
Diabetes In Older Aboriginal Adults

Introduction

The Indigenous Australians metabolism has been regulated in the direction of generating them as skilled hunters and gatherers, which was crucial for a growing traditional lifestyle. However with less Indigenous individuals maintaining a traditional lifestyle, and the vast majority being susceptible to current westernised living, with diet that is short in fibre and high in fat and sugar, alcohol and a sedentary lifestyle, resulting in current poor metabolism. An increase in weight, diabetes, and correlating conditions such as high blood pressure and heart disease have resulted due to a westernised lifestyle among aboriginal people. Research has indicated diminished glucose tolerance and inordinately high insulin levels in blood due to poor unhealthy lifestyle choices in older indigenous Australians, (Diabetes in Australians, 2019). Diabetes is classified as one of the major fastest growing chronic diseases, with type 2 diabetes attaining high epidemic percentages all-round and in Australia, creating a challenge for public health systems all over. Indigenous people are among the most socially disadvantaged groups hence the experience of unreasonable extreme levels of diabetes. According to research aboriginal people are three times more likely to develop diabetes in comparison to non-Aboriginal Australians and Indigenous women are two times more prone to gestational diabetes development in comparison to non- aboriginal women, (Burrow & Ride, 2016). Indigenous people are six times more likely to die from diabetes than non-Indigenous Australians, as a result mortality percentages are equivalently high. Therefore, an unhealthy lifestyle and a genetic susceptibility incorporated aid to the extreme levels of diabetes in older aboriginal Australians. This essay will examine the pathophysiology of diabetes, causes and risk factors contributing to the manifestation of the disease and the appropriate prevention and management of this condition. Through focusing on these areas the Indigenous health will be impacted positively allowing potential changes resulting in decreased mortality rate, education and a healthier advancement for aboriginal Australians.

Pathophysiology

Diabetes is one of the world's fastest growing chronic diseases affecting both children and adults. It has attained a high level of epidemic percentages worldwide and in Australia, affecting the public and the health systems (Burrow & Ride, 2016). Diabetes mellitus is a chronic disease caused by high measures of glucose in blood. As a result the body is incompetent of forming and or using insulin successfully. With no current cure it can affect the whole body and therefore will require lifelong management to reduce the risks of developing complications such as heart diseases, kidney damage, retinopathy and stroke. Diabetes can be classified into three main types which include, type 1, type 2 and gestational diabetes (Burrow & Ride, 2016). Type 1 diabetes develops when the pancreas does not generate insulin, as a result it is an auto-immune condition. It is mainly common in kids and teenagers, which puts the older indigenous adults at a low level of concern. However, a vast majority of older aboriginal adults have type 2 diabetes according to (Diabetes in Australia, 2019). Type 2 diabetes can develop from genetics and poor lifestyle choices which is the main problem for the older indigenous adults. As a result a combination of this causes insulin resistance and the pancreas is unable to produce enough insulin. Affecting those over thirty-five years of aged from an aboriginal descent with risk factors

such as obese and high blood pressure. Additional research suggests that an estimate of more than 300 million people will have diabetes by 2025 and there will be an exponential growth rate in type 2 diabetes (Harris and Zinman, 2000). Another main type of diabetes known as gestational diabetes affects 14% of pregnant women. Disadvantaged groups such as Indigenous Australian women are mainly affected putting them at a high risk of developing type 2 diabetes later on life (Burrow & Ride, 2016). This short term type of diabetes is caused by the placenta producing a high glucose level blocking insulin which can affect the growth of the baby when pregnant (Diabetes in Australia, 2019). The pathophysiology research clearly illustrates how diabetes is a great burden among the Indigenous Australians as they are “three times more likely to have diabetes than non-Indigenous Australians,” (Burrow & Ride, 2016).

Causes and Risk Factors

The danger of the progression of diabetes is not only limited by an individual's actions, but also by historical, social, cultural, geographical, and economic and community factors and government health policies and services (Burrow & Ride, 2016). This leads to the discussion of the main determinants influencing the causes and risk factors of diabetes in older Indigenous Australians. The development of a westernised lifestyle has had an immense impact on the aboriginal people. This has resulted in them not practising cultural or traditional lifestyle which allowed them to go out and hunt for the food which helped them stay fit, lean and not suffer from metabolic diseases. Therefore the adaptation of a new lifestyle has costed them health risk factors. (Burrow & Ride, 2016) define health risk factors as “behaviours, characteristics, or exposures that increase the likelihood of a person developing a disease”. Thus the main cause of diabetes due to health risk behaviours such as high blood pressure, abnormal cholesterol, smoking, sedentary lifestyle, poor diet and high BMI. Having hypertension in older aboriginal adults puts them at a severe risk of developing diabetes as they are three times as likely compared to those with no high blood pressure (24% compared with 9%), (Burrow & Ride, 2016). This clearly demonstrates the importance of maintaining a healthy blood pressure as it minimises the risk. Going forward with research, Indigenous Australian adults have been tested with high cholesterol levels and smoking percentages with the prevalence of diabetes increasing with more than 50%. It is more than common for aboriginals to smoke at a very young age of 15. With low social development in the remote areas such as Northern Territory is puts them at high risk as they lack health literacy. Body mass Index also has an influence on many chronic diseases as a result overweight people are at a greater risk of diabetes. This leads to a statistics which indicated that about 75% of Indigenous Australian women have excess abdominal fat. However, other findings argue that aboriginals have a “thrifty genotype” that aided to their past hunting and gathering way of living (Agarwal, 2017). Therefore their bodies naturally lack tolerance for sugar and hyperlipidaemia in order to maintain a lean body (Matthew Taylor, Usher & Mcdermott, 2013). Sadly the proportion of individuals who are obese is higher in the Indigenous Australian community in comparison to other non-Indigenous people. Some other challenges of diabetes can cause risks such as the development retinopathy. This is a complication of diabetes that affects the eyes causing damage to the blood vessels in the retina. Areas such as Indigenous communities in the remote countries such as Dubbo in NSW with restricted health resources are likely to have retinopathy. 15% of the newly diagnosed diabetes patients will already have signs of retinopathy at diagnosis, because type 2 diabetes may have gone undiagnosed for long (Remote Area Health Corps, 2019). Therefore blindness can result as a risk of diabetes in the age groups of 35 to 54 years, (Bursfield et al, 2002). Unfortunately diabetes rates among older aboriginal adults keep rising with diabetes being the second most

common cause of death in Indigenous people in 2017, (Fred Hollows 2019). However, this can all be controlled with a strong implication of successful prevention and management.

Prevention and Management

Evidenced long-term health promotion measures are crucial for the health of the older Aboriginal Australians in order to prevent and manage diabetes according to their needs. In Indigenous communities' diabetes can be managed through the enforcement of education, lifestyle modifications, access to primary healthcare, access to medicines and culturally appropriate health services. According to (WHO, 2019), health education is aimed to assist people in communities to advance their health by broadening their horizons and impacting their beliefs. Therefore, the incorporation of education will allow aboriginals to make healthy choices that help reduce the risk of diabetes and improving their nutritional status (O'Dea, Rowley & Brown, 2007). This leads to lifestyle modifications, which involve programs that assist communities with awareness, life abilities, understanding and help required to develop maintainable modifications to prevent diabetes (Burrow & Ride, 2016). However, without sufficient lasting funding keeping a healthy lifestyle program has been deemed difficult in Indigenous communities where social and economic issues are present. Access to primary health care is also important for Indigenous Australian older adults as it lowers limitations to health care access, racism and helps improve one's health outcome, (Panaretto, Wenitong, Button & Ring, 2014). It is a social model that allows all communities, individuals, and families to participate in better health results through socially acceptable cultural practice. Despite this aboriginal people are often disadvantaged from accessing this service due to costs associated, discrimination from mainstream service and distance, (Davy, Harfield, McArthur, Munn & Brown, 2016). To deliver the most appropriate diabetes management system older Aboriginal adults need to have access to medicines. With the assistance of the medicine the body is able to sustain stable blood sugar levels and improve insulin effectiveness, (Diabetes in Australia, 2019). The Webster packs is a useful strategy for improving access to medicines for who face challenges with health literacy on medicine labelling and information. Lastly, culturally appropriate healthcare and services is another way of preventing and managing diabetes in older Indigenous Australians, (Webster et al., 2016). Therefore culturally appropriate services are vital as they provide effective communication at all levels and focuses on what is specifically suitable and appropriate for Aboriginals. It is crucial to recognise that Indigenous people take pride in their culture and identity, which surrounds their overall wellbeing hence the importance of community values corresponding to family, culture and land, (Burrow & Ride, 2016). This clearly illustrates the importance of prevention and management of diabetes and research in Australia has indicated that early intervention with lifestyle modifications in individuals with pre-diabetes can reduce the risk of acquiring diabetes by nearly 60% over a three year period, (Diabetes in Australia).

