

# **ANESTHESIA FOR GERIATRIC PATIENTS**

ESSAY SUBMITTED FOR PARTIAL FULFILMENT  
OF MASTER DEGREE IN ANESTHESIA

BY

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بسم الله الرحمن الرحيم

اقراء باسم ربك الذي خلق (١) خلق الإنسان من علق (٢) اقراء  
وربك الأكرم (٣) الذي علم بالقلم (٤) علم الإنسان ما لم يعلم (٥)

صدق الله العظيم

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*Nasser Abd El - Mohsen*

*To  
My  
Family*

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# ***INTRODUCTION***

لشئون الدراسات العليا .

... وبعد ...

المعلومات الطبية بالمستشفى

رأى الطبيب من الرأى المقدم من :-

أ. د. محمد عبد الحليم

د

توقيع

## *Introduction*

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Geriatrics is the branch of medicine that deals with the problems and diseases of old age and aging people ( *Carl, 1993* ).

Aging is a progressive , universally prevalent physiologic process producing measurable changes in the structure and function of the tissues and organs by the passage of time and that is called **1 ry aging** . The changes that are not universal or that don't increase in severity or the magnitude proportional to the chronological age, are probably not manifestations of aging but rather an indication of age - related diseases and is called **2 ry aging** ( *Muravchick, 1990* ).

Although established at the beginning of this century, the speciality of geriatrics has only recently been given the funding and attention appropriate to a discipline describing approximately one - fourth of the surgical population. However, from the engineering point of view, life span is the theoretical useful lifetime of the biological machine, realized only when all vital organ systems function optimally in a benign environment. In contrast, life expectancy is the mean time before failure ( *Muravchick, 1990* ).

The change in modern era is not an increase in the upper limit of the human life span but is an increase in the proportion and the number who survive to approach that limit. This trend is the result of narrowing of the gap between primary and secondary aging ( *William , 1986* ) .

## *Introduction*

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In **1989**, **McLesky** considered geriatric patients are the individuals over 65 years of age. However , some specialized applications classified persons 65 to 74 years of age as elderly , those 75 to 84 years as aged and those 85 years or over as very old ( **Muravchick , 1990** ) .

Many theories had been developed for explanation of the aging process , these are : - ( **Collins et al., 1980** )

**1) Autoimmunity : -**

Mutation produces autoantigens for the cytoplasm or the nuclei making the cells malfunctioning e.g. diabetes.

**2) Chromosomal theory : -**

There are aberrations in the mitotic figures of the cells making them malfunctioning.

**3) Genetic theory : -**

Aging is due to genetic mutation causing cellular malfunction.

**4) Wear and tear theory : -**

Cells in the brain , muscle and the liver show wear without repair.

**5) Collagen deposition : -**

Widespread fibrosis in the tissues especially reproductive and endocrinal systems causing it malfunctioning.

## *Introduction*

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In **1987**, **Kelsey and Hoffman** notified that one half of patients who reach 65 years of age will require surgery before they die - mostly - cataract extraction , transurethral resection of prostate , reduction of fractured hip and herniorrhaphy.

Unfortunately, elderly patients are at great risk for perioperative morbidity and mortality because of age - related concomitant diseases and the age - related decrease in the basic organ function ( **Triet et al., 1986** ) .

# ***Pathophysiological Changes in Elderly***