

Researchers find formula that forestalls aging

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Researchers at McMaster University have developed a cocktail of ingredients that forestalls major aspects of the aging process.

The findings are published in the current issue of *Experimental Biology and Medicine*.

"As we all eventually learn, ageing diminishes our mind, fades our perception of the world and compromises our physical capacity," says David Rollo, associate professor of biology at McMaster. "Declining physical activity—think of grandparents versus toddlers—is one of the most reliable expressions of ageing and is also a good indicator of obesity and general [mortality risk](#)."

The study found that a complex [dietary supplement](#) powerfully offsets this key symptom of ageing in old mice by increasing the activity of the cellular furnaces that supply energy—or mitochondria—and by reducing emissions from these furnaces—or free radicals—that are thought to be the basic cause of ageing itself.

Most of the primary causes of human mortality and decline are strongly correlated with age and free-radical processes, including [heart disease](#), stroke, Type II diabetes, many cancers, neurodegenerative diseases, and inflammatory and autoimmune conditions. Successful intervention into the ageing process could consequently prevent or forestall all of these.

Using bagel bits soaked in the supplement to ensure consistent and

accurate dosing, the formula maintained youthful levels of locomotor activity into old age whereas old mice that were not given the supplement showed a 50 per cent loss in daily movement, a similar dramatic loss in the activity of the cellular furnaces that make our energy, and declines in brain signaling chemicals relevant to locomotion. This builds on the team's findings that the supplement extends longevity, prevents cognitive declines, and protects mice from radiation.

Ingredients consists of items that were purchased in local stores selling vitamin and health supplements for people, including vitamins B1, C, D, E, acetylsalicylic acid, beta carotene, folic acid, garlic, ginger root, ginkgo biloba, ginseng, green tea extract, magnesium, melatonin, potassium, cod liver oil, and flax seed oil. Multiple ingredients were combined based on their ability to offset five mechanisms involved in ageing.

For Rollo, the results go beyond simply prolonging the lifespan.

"For ageing humans maintaining zestful living into later years may provide greater social and economic benefits than simply extending years of likely decrepitude," he says. "This study obtained a truly remarkable extension of physical function in old mice, far greater than the respectable extension of longevity that we previous documented. This holds great promise for extending the quality of life of "health span" of humans."

Development of new and hopefully more effective supplements is ongoing.

Provided by McMaster University

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