



Watch ONE-MINUTE WORLD NEWS

Page last updated at 23:29 GMT, Monday, 25 May 2009 00:29 UK

E-mail this to a friend

Printable version

Gene links heart and gum disease

A genetic link between dental disease and heart attacks has been found by German researchers.

Gum disease - periodontitis - is known to be associated with heart disease but how exactly they are linked is unknown.

Now the University of Kiel team has found a common gene mutation in people with periodontitis and heart attack patients, a conference heard.

Study leader Dr Arne Schaefer said gum disease should be taken very seriously and treated as early as possible.

Both coronary heart disease (CHD) and periodontitis are associated with the same risk factors - most importantly smoking, diabetes and obesity.

Researchers have shown similarities between the bacteria found in the oral cavity and those in coronary plaques and both diseases are characterised by an imbalanced immune reaction and chronic inflammation.

One theory is that the bacteria involved in gum disease trigger a low grade inflammatory response throughout the body, prompting changes in the arteries leading to strokes and heart attacks.

Another possibility is that bacteria disturbs the way blood vessels dilate directly, since some bacteria can enter the bloodstream.

Genetic link

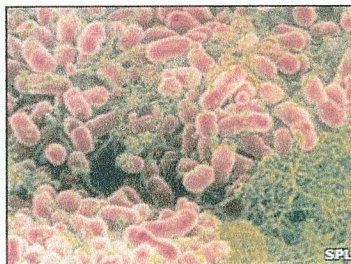
Speaking at the annual conference of the European Society of Human Genetics in Vienna, study leader Dr Arne Schaefer from the University of Kiel said his team found the gene linking the conditions on chromosome 9.

It had already been associated with heart attacks but in the latest study was found both in a group of 1,097 patients with heart disease and in 151 patients with the most aggressive early-onset forms of periodontitis.

The genetic variation was identical in both diseases and the researchers confirmed the association in further groups of 1,100 CHD patients and 180 periodontitis patients.

Although it is known what protein the gene encodes it is not yet clear how this is linked with the conditions.

"Now we know for sure that there is a strong genetic link, patients with periodontitis should try to reduce their risk factors and take



Periodontitis is caused by a bacterial infection

“ Now we know for sure that there is a strong genetic link, patients with periodontitis should try to reduce their risk factors and take preventive measures at an early stage ”
Study leader, Dr Arne Schaefer

SEE ALSO

- Gum disease link to cancer risk
26 May 08 | Health
- Obesity 'raises gum disease risk'
11 Dec 07 | Health
- Gum disease care heart aid hope
02 Mar 07 | Health

RELATED INTERNET LINKS

- European Society of Human Genetics
- British Heart Foundation

The BBC is not responsible for the content of external internet sites

TOP HEALTH STORIES

- Gene links heart and gum disease
- Floppy baby breakthrough
- US 'cancer battle' teen returns

News feeds

MOST POPULAR STORIES NOW

SHARED READ WATCHED/LISTENED

- Obama 'makes Supreme Court pick'
- North Korea 'fires more missiles'
- Couple's 81st wedding anniversary
- US paper missed Watergate scoop
- Is there a problem with paintball?
- California ruling on gay marriage
- Model Lloyd attacked in nightclub
- South Africa goes into recession
- Asian neighbours react to nuclear test
- French President Sarkozy opens UAE base

Most popular now, in detail

News Front Page



- Africa
- Americas
- Asia-Pacific
- Europe
- Middle East
- South Asia
- UK
- Business
- Health
- Medical notes
- Science & Environment
- Technology
- Entertainment
- Also in the news

Video and Audio

- Have Your Say
- In Pictures
- Country Profiles
- Special Reports

Related BBC sites

- Sport
- Weather
- On This Day
- Editors' Blog
- BBC World Service

Site Version

- UK Version
- International Version
- About the versions

preventive measures at an early stage", said Dr Schaefer.

"We hope that our findings will make it easier to diagnose the disease at an early stage, and that in future a greater insight into the specific pathophysiology might open the way to effective treatment before the disease can take hold."

"In the meantime, because of its association with CHD, we think that periodontitis should be taken very seriously by dentists and diagnosed and treated as early as possible."

Dr Francesco D'Aiuto, clinical lecturer at the UCL Eastman Dental Institute, said the study had focused on a particularly aggressive form of periodontitis but the findings take researchers a step closer to working out how the two diseases are linked.

"We will be looking closely looking at this novel genetic variant to see if the finding can be replicated in the UK population.

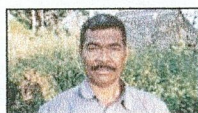
"There is great interest whether this genetic locus is associated not only with aggressive forms of periodontitis but also with the more common chronic form, which is present in some form in at least 10-20% of the UK population."

Bookmark with: What are these?

[Delicious](#)
[Digg](#)
[reddit](#)
[Facebook](#)
[StumbleUpon](#)

[E-mail this to a friend](#) [Printable version](#)

FEATURES, VIEWS, ANALYSIS



Lost children
The Timorese taken by Indonesian occupiers



Thwock, splat
Is this harmless sport or sinister pseudo-militarism?



FROM BBC SPORT >>
In pictures
Path to Champions League final

MOST POPULAR NOW | 51,557 pages were read in the last minute.

[SKIP TO TOP](#)

[PRODUCTS & SERVICES](#)

[E-mail news](#)

[Mobiles](#)

[Alerts](#)

[News feeds](#)

[Podcasts](#)



The BBC is not responsible for the content of external internet sites.

[News Sources](#)
[About BBC News](#)

[BBC Help](#)
[Accessibility Help](#)
[Jobs](#)
[Advertise With Us](#)

[About the BBC](#)
[Contact Us](#)
[Terms of Use](#)
[Privacy & Cookies](#)