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### Abbreviations used in this issue

**CAD** = coronary artery disease  
**CFR** = case fatality rate  
**COPD** = chronic obstructive pulmonary disease  
**HDL-C** = high-density lipoprotein cholesterol  
**LDL-C** = low-density lipoprotein cholesterol  
**MI** = myocardial infarction  
**TC** = total cholesterol  
**TG** = triglycerides

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## Welcome to the seventeenth issue of Asian Health Research Review.

The *Health Needs Assessment of Asian People living in the Auckland region* undertaken by Dr Suneela [Mehta \(2012\)](#) shows that for cardiovascular disease, coronary heart disease and stroke, Indian men across the Auckland region have higher mortality rates than their European/Other counterparts. Similar trends are noted among Indian women, although the mortality rates for women are lower. Indian men generally have much higher hospitalisation rates for cardiovascular disease, coronary heart disease and stroke, compared to their European/Other counterparts and higher rates as compared to Māori men. Other Asian (i.e. Japanese, Korean, Afghani, Sri Lankan, Bangladeshi, Pakistani) men have higher hospitalisation rates from cardiovascular disease and stroke compared to European/Other men, but similar rates of coronary heart disease admissions. Indian women generally have higher hospitalisation rates for cardiovascular disease, coronary heart disease and stroke compared to European/Other women (Mehta, 2012). Indian men have the highest rate of coronary procedures of all ethnic groups, in the Auckland region. Indian women generally have significantly higher rates of coronary procedures compared to European/Other women (Mehta, 2012). The hospitalisation rates for congestive heart failure for Indian men and women are higher compared to European/Other men and women.

Comparison of mortality data and hospitalisation rates for cardiovascular disease indicate that the burden of cardiovascular morbidity is relatively high among Indians, but the burden of cardiovascular mortality, while higher than among European/Others, is not as prominent. This is likely to be accounted for by the relatively recent arrival of a large proportion of Asian communities in Auckland, such that the cardiovascular morbidity among Indian and, to a lesser extent, Other Asian populations have not yet had time to be fully reflected in the mortality data of those communities.

[Scragg's \(2016\)](#) study *Asian Health in Aotearoa in 2011-2013: Trends since 2002-2003 and 2006-2007* shows that Asian adults are less likely to be physically active and more likely to be sedentary than European and Other adults in New Zealand. Of concern, the level of physical activity by Asian adults has changed little since the 2002-2003 survey. This is worrying as emerging evidence reported in studies from several Asian countries shows that physical activity and cardiorespiratory fitness are inversely associated with risk of developing the metabolic syndrome and diabetes. For South Asian, Chinese and Other Asian adults, mean BMI levels are lower than those in all other ethnic groups. However, the lower mean BMI levels in Asian adults may not be associated with lowered risk of cardiovascular diseases and diabetes, as the risk of these diseases is associated with lower cut-points for BMI and waist circumference in adult Asians compared to Europeans.

The recommendation of both Mehta's (2012) and Scragg's (2016) reports are that as South Asian, Chinese and Other Asian populations in New Zealand are rapidly increasing, there is an ongoing need to monitor separately their health in national and regional surveys because they comprise a growing proportion of the total population. Further, targeted culturally appropriate health education to promote smoking cessation, physical activity and healthy eating is needed to prevent cardiovascular disease and diabetes in Asian populations. This issue will focus on the causes of cardiovascular disease including smoking, and the associated risk factors of obesity and sedentary lifestyles.

We hope you enjoy this issue and look forward to receiving any feedback you may have.

Kind regards,

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The Asian Health Review has been commissioned by the Northern Regional Alliance (NRA), which manages the Asian, migrant and refugee health action plan on behalf of the Waitemata, Auckland and Counties Manukau District Health Boards.

## A profile of New Zealand 'Asian' participants of the 2008/09 Adult National Nutrition Survey: focus on dietary habits, nutrient intakes and health outcomes

**Authors:** Parackal SM et al.

**Summary:** This analysis of data from the cross-sectional NZ 2008-09 Adult National Nutrition Survey compared diet and health outcomes across, and within, the South Asian (SA), East and South-East Asian (ESEA) and the New Zealand European and Other (NZE0) group and the effect of duration of residence. The SA group was more likely to 'never' eat red meat than the NZEO ( $p < 0.001$ ) and, among females, ESEA ( $p < 0.05$ ) groups. Fats and some micronutrient (riboflavin, vitamin B<sub>6</sub>, B<sub>12</sub>, selenium) intakes were also lower in SA than NZEO ( $p < 0.05$ ) groups. Zinc and vitamin B<sub>12</sub> intake was lower in SA females than ESEA and NZEO females ( $p < 0.05$ ). More SAs were obese using ethnic-specific cut-offs, had low iron status and reported being diagnosed with diabetes than NZEOs and ESEAs.  $\beta$ -carotene, vitamin C and calcium intakes were higher in recent SA male migrants than long-term SA male migrants ( $p < 0.05$ ).

**Comment (GG):** This study profiled 'Asian' participants from the 2008/09 Adult Nutritional Survey to investigate similarities and differences within two Asian subgroups; and compared them with the Europeans in regards to dietary habits, nutrient intakes and health outcomes. The study also examined the effect of duration of residence on the Asian subgroups. The Asian subgroups derived higher percentage of energy from carbohydrate than the Europeans, not surprising, as most Asian diets are predominately rice-based. A lower proportion of Asian subgroups met the recommended 5+ daily intake of fruits and vegetables. A higher proportion of SAs were obese using ethnic-specific cut-offs, had lower iron status and reported diabetes compared with Europeans and ESEAs. These findings are consistent with the New Zealand Health Survey results. The obvious heterogeneity among Asian subgroups must be acknowledged when planning interventions to reduce the burden of growing diabetes and cardiovascular diseases in these populations.

**Reference:** *Public Health Nutr.* 2015;18(5):893-904

[Abstract](#)

### Independent commentary by Dr Annette Mortensen and Dr Geeta Gala



Dr Annette Mortensen has worked to improve the health of newcomers to New Zealand from ethnically diverse backgrounds for the last 15 years. Since 2007 Annette has worked as the Asian, Refugee and Migrant Health Programme Manager for the Northern Regional Alliance on behalf of the Auckland region District Health Boards. **FOR FULL BIO** [CLICK HERE](#)



Dr Geeta Gala is a Public Health Physician. She leads and advises on many of the cancer projects led by the Northern Cancer Network and is active in advocacy for improvement of Asian health in New Zealand.

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## Why do Chinese people with COPD continue smoking: the attitudes and beliefs of Chinese residents of Vancouver, Canada

**Authors:** Poureslami I et al.

**Summary:** This study in 91 Mandarin or Cantonese speaking Canadian patients with COPD, compared the smoking habits and associated beliefs in those who successfully stopped smoking versus those who continued to smoke (24 current and 67 former smokers). Data from individual semi-structured interviews indicated differences in terms of beliefs about smoking helping relaxation and reducing COPD anxiety and stress, and that it is a psychological habit that cannot be easily given up. An understanding of Chinese smokers' internal motivations to quit is needed before development of culturally and linguistically relevant smoking cessation counselling.

**Comment (AM):** Chinese people with COPD in Canada and other settlement societies who continue smoking may be unaware that smoking causes COPD. Some believed that a certain level of tobacco consumption was safe. Others felt that smoking had a calming effect. Using interpreters and Asian smoke-free coordinators is essential in engaging Asian clients who smoke, where language and health literacy is a barrier. In the study, Asian participants reported difficulty in understanding and applying information provided by health practitioners about how to overcome withdrawal symptoms. Some mentioned that they had stopped smoking and experienced weight gain, dizziness, depression and mood changes, which had led them to start smoking again. Currently there is only one dedicated Asian quitting service provider operating in the Auckland region, Asian Smokefree Communities. The services provide support in Chinese, Korean, Burmese and Hindi/Fiji Hindi languages. The service offers a culturally appropriate approach to the smoking cessation programme. Factors which contribute to the success of this approach include: using Asian community media and networks to promote smoking cessation information; translated resources; Asian language speaking smoke-free coordinators delivering family focused community-based home, workplace or clinic based interventions with the option of individual appointments; coordinators who assist Asian smokers and their families to create smoke-free environments (home and cars), and support smokers to go smoke-free using advice, education, counselling, nicotine replacement therapy, and carbon monoxide monitoring. Further information on Asian Smokefree services can be found at: <http://www.comprehensivcare.co.nz/services-and-programmes/addictions/asian-smokefree-services/>

