

**Fox News March 11, 2013**

**Even 4,000 year-old mummies had clogged arteries, study reveals**

Even without modern-day temptations like fast food or cigarettes, people had clogged arteries some 4,000 years ago, according to the biggest-ever hunt for the condition in mummies.

Researchers say that suggests heart disease may be more a natural part of human aging rather than being directly tied to contemporary risk factors like smoking, eating fatty foods and not exercising.

'Heart disease has been stalking mankind for over 4,000 years.'

- Dr. Randall Thompson, a cardiologist at Saint Luke's Mid America Heart Institute in Kansas City

CT scans of 137 mummies showed evidence of atherosclerosis, or hardened arteries, in one third of those examined, including those from ancient people believed to have healthy lifestyles. Atherosclerosis causes heart attacks and strokes. More than half of the mummies were from Egypt while the rest were from Peru, southwest America and the Aleutian islands in Alaska. The mummies were from about 3800 B.C. to 1900 A.D.

"Heart disease has been stalking mankind for over 4,000 years all over the globe," said Dr. Randall Thompson, a cardiologist at Saint Luke's Mid America Heart Institute in Kansas City and the paper's lead author.

The mummies with clogged arteries were older at the time of their death, around 43 versus 32 for those without the condition. In most cases, scientists couldn't say whether the heart disease killed them.

The study results were announced Sunday at a meeting of the American College of Cardiology in San Francisco and simultaneously published online in the journal Lancet.

Thompson said he was surprised to see hardened arteries even in people like the ancient Aleutians who were presumed to have a healthy lifestyle as hunter-gatherers.

"I think it's fair to say people should feel less guilty about getting heart disease in modern times," he said. "We may have oversold the idea that a healthy lifestyle can completely eliminate your risk."

Thompson said there could be unknown factors that contributed to the mummies' narrowed arteries. He said the Ancestral Puebloans who lived in underground caves in modern-day Colorado and Utah, used fire for heat and cooking, producing a lot of smoke.

"They were breathing in a lot of smoke and that could have had the same effect as cigarettes," he said.

Previous studies have found evidence of heart disease in Egyptian mummies, but [the Lancet paper is the largest survey so far](#) and the first to include mummies elsewhere in the world.

Dr. Frank Ruehli of the University of Zurich, who runs the Swiss Mummy Project, said it was clear atherosclerosis was notably present in antiquity and agreed there might be a genetic predisposition to the disease.

"Humans seem to have a particular vulnerability (to heart disease) and it will be interesting to see what genes are involved," he said. Ruehli was not connected to the study. "This is a piece in the puzzle that may tell us something important about the evolution of disease."

Other experts warned against reading too much into the mummy data.

Dr. Mike Knapton, associate medical director at the British Heart Foundation, said calcified arteries could also be caused by other ailments including endocrine disorders and that it was impossible to tell from the CT scans if the types of calcium deposits in the mummies were the kind that would have sparked a heart attack or stroke.

"It's a fascinating study but I'm not sure we can say atherosclerosis is an inevitable part of aging," he said, citing the numerous studies that have showed strong links between lifestyle factors and heart disease.

Researcher Thompson advised people to live as healthy a lifestyle as possible, noting that the risk of heart disease could be reduced with good eating habits, not smoking and exercising. "We don't have to end up like the mummies," he said.

<http://www.foxnews.com/slideshow/scitech/2010/02/16/unwrapping-king-tut/#slide=1>

Unwrapping King Tut shows he died of malaria

“ Egypt's famed King Tutankhamun suffered from a cleft palate and club foot, likely forcing him to walk with a cane, and died from complications from a broken leg exacerbated by malaria, according to the most extensive study ever of his mummy.”

**Mummies Finally Yield Truth About the Pharaohs; Mummies Finally Reveal Truth About Pharaohs Hair Comparisons Made A Laborious Process**

By MALCOLM W. BROWNE ();  
December 02, 1980,  
, Section Science Times, Page C1, Column , words

[ DISPLAYING ABSTRACT ]

PHILADELPHIA THE rapid development of computers, X-ray techniques, subtle chemical analysis and other space-age sciences is opening an avenue through which the mummies of ancient Egypt may yield new insight into man's development and present state of health.

<http://www.nytimes.com/2009/11/24/health/24heart.html?action=click&module=Search&region=searchResults&mabReward=relbias%3Ar&url=http%3A%2F%2Fquery.nytimes.com%2Fsearch%2Fsite%2F%3Faction%3Dclick%26region%3DMasthead%26pgtype%3DHomepage%26module%3DSearchSubmit%26contentCollection%3DHomepage%26t%3Dqry41%23%2Fmummies%2520reveals%2520disease>

## Artery Disease in Some Very Old Patients

The Book of Exodus in the King James translation of the Bible describes a pharaoh who “**hardened his heart**” **against the exodus of the Jews** from ancient Egypt. But if a [research letter](#) published last week in The Journal of the American Medical Association is correct, the pharaoh may have been suffering from hardened arteries.