Conclusion

Culturally appropriate care is effective in providing prevention and management of diabetes among Indigenous Australians. Diabetes is a chronic disease that is not curable, however, it can be managed and prevented through the implementation of education and lifestyle modifications in communities. Diabetes has reached high prevalence levels in Australia mainly affecting socially developing groups such as Aboriginals due to health risk behaviours and sedentary lifestyle. Indigenous Australians will continue to suffer if long term interventions for prevention

and management that address diabetes across the lifespan are not in place (Burrow & Ride, 2016). Overall early recognition will assist in the future with diminishing mortality rate and provide a healthier advancement of diabetes management in Indigenous Australians.

References

1. Older Australia at a glance, Diabetes - Australian Institute of Health and Welfare. (2019). Retrieved 27 August 2019, from <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/health-functioning/diabetes>
2. Diabetes - Health Topics - Australian Indigenous HealthInfoNet. (2019). Retrieved 29 August 2019, from <https://healthinfo.net.ecu.edu.au/learn/health-topics/diabetes/>
3. Matthew Taylor, S., Usher, K., & Mcdermott, R. (2013). Diabetes in Torres Strait Islanders: Challenges and opportunities for remote area nurses. *Contemporary Nurse*, 46(1), 46-53. doi: 10.5172/conu.2013.46.1.46
<https://www.tandfonline.com/doi/pdf/10.5172/conu.2013.46.1.46?needAccess=true>
4. Busfield, F., Duffy, D., Kesting, J., Walker, S., Lovelock, P., & Good, D. et al. (2002). A Genomewide Search for Type 2 Diabetes–Susceptibility Genes in Indigenous Australians. *The American Journal Of Human Genetics*, 70(2), 349-357. doi: 10.1086/338626
5. Webster, E., Johnson, C., Kemp, B., Smith, V., Johnson, M., & Townsend, B. (2016). Theory that explains an Aboriginal perspective of learning to understand and manage diabetes. *Australian And New Zealand Journal Of Public Health*, 41(1), 27-31. doi: 10.1111/1753-6405.12605
6. Harris, S., & Zinman, B. (2000). Primary prevention of type 2 diabetes in high-risk populations. *Diabetes Care*, 23(7), 879-881. doi: 10.2337/diacare.23.7.87
7. Diabetes in Australia. (2019). Retrieved 27 August 2019, from <https://www.diabetesaustralia.com.au/diabetes-in-australia>
8. Diabetes & Diabetic Retinopathy in Aboriginal & Torres Strait Islander Populations | Indigenous Health | Fred Hollows. (2019). Retrieved 27 August 2019, from <https://www.hollows.org/au/diabetic-retinopathy-indigenous-australia>
9. Home | RAHC - Remote Area Health Corps. (2019). Retrieved 29 August 2019, from <https://www.rahc.com.au/>
10. O'Dea, K., Rowley, K., & Brown, A. (2007). Diabetes in Indigenous Australians: possible ways forward. *The Medical Journal Of Australia*, 186(10), 494. doi:10.5694/j.1326-5377.2007.tb01020.x
11. Chen, L., Magliano, D. and Zimmet, P. (2011). The worldwide epidemiology of type 2 diabetes mellitus—present and future perspectives. *Nature Reviews Endocrinology*, 8(4), pp.228-236.
12. Davy, C., Harfield, S., McArthur, A., Munn, Z., & Brown, A. (2016). Access to primary health care services for Indigenous peoples: A framework synthesis. *International Journal For Equity In Health*, 15(1). doi: 10.1186/s12939-016-0450-5
13. Panaretto, K., Wenitong, M., Button, S., & Ring, I. (2014). Aboriginal community controlled health services: leading the way in primary care. *The Medical Journal Of Australia*, 200(11), 649-652. doi: 10.5694/mja13.00005
14. Agarwal, M. (2017). Mortality in indigenous populations of Australia: An ounce of action trounces a pound of theory. *Journal Of Diabetes And Its Complications*, 31(4), 649-650. doi: 10.1016/j.jdiacomp.2017.01.018