if you missed your last dental checkup, a new study might encourage you to book that appointment right away; researchers have identified a higher risk of heart disease for individuals who have hidden tooth infections.

women in the United States, responsible for around 610,000 deaths every year.

Coronary artery disease (CAD) is the most common form of heart disease, caused by a buildup of plaque in the coronary arteries, reducing blood flow to the heart.

Common risk factors for heart disease include obesity , physical inactivity, smoking, high blood pressure , high cholesterol , and diabetes . However, researchers are increasingly suggesting poor dental health should be added to the list.

Last year, for example, a study published in *Infection and Immunity* suggested that the bacterium involved in gum disease may also raise the risk of heart disease.

Now, researchers from the University of Helsinki in Finland have uncovered a link between dental root tip infection, known as apical periodontitis , and greater risk for acute coronary syndrome (ACS) - an umbrella term for conditions that involve blocked blood flow to the coronary arteries.

Study co-author John Liljestrand, of the Department of Oral and Maxillofacial Diseases at the University of Helsinki, and colleagues publish their findings in the *Journal of Dental Research*.

Apical periodontitis is a condition characterized by inflammatory lesions of the pulp in the center of the tooth, most commonly triggered by infection. Dental caries, or tooth decay, are the most common cause of apical periodontitis.

While the condition can cause pain, this may not present until later on in the infection, meaning some people who have apical periodontitis are unaware they have it; most cases are uncovered unexpectedly through X-rays.

Apical periodontitis 'independently associated' with CAD, ACS

The research involved 508 individuals of a mean age of 62 years who were part of The Finnish Parogene study and who were experiencing some heart problems.

All patients underwent angiography - an X-ray of the blood vessels. This revealed that 36 percent of the patients had stable CAD, 33 percent had ACS, and 31 percent had no significant CAD.

Using panoramic tomography, the researchers assessed the patients' teeth and jaws. They found that up to 58 percent of the patients had at least one inflammatory lesion, a sign of apical periodontitis.

The results revealed that patients with apical periodontitis were more likely to have CAD or ACS ; this association was strongest for patients whose apical periodontitis was untreated and required a root canal, with a 2.7-times greater risk of ACS.

These results remained after accounting for a number of possible confounding factors, including patients' age, sex, smoking, type 2 diabetes , body mass index (BMI), and number of teeth.

Based on their findings, the researchers believe apical periodontitis can be considered a risk factor for heart disease: