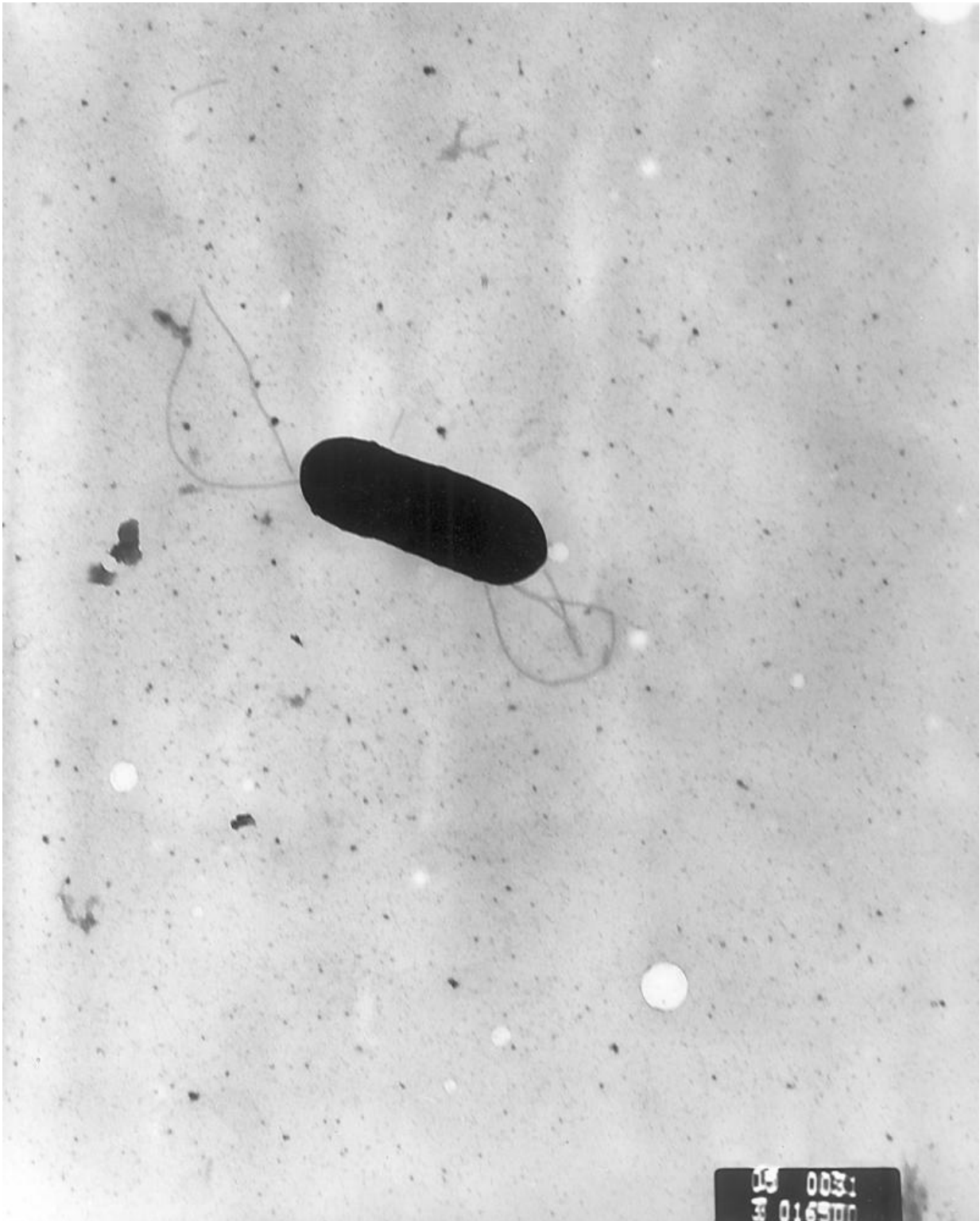


First nationwide study of listeria in mothers and babies

December 12 2018



Electron micrograph of a flagellated *Listeria monocytogenes* bacterium, Magnified 41,250X. Credit: CDC/public domain

The first study of the burden of listeria in pregnant New Zealanders and their babies has found reassuringly low rates of the infection – indicating food safety warnings are working to prevent unnecessary cases of miscarriage, still birth, and meningitis in babies infected in the womb. However in those who contract the infection, the consequences are devastating, with the lives of 12 unborn babies claimed over two decades, and more than 100 people hospitalised.

The University of Otago, Christchurch, study found disproportionately high levels of the [infection](#) in mothers and babies identified as Pacific Islanders.

Listeria is most commonly transmitted by the consumption of contaminated food. Pregnant women are about 18 times more likely to get the infection than the general population. It most commonly presents in the third trimester of pregnancy (from 28 weeks) and is rarely fatal in the mother, but can seriously affect infants and children.

University of Otago, Christchurch, medical student Emma Jeffs did the research, supervised by paediatric infectious disease expert Associate Professor Tony Walls as part of the campus' Summer Studentship programme. The research is being shared publically at this week's One Health Aotearoa Symposium in Wellington.

To do the [listeria](#) research, Ms Jeffs studied 20 years of data (between 1997 and 2016) on cases of the notifiable disease in pregnant women and children. The study is the first on this particular population – the most vulnerable to the infection's most serious consequences.

Over two decades, there were 143 cases of the disease; 115 (80.4 per cent) cases in pregnant women and 28 (19.6 per cent) cases in children.

Of all cases, 118 resulted in hospitalisation.

Ms Jeffs says the study indicates pregnant women on the whole seem to be following the Ministry of Health food safety recommendations to avoid the disease. This includes not eating foods such as sushi, deli meats or salads that are most likely to be contaminated with listeria.

Though rare, the consequences for those who contract listeria are devastating, says Ms Jeffs. The study identified eight cases of still birth and four cases of miscarriage to mothers hospitalised by listeria. Infected expectant mothers were also involved in more than 30 cases of early delivery or foetal distress. There were 12 cases of children infected with listeria who developed meningitis, as a result of their lowered immune resistance.

Listeriosis is a serious infection in children. International research has found approximately half of very young infants who contract the infection will not survive, and for those who do, most will have life-long negative health consequences.

Ms Jeffs says women and children identifying as Pacific Island ethnicity had the highest incidence of disease notification and hospitalisation. The reason for this disparity is unknown but warrants investigation, and potentially a different food safety approach from relevant authorities.

Following is a breakdown of the rate of listeria in pregnant women and [children](#), by ethnicity:

- European pregnant women = 0.29 cases per 100,000 (40 cases)
- Pacific Island pregnant women = 2.15 cases per 100,000 (31 cases)
- Maori pregnant [women](#) = 0.36 cases per 100,000 (11 cases)
- Asian [pregnant women](#) = 0.94 cases per 100,000 (23 cases)

The study found there were 81 cases that were notified but did not require hospitalisation over the two decades. Outcomes for these people are not known.

Provided by University of Otago

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