

Egyptian princess was first person with diagnosed coronary artery disease

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The Egyptian princess Ahmose-Meryet-Amon, who lived in Thebes (Luxor) between 1580 and 1550 BC and who is now known to be first person in human history with diagnosed [coronary artery disease](#), lived on a diet rich in vegetables, fruit and a limited amount of meat from domesticated (but not fattened) animals. Wheat and barley were grown along the banks of the Nile, making bread and beer the dietary staples of this period of [ancient Egypt](#). Tobacco and [trans-fats](#) were unknown, and lifestyle was likely to have been active.

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Both presentations will be based on findings from the Horus study, in which arterial atherosclerosis was investigated in 52 ancient Egyptian mummies. Results have shown that recognisable arteries were present in

44 of the mummies, with an identifiable heart present in 16. Arterial calcification (as a marker of atherosclerosis) was evident at a variety of sites in almost half the mummies scanned, prompting the investigators to note that the condition was common in this group of middle aged or older ancient Egyptians; the 20 mummies with definite atherosclerosis were older (mean 45.years) than those with intact [vascular tissue](#) but no atherosclerosis (34.5 years).

Although relatively common at other vascular sites, atherosclerosis in the coronary arteries was evident in only three of the mummies investigated, but was clearly visualised in Princess Ahmose-Meryet-Amon (in whom calcification was present in every vascular bed visualised).

The CT scan image below shows that the princess, who died in her 40s, had atherosclerosis in two of her three main coronary arteries. "Today," said Dr Gregory S Thomas, director of Nuclear Cardiology Education at the University of California, Irvine, USA, and co-principal investigator of the Horus study, "she would have needed by-pass surgery."

"Overall, it was striking how much atherosclerosis we found," said Dr Thomas. "We think of atherosclerosis as a disease of modern lifestyle, but it's clear that it also existed 3500 years ago. Our findings certainly call into question the perception of atherosclerosis as a modern disease."

If, however, the princess enjoyed a diet deemed to be healthy and pursued a lifestyle probably active, how could this "disease of modern life" affect her so visibly? Dr Thomas and his co-principal investigator Dr Adel Allam of Al Azhar University, Cairo, suggest three possibilities.

First, that there is still some unknown risk factor for cardiovascular disease, or at least a missing link in our understanding of it. Dr Allam noted a likely effect of genetic inheritance, pointing out that much of the human predisposition to atherosclerosis could be secondary to their

genes. He similarly raised the possibility that an inflammatory response to the frequent parasitic infections common to [ancient Egyptians](#) might predispose to coronary disease - in much the same way that immunocompromised HIV cases seem also predisposed to early coronary disease. Nor can a dietary effect be excluded, despite what we know of life in ancient Egypt. Princess Ahmose-Meryet-Amon was from a noble family, her father, Seqenenre Tao II, the last pharaoh of the 17th Dynasty.

So it's likely that her diet was not that of the common Egyptian. As a royal, she would have eaten more luxury foods - more meat, butter and cheese. Moreover, foods were preserved in salt, which may also have had an adverse effect.

Despite the suggestion of a genetic, inflammatory or unknown effect, Drs Thomas and Allam were keen not to discount those risk factors for heart disease which we do know about. Indeed, even in the study's apparent association of atheroma with increasing age, there was a pattern of prevalence consistent with our own epidemiology today. "Recent studies have shown that by not smoking, having a lower blood pressure and a lower cholesterol level, calcification of our arteries is delayed," said co-investigator Dr Randall C Thompson of the St Luke's Mid-America Heart Institute in Kansas City, USA. "On the other hand, from what we can tell from this study, humans are predisposed to [atherosclerosis](#), so it behoves us to take the proper measures necessary to delay it as long as we can."

Provided by European Society of Cardiology

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