

THE CONCEPT OF KSHAYA VS AGEING**Dr. Anand Pandey^{*1}, Dr. Pavan Sharma², Dr. Rahul Kumar Gupta³, Dr. Vaibhav Patel⁴**Assistant Professor (Rachana Sharir)¹, Associate Professor(Swashtvrita)², AssistantProfessor(Dravyaguna)³, PG Scholar(Kriya Sharir)⁴

Govt. (Auto) Ayurveda College & Hospital, Gwalior (M.P.)

Article Received on 15 June 2026,

Article Revised on 05 July 2026,

Article Published on 16 July 2026,

<https://doi.org/10.5281/zenodo.21369037>***Corresponding Author****Dr. Anand Pandey**

Assistant Professor, (Rachana Sharir)

Govt. (Auto) Ayurveda College &

Hospital, Gwalior (M.P.).



How to cite this Article: Dr. Anand Pandey^{*1}, Dr. Pavan Sharma², Dr. Rahul Kumar Gupta³, Dr. Vaibhav Patel⁴ (2026). The Concept of Kshaya Vs Ageing. World Journal of Pharmaceutical Research, 15(14), 1046–1051.

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ABSTRACT

Decay is a natural process, essential for homeostasis or equilibrium, operates from the beginning of the universe through the Big Bang phenomena. There is a relation between energy and matter, which transform into each other. When matter is formed, its transformation requires energy, which may be absorbed or may be released. During this transformation, the different states of matter are established, which require formation and decaying processes for new combinations. In vital organisms, the process of decaying is the explanation of a better model through evolutionary processes because the process of decay is hastened if the homeostasis of the organism is not properly coded in the genetic components of the organism. Likewise, if the organism reacts better to the ever-changing external environment by the process of homeostasis

directed by its genetic components, then the decaying process in the organism is in a controlled way. In ancient times, the natural decaying process operating in the body is explained by the process of aging, defined system-wise and expressed as age-related signs and symptoms. In the modern text, the natural decaying process through ageing is explained through biochemical explanations. If we compare both explanations, some similarities and specialities is the moto of this paper to elaborates these points.

KEYWORDS: Kshaya, Ageing, Sharir, Aayu, Apoptosis, Endonuclease, Protease, Transglutaminase, Rasayan, Vajikaran, Aachar Rasayan.

INTRODUCTION

The origin of life on the planet Earth is due to repetitional assessment of the environment by developing and evaluating organisms. The environment of planet Earth from the Archeozoic era to the present era is totally different and depends on several geological activities. These activities may work in a positive or negative direction by changing the external environment, which creates a direct impact on living organisms. For better assimilation to a better environment, assessment of the conditions of the external world is required. Data are coded in the organism's genetic material; if the coding is in a positive direction, it creates a better blueprint for the origin and evolution of better species. This type of regular assessment changed unicellular organisms into multicellular organisms. In comparison to unicellular and multicellular organisms, the cohesion of different systems during the process of embryological assessment through the tissue induction phenomenon, the different systems follow the developmental, evolutionary and embryological trends for the development of different systems in the body. This phenomenon requires a type of biological multifactorial clock system, which controls the growth and development of the body. The two types of phenomena control this whole process, that is, the process of apoptosis and the process of ageing. These two phenomenas are multifactorial described in modern medical science in generalised way and in *Ayurvedic Samhita*, and these two phenomena are explained broadly in the general explanation of *Sharir* and age-wise destructive phenomena operating in the body. The differential explanation in both streams of life science is that, in modern science, it is described through physio-etio-pathological events in a generalized way however, it is not fully explained. Whereas, in *Ayurvedic Samhita*, the age-wise, system-wise destructive effects are explained, but the detailed physio-etio-pathological events are not fully explained. So, if we combine both streams of knowledge, it provides better insight to explain the process of aging.

AIM AND OBJECTIVE

1. To study the concept of *Kshaya* in a generalized way and age-wise systemic destruction of the body described in *Samhita Granths* on modern grounds.
2. In modern science, the process of apoptosis is studied comparatively and theoretically to the concept of *Kshaya* present in *Ayurvedic Samhitas*.

There is the lacking of knowledge of concept of *kshaya* / age wise systematic destruction defined in *Samita granths* are not explain on modern ground.

