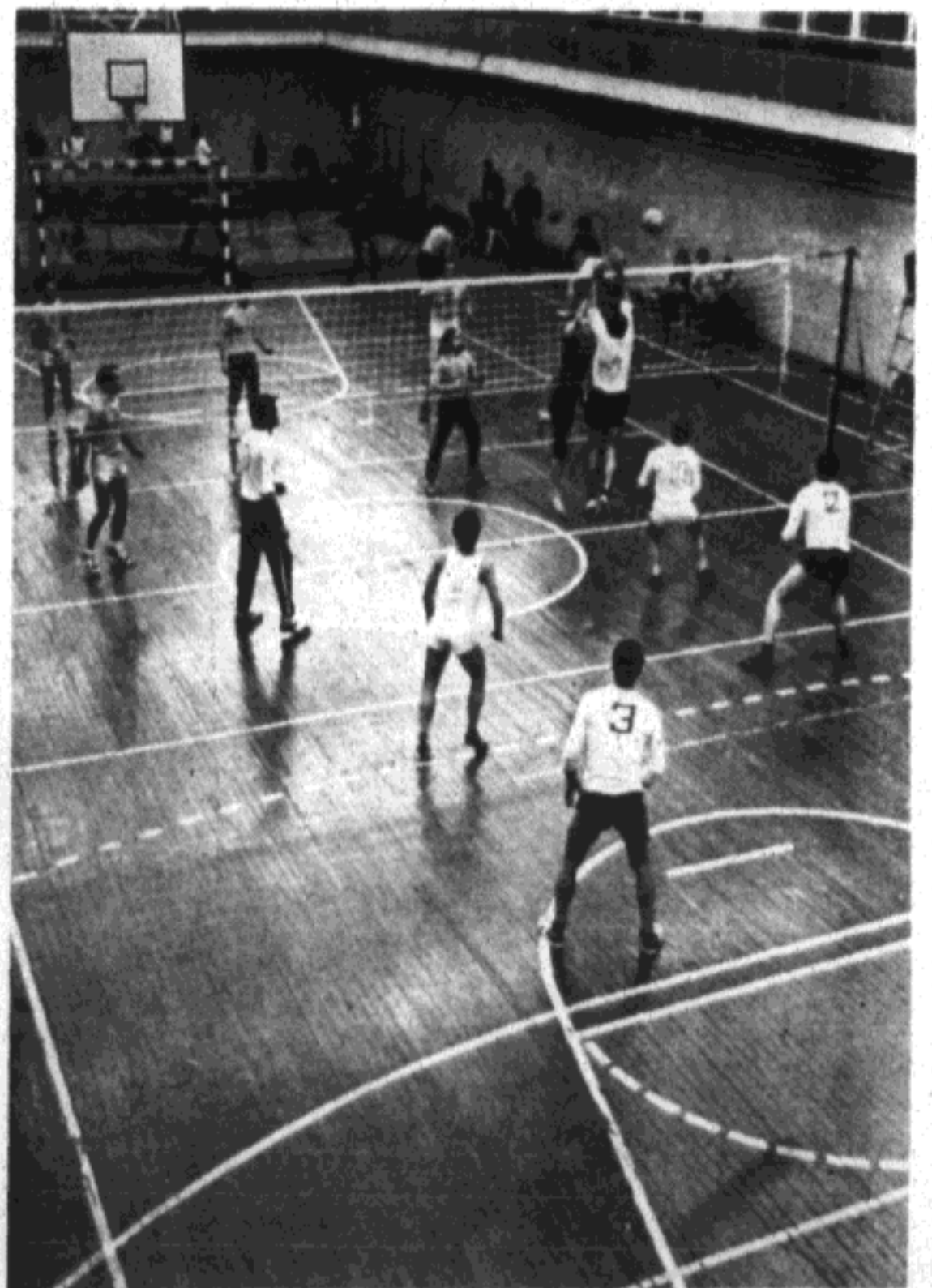
ARCTIC DOCTOR — Valery Sobolev, a Nenets by origin, works at the area hospital in the Arkhangelsk Region of the Russian Federation. Speaking of disease in the Soviet North, a medical institute professor says: "In the North diseases are specific, and every doctor must know them."

Kaznacheyev, head of the Human Adaptation Programme, says:

"The time is near when we doctors will tackle not ease histories, but cases of human health-building."



CHILDREN'S DIET ADJUSTED FOR CLIMATE — Soviet medical researchers have discovered that environmental considerations warrant "climatic corrections" in meals served in the schools. The children attend the kindergarten at Pervomaysky settlement in the Arkhangelsk Region.



NORTHERN RECREATION — Workers at the Arkhangelsk Region's pulp and paper combine enjoy a game of volleyball in the gymnasium at Pervomaysky settlement. The Soviet Arctic boasts some 2,000 industrial enterprises and 600 farms and hunting lodges. — All Photos Courtesy of APN