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Cardiovascular health of nonagenarians in southern Italy: a cross-sectional, home-based pilot study of longevity

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Abstract

Background
The Cilento region of southern Italy has a high prevalence of nonagenarians and centenarians. Few studies of the oldest old have included echocardiographic and/or electrocardiographic data, in a home-based setting.

Objectives
The objective of this pilot study was to delineate the key lifestyle, medical, echocardiographic, and electrocardiographic features of a sample of nonagenarians and centenarians and their younger cohabitants from Cilento, via a comprehensive, home-based cardiovascular assessment. The ultimate aim is to identify the cardiovascular profile and lifestyle factors associated with longevity.

Methods
Twenty-six nonagenarians and centenarians (mean age 94±3 years) and 48 younger cohabitants aged 50–75 years (mean 62±5) underwent a comprehensive cardiovascular evaluation in their homes.

**Results**

In contrast to their younger cohabitants, nonagenarians and centenarians did not smoke, had lower fasting glucose levels, and lower LDL cholesterol despite being half as likely to be taking statins, and showing similar adherence to a Mediterranean diet. Over half of nonagenarians and centenarians (15/26) remained autonomous with their activities of daily living. Prevalence of self-reported coronary artery disease and stroke among nonagenarians and centenarians was low (11.5%), though a significant number had atrial fibrillation (31%) or congestive heart failure (27%). Although 62% of nonagenarians and centenarians had at least moderate valvular disease on echocardiography, less than 25% of those affected reported dyspnea.

**Conclusion**

Nonagenarians and centenarians in the Cilento region had a healthy metabolic profile and a low prevalence of clinical cardiovascular disease. Even among nonagenarians and centenarians with structural heart abnormalities, report of symptoms is low. Larger studies in the Cilento population may help elucidate the mechanisms underlying cardiovascular health in the oldest old.

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