

Concurrent Session 3: Joint NSA/ANTF Session: Nutrition and Aboriginal Health

The contribution of Dr Richard Smith to Aboriginal nutrition

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Dr Richard Smith discovered at CSIRO that the sheep wasting disease or coastal disease was due to a cobalt deficiency which through the absence of B12 led to an inability to convert propionate to glucose with a build up of acetate. The laboratory skills in trace mineral measurement led him to turn to measuring trace minerals in human studies. He and Don Cheek noted that zinc levels were low in Australian Aboriginal children and proposed that zinc supplements would overcome the growth deficits seen in those children. A trial of zinc supplementation in 200 children increased plasma zinc but had no effect on growth which they concluded was due to calorie deficiency.

An extensive survey of diet and lifestyle factors in relation to hypertension was undertaken in the Kimberley region in 1988-89 in 490 men and women and heart disease was found to be twice as common than in white Australians which was strongly related to systolic hypertension. Mortality 14 years later was related to alcohol intake and take away foods > 9 times month.

A survey of mothers and babies in 1996/7 in 5 communities in the Kimberley and Pilbara regions found that full term birth weights were only slightly lower than international standards and exceeded norms at 2 weeks after birth. Low birth weights (<2,500g) were due chiefly to a prematurity rate of 20%. A nutritional intervention in the communities did not change term birth weights or pre term birth weights or growth rates up to 3 years but did change term growth rates from 12-36 months.