

EXPERT OPINION

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## Aging, preventive geriatrics and the role of physical exercise to improve health with longevity

Yukio Moriguchi



Moriguchi Y  
(Picture authorized for publicity)

### EDITOR'S INTRODUCTION

Dear Readers,  
This scientific session was prepared by the editors to give you all the opportunity to learn a little more about Professor Yukio Moriguchi and his main areas of academic and clinical contribution.

It would seem only natural in this first issue of PAJAR that we begin the section "expert opinion" by addressing some of the main topics related to aging. As such, there can be nothing more fundamental than a contribution from our remarkable Professor Yukio Moriguchi. He is considered to be one of the leading world experts in the area of aging and preventive geriatrics – a genuine truly senior expert.

Well – let's begin!

### BRIEF BIOGRAPHY

Born in Japan in 1926, Professor Yukio Moriguchi graduated as a Medical Doctor from the School of Medicine at Keio University, Japan (1948). He went on to do his Postgraduate studies in Internal Medicine at Milan University, Italy (1953 to 1956), before returning to Keio University once more to complete a PhD in the same field (1957).

Prof. Moriguchi rapidly gained broad international experience in clinical medicine and epidemiology. His mastery and knowledge in these areas, combined with people skills comparable with those of a successful diplomat made him a worthy candidate to serve as a Scientist and Medical Advisor to His Holiness Pope Paul VI in the Vatican (1965 to 1968). Following on from this, he worked as a Professor at Seisen University in Tokyo, Japan (1968 to 1971).

For more than 40 years, his career in Brazil and Latin America has driven the development of the science of aging and geriatric medicine in these regions. From 1971 until the present day, Prof. Moriguchi has worked in Brazil as a Full Professor of Geriatrics at the Pontifical Catholic University of Rio Grande do Sul (PUCRS), having first come to the university at the request of Rector Brother José Otão to establish there the first discipline in Geriatrics in Latin America. His establishment in the early 70s of a groundbreaking and promising area of



research created the cornerstone of a solid research institute: the Institute of Geriatrics and Gerontology of PUCRS (IGG-PUCRS). His pioneering influence also led to the creation of the first residency program in Geriatrics, as well as the first postgraduate program in Geriatrics in Latin America.

Currently, Professor Moriguchi continues to skillfully apply both geriatric medicine and his knowledge of clinical epidemiology, stressing the importance of preventive medicine and maintaining quality of life in late adulthood. He was nominated in this field by the World Health Organization (WHO) as a principal researcher in the primary areas of preventive geriatrics and healthy aging (1988).

## MAIN POINTS AND DEFINITIONS BASED ON THE BACKGROUND OF THE SENIOR EXPERT

### Definition of aging

Aging is the biological and psychological changes that occur as the result of the passing of time. During the aging process the human body has a tendency to become ill, for example, cancer, myocardial infarction and cerebral apoplexy.

### Definition of preventive geriatrics and its main goals

The final aim of geriatrics is longevity with quality of life (QOL) but what is necessary to gain this? It is preventive geriatrics, in other words, the main goal of preventive geriatrics is longevity with QOL.

Preventive geriatrics is made up of 5 factors: nutrition, psychology, genetics, ecology and exercise.

The most important of these for QOL is exercise, and its systemic benefits should be highlighted:

- 1) An increase in the function of the mitochondria of the muscular fibers of the myocardium, and of the smooth-muscular fibers.
- 2) Activation of the anti-oxidative enzyme.
- 3) A decrease in the level of catecholamine.
- 4) An increase of fibrinolytic activity and decrease of blood coagulability.
- 5) An increase in the HDL serum level.
- 6) An increase in insulin activity.
- 7) An increase in the elimination of salt by urine and perspiration.
- 8) Prevention of obesity.
- 9) Reduction in the stress caused by modern life
- 10) Prevention of pathologic aging.

For these reasons, exercise produces many clinical effects:

- 1) Prevention: early aging, hypertension, myocardial infarction, arteriosclerosis, diabetes, obesity, stress.
- 2) Decrease rates: stroke, cancer, Alzheimer's disease.

## EDITOR'S CONSIDERATIONS

Well, as can be seen, some themes that might at first seem unfamiliar to the majority of health professionals have been, in fact, for several decades very much a part of the everyday life, work and convictions of this wise man. More than a physician or researcher, he was and continues to be a visionary!