



Letter to the Editor

What Is the Onset Age of Human Aging and Old Age? ☆



To the Editor,

Humans are complex beings in whom diverse biological, psychological, and social elements, which are interdependent, combine together and complement each other. Therefore, human aging is different from cellular aging and organ or system aging. In addition, as noted by Leonard Hayflick¹ “it is not the mere passage of time; but the manifestation of biological events that occur during a period of time, which defines aging”; hence, “aging occurs over time, but not because of the passage of time.” In this sense, most of the cells that are present in our body now did not exist 5 or 10 years ago, or even 2 days ago; this phenomenon occurs in all stages of life (e.g., in children, adults, and the elderly). Therefore, the cells that were renewed and replaced by new ones in the past decade are younger in all age groups, including the elderly. However, the paradoxical question that arises is the following: if most of the cells of aged people are renewed over time, and therefore remain younger, can the elderly rejuvenate over time? Of course, the answer is no.

In this context, we define human aging as a gradual and adaptive process, characterized by a relative decrease in the biological reserve and response to demands to maintain or restore homeostasis, due to morphological, physiological, biochemical, psychological, and social changes, prompted by genetic load and accumulated wear, and the challenges that a person faces throughout their life in a given environment².

There is no consensus in the gerontological field regarding the age at which aging begins; however, some authors, based on a time-limited approach, have established that aging begins at birth or even from conception.

We assume that aging starts from the 5th decade of life, at about 45 years of age, as biological, physical, psychological, and social changes, which are evident and related to the aging process, occur in the majority of the population at this stage of life. This does not mean that we shall ignore that human aging is a complex, multidimensional, and multifactorial process, and therefore individualized; however, a starting point of aging should be assumed for the implementation of social and community programs aimed at this section of the population.

By contrast, chronological age is usually considered as a parameter to indicate at what point of time a person becomes old. In this

sense, it has been established that old age begins at 60 years of age in developing countries and 65 years in developed ones.

Old age is a social condition with specific qualities that are manifested in different ways depending on the historical and social characteristics of each person.

In this context, the use of the terms “third age,” “elderly,” “fully adult,” etc., serves the principal purpose of putting aside prejudice and discrimination associated with this age group, however, instead of avoiding such associations these terms perpetuate them³.

Ageing and the elderly can only be studied within specific contexts with reference to their understanding of freedom and awareness throughout their present, past, and future

References

1. Hayflick L. *How and why we age*. New York: Ballantine Books; 1996:49–57.
2. Mendoza-Núñez VM, Martínez-Maldonado ML, Correa-Muñoz E. Implementation of an active aging model in Mexico for prevention and control of chronic diseases in the elderly. *BMC Geriatr*. 2009;9:40. <http://dx.doi.org/10.1186/1471-2318-9-40>. Available from: <http://www.biomedcentral.com/1471-2318/9/40>.
3. Bass SA. Emergence of the third age. *J Aging Soc Policy*. 2008;11:7–17.

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3 June 2015

* Conflicts of interest: All contributing authors declare that they have no conflicts of interest