The new report recounts how a team of cardiologists used CT scanning on mummies in the Egyptian National Museum of Antiquities in Cairo to identify [atherosclerosis](#) — a buildup of [cholesterol](#), inflammation and [scar](#) tissue in the walls of the arteries, a problem that can lead to [heart attack](#) and stroke.

The cardiologists were able to identify the disease in some mummies because atherosclerotic tissue often develops calcification, which is visible as bright spots on a CT image. The finding that some mummies had hardened arteries raises questions about the common wisdom that factors in modern life, including stress, high-fat diets, [smoking](#) and sedentary routines, play an essential role in the development of cardiovascular disease, the researchers said.

“It tells us that we have to look beyond lifestyles and [diet](#) for the cause and progression of this disease,” said Dr. Randall C. Thompson, a cardiologist at St. Luke’s Mid America Heart Institute in Kansas City, Mo., and part of the team of cardiovascular imaging specialists who traveled to Cairo last year. “To a certain extent, getting the disease is part of the human condition.”

Last February, the team of cardiologists — one Egyptian and four American — conducted whole-body scans of 20 of the museum’s mummies that were well preserved and thus likely to have identifiable arteries. The study also included two mummies that had been scanned by other researchers.

Sixteen of the people mummified had been members of a pharaoh’s court, among them two priests, a king’s minister and his wife, and a nursemaid to a queen. They lived between 1981 B.C. and A.D. 334, the cardiologists said.

Among the 16 mummies that had identifiable cardiovascular tissue, there were 5 confirmed and 4 probable cases of atherosclerosis.

The researchers found calcification in the leg arteries and the aorta of some mummies, which means that these ancient Egyptians had risk factors for problems like strokes and heart attacks — though not necessarily that they had developed heart disease before they died. As with modern humans, arterial calcification was more prevalent among the mummies who lived longer. The study’s small sample and the subjects’ high socioeconomic status may mean the findings do not extend to more ordinary ancient Egyptians, said Dr. Adel H. Allam, the Egyptian cardiologist on the team.

“They were rich people, and the habit of diet and [physical activity](#) could be a little bit different than other Egyptians who lived at that time,” said Dr. Allam, an assistant professor of cardiology at the Al Azhar Medical School in Cairo.

The group hit upon the idea of examining mummies for arterial disease in 2007, when another cardiologist, Dr. Gregory S. Thomas, was visiting Dr. Allam in Cairo and happened upon a mummified pharaoh named Menephtah in the museum. A plaque by Menephtah’s case explained that the pharaoh, who died about 1200 B.C., had been afflicted with atherosclerosis.

Dr. Thomas, a clinical professor of medicine and cardiology at the medical school of the [University of California, Irvine](#), did not believe it.

“For one thing, how would they know?” Dr. Thomas said in a phone interview last week from Cairo. “For another thing, what would people be doing with atherosclerosis 3,000 years ago, without tobacco, with an all-natural diet and, presumably, with much more walking?”

Egypt’s Supreme Council of Antiquities gave permission for the team to scan a group of mummies, provided that none were royalty. The team used a CT scanning system, housed in a trailer at the back of the museum, that had been donated by the medical device maker Siemens and had been used by a different team in 2005 to scan [Tutankhamen](#). Siemens, the National Bank of Egypt and St. Luke’s Mid America Heart Institute were sponsors of the study.

The oldest mummy in whom the group found hardened arteries was Lady Rai, a nursemaid to a famous queen, who died in about 1530 B.C. when she was between 30 and 40 years old. Dr. Thompson said the calcification in her aorta looked similar to that in images of his own patients with atherosclerosis in Kansas City.

“She went in a relic,” Dr. Thompson said of the mummified Lady Rai. “She came out a patient.”

Modern habits have long been linked to cardiovascular disease in the public mind — in part, said Dr. Roger S. Blumenthal, director of the Ciccarone Center for the Prevention of Heart Disease at Johns Hopkins, because of correlations like the one between smoking and heart disease.

[Heart disease](#) increased in the 20th century as more people took up smoking. Then it declined after the surgeon general’s famous warning in 1964, said Dr. Blumenthal, who is not affiliated with the mummy researchers.

But Dr. Thomas says he now views arterial buildup as being more like [wrinkles](#) — a human condition whose progression may be inhibited by behavior like avoiding [cigarettes](#) and too much sunlight, but which is ultimately inevitable. If that is the case, he said, preventive lifestyle changes become even more important.

“You have to think about it differently if everyone is going to get it,” Dr. Thomas said. “I don’t want to say it is something we can prevent, but it is something we can delay.”