Sugary drinks in rheumatic fever link

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A world-first study looking at the risk factors for rheumatic fever has made an ‘‘unexpected’’ finding that sugar-sweetened drinks could be a factor.

Research led by the University of Otago also uncovered the strongest evidence yet that household overcrowding is a major risk factor for acute rheumatic fever, an inflammatory reaction to group A streptococcus bacterial infection of the throat or skin.

Rheumatic fever is rare in developed countries but Aotearoa’s disease rates, particularly in indigenous and Pacific young people, have been labelled ‘‘shameful’’ by public health experts.

Rates of rheumatic fever are about 20 times higher for Ma¯ori, and 44 times higher for Pacific people, than for non-Ma¯ori and nonPacific people.

One or more rheumatic fever attacks can cause permanent damage to heart valves (rheumatic heart disease), which may require major surgery and can result in a lower quality of life and premature death.

The research found drinking sugar-sweetened drinks was twice as common among rheumatic fever cases compared with healthy controls (matched by age, gender, ethnicity, district health board and deprivation), even after adjusting for all the other risk factors.

Lead researcher Professor Michael Baker said there were several ways in which sugarsweetened drinks could increase risk and planning was under way for further research to test some of those theories about the ‘‘unexpected’’ find.

One theory was that because bacteria metabolised on sugar, sugary drinks could change the mix of bacteria in the throat.

Sugary drinks were also a marker of a generally poorer diet and were commonly consumed by lower-income families and those with food insecurity, who were more likely to live in poverty or overcrowded housing, he said.

Household overcrowding was a ‘‘major’’ risk for both acute rheumatic fever and streptococcal skin infections.

Baker said this was the first time academics had investigated risk factors for group A strep infections of the throat (strep throat) and skin (strep skin), which could cause rheumatic fever. Both rheumatic fever and strep skin were linked with barriers to accessing primary healthcare and a family history of rheumatic fever and rheumatic heart disease.

Baker said the importance of strep skin in ‘‘triggering’’ the disease suggested treating skin infections in young tamariki could help to prevent them developing rheumatic fever.

‘‘Our findings reinforce the central role that good quality, uncrowded housing has in protecting children during the period when they are vulnerable to rheumatic fever and other infectious diseases.’’

Baker said the ‘‘ultimate goal’’ was to lift children out of poverty and overcrowded housing, which increased the risk of all infectious diseases.

In the meantime, treating skin infections could be the ‘‘point in the chain to really break the link’’ – something he encouraged Health NZ to make a ‘‘major priority’’.

Associate Professor Jason Gurney (Nga¯ Puhi) said rheumatic fever was an important example of the stark inequities that existed in health outcomes in Aotearoa.

‘‘It is also crucial that we look further upstream at the social determinants of this disease and continue to address inequities in access to things like high-quality, healthy housing and primary care.’’