



AUSTRALIA WEEK

ESSAY

COMPETITION...

Topic: HOW CAN GOOD NUTRITION, LIKE
TRADITIONAL FOOD, HELP REDUCE THE IMPACT OF
TUBERCULOSIS?

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How can good nutrition, like traditional food, help reduce the impact of tuberculosis?

Tuberculosis is a contagious infection caused by the organism *Mycobacterium tuberculosis*. Although it is not known whether tuberculosis was present in Papua New Guinea (PNG) prior to the arrival of Europeans in the early 19th century, evidence from the literature suggest it may have been introduced. At the time of colonisation between 1869 and 1910, the Germans and Australians recruited New Guinea labourers to work in plantations in Samoa and Queensland, and these men brought many diseases including tuberculosis back to their villages on their return. In this essay, the factors that have contributed to the spread of tuberculosis in PNG, as well as factors such as good nutrition that can reduce the impact of tuberculosis, will be discussed.

Over the past 40 years, tuberculosis has become an epidemic in PNG because of increasing migration and the gradual breakdown in health service delivery and public health prevention programs, particularly during the post-independence era. This has been compounded by the increasing rate of rural to urban drifts, leading to an increase in the number of squatter settlements, overcrowding, poor hygiene practices, poverty and the high rate of malnutrition. Without good nutrition, malnutrition will develop and the body will be unable to have an effective immune system to fight against diseases such as tuberculosis.

A recent study suggests that PNG has one of the highest incidence rates of tuberculosis in the world with an estimate of 1290 infected people per 100,000. However, unlike in other developing countries, particularly in sub-Saharan Africa where HIV prevalence rates can be over 20%, the current tuberculosis epidemic in PNG is not driven by HIV. In fact, the HIV prevalence rate in PNG is only 0.65%. This means that in sub-Saharan Africa, tuberculosis is mainly an opportunistic infection in HIV-infected people whose immune system has been compromised. Contrary to this, in PNG, the primary driver of the current tuberculosis epidemic is not HIV causing reduced immunity, but malnutrition.

Fortunately, there is no shortage of healthy nutritious food in PNG. Indeed, the country is blessed with fertile soil and an abundance of nutritious traditional food. Therefore, it comes down to the choices an individual makes on a daily basis. Choosing to eat the nutritious traditional food that we abundantly have can be an important factor in reducing the impact of tuberculosis in PNG. Despite this, it is so saddening to see malnutrition claiming the lives of over 30% of hospitalised children every year. In Madang Province alone, deaths due to malnutrition in hospitalised children are as high as 45%. According to the PNG Paediatric Society, tuberculosis kills 1 in every 4 children with malnutrition.

Unfortunately, many of the children, women and men affected by tuberculosis and malnutrition are poor. Therefore, they may not have access to nutritious food that can help sustain their immunity to fight against opportunistic infections such as tuberculosis, and this renders them prone to death and significant morbidity. However, because tuberculosis and malnutrition are diseases of poverty, this does not imply that it will be difficult to eradicate tuberculosis from PNG. Like many other diseases, tuberculosis can be effectively controlled, treated and eradicated. Although contributing factors such as over-crowding and the breakdown in public health prevention strategies are often beyond the control of individual citizens, daily intake of appropriate nutritious food, particularly traditional food, can play an important role in sustaining an individual's immune system.

Additionally, a traditional diet is healthier and is more likely to contain high fibre as well as a variety of vitamins and minerals. Unlike processed food and low quality imported foodstuff such as lamb flaps, a traditional diet is more likely to prevent lifestyle diseases such as heart attack, stroke and diabetes that are currently claiming the lives of many working class Papua New Guineans.

In conclusion, compared to other developing countries where the tuberculosis epidemic is driven by HIV, it is highly likely that malnutrition and its effect on lowering the immune system is the primary driver of tuberculosis in PNG. The PNG tuberculosis epidemic is facilitated by poor hygiene practices such as coughing or spitting openly in public places and the breakdown of public health control programs. Despite this, good nutrition alone, particularly in the form of traditional foodstuff, is likely to be a key in reducing the high burden of tuberculosis and lifestyle diseases in PNG.

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