**Reference:** *Diversity Equal Health Care* 2015;12(1):18-27

[Abstract](#)

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### CONGRATULATIONS TO

**Metua Daniel-Atutolu**, who won a \$500 Visa Prezzy Card by taking part in our recent Pacific Health Review Subscriber Survey. Metua is a Senior Lecturer in Nursing at the Manukau Institute of Technology.



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## Ethnic variation in lipid profile and its associations with body composition and diet: Differences between Iranians, Indians and Caucasians living in Australia

**Authors:** Meshkini M et al.

**Summary:** This Australian cross-sectional study assessed ethnic variations in lipid profile, body composition and diet in overweight and obese European- (n = 32), Indian- (n = 28) and Iranian-Australians (n = 31). Iranian-Australians had lower serum total cholesterol (TC) and low-density lipoprotein cholesterol (LDL-C) levels than European- and Indian-Australians, while both Iranian- and Indian-Australians had lower mean high-density lipoprotein cholesterol (HDL-C) than European-Australians. Triglycerides (TG) and HDL-C, but not TC and LDL-C levels were associated with variations in truncal adiposity measurements; however, the level of the associations varied among ethnic groups. Regression analysis indicated that, after controlling for potential confounders, ethnicity significantly predicted TC (p = 0.01), TG (p = 0.03) and HDL-C (p = 0.04). LDL-C was associated with total (p = 0.005) and saturated fat (p = 0.004) intake, which also significantly determined serum TC (p = 0.04 and p = 0.02).

**Comment (GG):** This is a cross-sectional study from Australia, which evaluated the ethnic variation in lipid profile and its association with body composition and diet in overweight and obese Iranians, Indians and Europeans. The study results showed that serum TC and LDL-C levels were significantly lower in Iranian-Australians than in European-Australians and Indian-Australians, and HDL-C levels were lower in Iranian-Australians and Indian-Australians compared to European-Australians. The study found significant association of TG and HDL-C with truncal obesity, but there were ethnic variations. In contrast, LDL-C was significantly associated with dietary intake of total and saturated fats. The study findings indicate different mechanisms in dyslipidemia. Lifestyle or environmental factors can affect TC and LDL-C levels but low-HDL-C has a correlation with truncal obesity and may have a genetic basis. Although, the small sample size may confound the results of the study, the findings correlate with evidence in the literature.

**Reference:** *J Immigr Minor Health. 2016;Jan 13 [Epub ahead of print]*

[Abstract](#)

## Systematic review of smoking initiation among Asian adolescents, 2005-2015: Utilizing the frameworks of triadic influence and planned behavior

**Authors:** Talip T et al.

**Summary:** This systematic review of 20 peer-reviewed articles on cigarette smoking initiation among Asian adolescents was intended to model the factors that influence smoking initiation. Those initiating smoking had a mean age of 10-14 years and were more likely to be male, older adolescents, with low parental socioeconomic status, low parental monitoring, low parental education level and no smoking discussion at home, living in public housing and exhibiting health-risk behaviours. The risk of smoking initiation was increased by; exposure to smokers, influence by peers, exposure to tobacco advertisements, receiving pocket money, a lack of smoking knowledge, poor school performance, family conflict, and psychological problems.