1. Ancient literature

[illegible]

2. Modern literature

2. □ □ The apoptosis is initiated by activation of proteases called caspases there are enzymes that are synthesised and stored in the cells as inactive pro caspases. The mechanism of activation of caspases are complex, but only activated enzyme live and activate other pro caspase triggering a cascade debt rapidly breakdown protein within the cells. The cells thus dismantles itself, and it's remains are rapidly digested by phagocytic cells. A tremendous amount of apoptosis occurs in tissue that are being remodelled during development. Even in adult humans, billions of cells die. Each hour in tissue such as intestine and born marrow are replaced by New cells. Program cell death, however, is normally balanced with the formation

OBSERVATION

- ## DISCUSSION

in which the synonyms of *Aayu* denote the characteristics of *Aayu*. The meaning of $\square\square\square\square$ is the factor which promotes the growth of the body. $\square\square\square\square\square\square$, the second synonym, states about the factor which balances growth and decay in the body, $\square\square\square\square\square$, the third synonym, states the decaying process in the body and $\square\square\square\square\square\square\square$, the fourth synonym, states the overall summation of all these three above-mentioned synonymous factors. So, it is clear that, according to the definition of *Aayu*, *Kshaya* is an important factor affected by the

status of *Aayu*. There are several factors which control the natural decay process by obeying *Dinacharya, Ritucharya, using Rasayana, and Aachara Rasayana*.

In the modern text the process of apoptosis is depends on physiological status and pathological event conditions. In the physiological conditions, chromatin condensations due to inter nucleosomal genes activation, endonuclease. The size and shape of cells get distorted due to gene induced calcium ion activation dependent enzyme like proteases trans glutaminase, the protease distort The cytoskeleton of the cell and trans glutaminase denature, the cytoplasmic protein, especially cytosol enzymes, which controls several biochemical reactions, both of these phenomena's change, size shape, and the membranous status of the cell, which is later on very much prone for phagocytosis by cytotoxic cells. There are several other factors like mild thermal injury, radiation, cytotoxic anti cancerous drug and possibly hypoxia and hormonal status of the body induced the natural process of apoptosis.

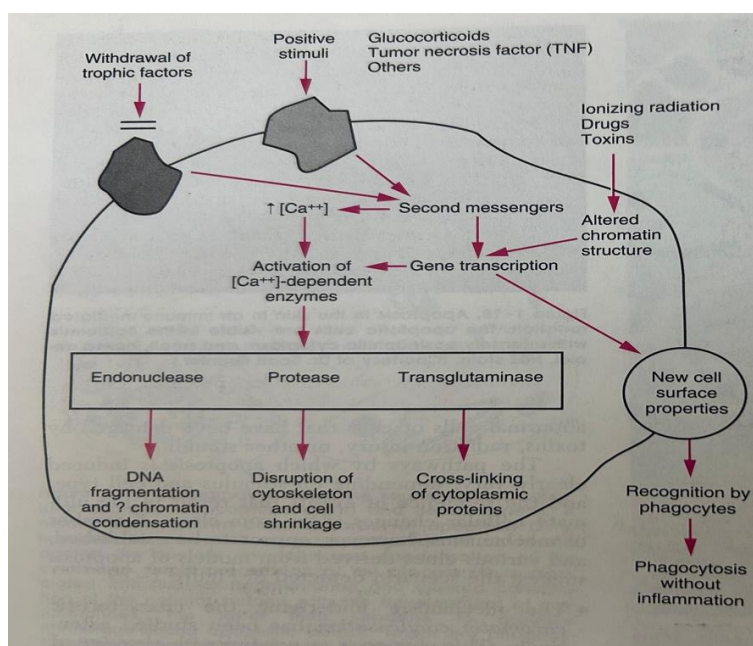


Figure taken from:- Robbins Basic Pathology 5th edition page no.20

To summarize, apoptosis is a distinctive form of cell death manifested by characteristic chromatin condensation and DNA fragmentation, whose function is the deletion of cells in normal development, organogenesis, immune function, and tissue growth, but which can also be induced by pathologic stimuli. Some of the known effector mechanisms include endonuclease activation, stimulated by increased cytosolic calcium, which causes the DNA fragmentation; transglutaminase activation, which partly accounts for the shape and volume changes; and receptor-mediated phagocytosis of apoptotic bodies. In some instances, gene

transcription and protein synthesis are required for the induction of apoptosis, and the process is regulated by a set of genes that are involved in normal cell growth and differentiation. If we study the ancient and modern review comparatively about aging, there is a drastic similarities found in Ayurvedic text, the follow of *Dincharya and Ritu Charya, Rasayan and Vajikaran and Aachar rasayan* controls the metabolic toxins like free, radicals, and hormonal status of the body. Prohibit the biochemical process of apoptosis. Nowadays in modern science also working in same direction to control the process of aging by researching on rejuvenating drugs like pigmented plant, product, multiple micro and micro nutrients formulation and natural psychosomatic natural products so by using the vast knowledge of ancient and modern science in collaboration way helpful to know the process of ageing and how and what way we should prohibited the speed of ageing.

RESULT AND CONCLUSION

Aging is a natural process, essential for vitality in a controlled manner. It is a very complex biochemical multifactorial phenomenon in which the cells go to maturation due to several biochemical reactions. It does not stop the process of aging, but by using the knowledge of the ancient and modern concepts, we should be able to make a drug regimen and *Vihar* (lifestyle) for better living of human beings. It supports the common human dream of long living.

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