

Ashwagandha and Longevity



THEORY:

Several Ayurvedic botanicals

are mentioned in ancient texts as serving as *rasayanas* or life extenders. Extract of ashwagandha (*Withania somnifera* Dunal) root is among the leading ingredients used for this purpose, and it has shown positive effects against stress and inflammation. Investigators have proven the usefulness of the *Caenorhabditis elegans* worm model in lifespan extension research. Could consumption of ashwagandha root extract and the purified components in it positively affect lifespan?



PARAMETERS:

Wild type *C. elegans* or mutant

worms were grown on NGM plates with OP50 *E. coli* as food, with ashwagandha root extract (ARE) or purified ingredients (PI) (both provided by Ixoreal Biomed) on the plates. ARE was diluted into various fractions: suspension, ~80% water soluble fraction, ~60% water soluble fraction, and ethanol solubilized mixture of the purified components in the same ratio as ARE. Treatment was chronic from embryo stage to death, and both lifespan and dose response assays were conducted.



OUTCOME:



Treatment with the purified ingredients at a concentration of 100 ng/ml **extended the lifespan** in the human nicotinic acetylcholine receptor alpha-7 equivalent mutant, *acr-16*, but not wild type or other mutant worms.



The purified extract **increased lifespan by 21.4%** compared to control and 14% compared to ethanol.



Researchers concluded: "We are able to show that one of the age-old healthy longlife supplements, Ashwagandha does extend lifespan of *C. elegans*. ... It will be worthwhile to evaluate KSM-66 for longevity effects on higher animal model."



IMPACT:



Around the world, people are living longer lives, as access to health care, sanitation and quality food have improved health and lifespan. A new study out of Imperial College London estimated that average lifespan by 2030 could extend beyond age 90 in many developed countries, particularly those with universal health coverage.¹ However, beyond just length of life is supporting health of life; the integrated use of an ingredient such as ashwagandha that has proven health benefits in stress management and inflammation could ensure the additional years are healthy ones.

1. Kontis V et al. *Lancet*. 2017; ePub 21 February. DOI: 10.1016/S0140-6736(16)32381-9

Source: Kumar R et al. "*Withania somnifera* root extract extends lifespan of *Caenorhabditis elegans*." *Annals Neurosci*. 2013;20(1):13-16. DOI: 10.5214/ans.0972.7531.200106.