**Comment (AM):** This study gives an insight into patterns of smoking initiation in Asian source countries for migrants to New Zealand. In countries such as Bangladesh, China, Hong Kong, Taiwan, India, Indonesia, Iran, Japan, Korea and Malaysia Asian countries, smoking starts young. The study shows that the mean age of smoking initiation is between the ages of 10 and 14, with a higher uptake among males. Apart from age, most factors influencing smoking initiation are the same for Asian and for non-Asian studies. These factors include: low socio-economic status, adolescents with low parental supervision, and parental and adolescent low health literacy. Alcohol and other risk behaviours are associated with smoking initiation. As well, psychological factors including stress, depression, anxiety, social alienation and low self-esteem are associated with smoking initiation. Peers are a significant influence on the uptake of smoking in adolescence, both positively and negatively.

**Reference:** *Asian Pac J Cancer Prev. 2016;17(7):3341-55*

[Abstract](#)

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## Ethnic differences in clinical outcome of patients presenting to the emergency department with chest pain

**Authors:** de Hoog VC et al.

**Summary:** In a multi-ethnic (788 Caucasians, 1281 Chinese, 404 Indians and 311 Malays) multinational (Singapore and The Netherlands) cohort study, ethnicity was investigated as a risk factor in patients presenting to the emergency department with suspected acute myocardial infarction (MI). Caucasian patients were older with more cardiovascular adverse events; however, Asian patients had a greater burden of cardiovascular risk factors. Caucasian (11.2%) and Malay (10.6%) patients more frequently had acute MI than Chinese and Indians (6.4%; p < 0.001), even after correction for baseline differences, while Chinese and Indian patients more often had unstable angina. Coronary artery disease (CAD) was more extensive among Asian than Caucasian patients (triple-vessel disease: Malays 32.8%, Indians 32.4%, Chinese 22.8%, Caucasians 6.5%; p < 0.001) and Chinese MI patients underwent coronary revascularisation more frequently than Caucasian patients (Chinese 67.5%, Indians 62.5%, Malay 46.7%, Caucasians 41.4%; p = 0.005). Over a 1-year follow-up period, ethnicity did not independently predict major adverse cardiovascular events in all chest pain patients.

**Comment (GG):** This is a multi-ethnic cohort study conducted in Singapore and The Netherlands where patients from different ethnic groups (Caucasian, Chinese, Indian or Malay), presenting with chest pain to the emergency department were analysed for ethnic difference in presentation and clinical outcomes. Patients with significant elevation of ST-segment of the electrocardiogram were excluded from the cohort. The study showed substantial inter-ethnic differences in the prevalence of MI, unstable angina, revascularisation rate and the extent of CAD among patients presenting to the emergency department with chest pain. Caucasians had a higher chance of MI, despite less severe CAD, compared with Indians and Chinese patients. In contrast, Indians and Chinese patients had more unstable angina and all the Asians (Indian, Chinese, Malay) had extensive CAD when compared with Europeans. The study contrasts with findings in the general population where the incidence of MI is higher in Indians and lower in Chinese when compared with Caucasians. These findings have important implications for risk stratification and management of patients presenting with chest pain to the emergency department. Although the Asian patients had a lower prevalence of acute MI, they harbour severe and diffuse CAD, leading to unstable angina and coronary revascularisation. Therefore, consideration of ethnicity in risk stratification is as important in acute management as it is in the community when assessing cardiovascular risk!

**Reference:** *Eur Heart J Acute Cardiovasc Care. 2015;Dec 29 [Epub ahead of print]*

[Abstract](#)

## Factors associated with smoking in immigrants from non-western to western countries – what role does acculturation play? A systemic review

**Authors:** Reiss K et al.

**Summary:** This systematic review of 27 peer-reviewed quantitative studies (published 1998-2013) examined factors associated with smoking among adult immigrants to the USA, Canada, Ireland, Germany, The Netherlands, Norway, the UK, and Australia, and the relationship between acculturation and smoking, accounting for the stage of the 'smoking epidemic' in the immigrants origin and host countries. Acculturation was a focus of 21 of the studies (bidimensional multi-item scales designed for the immigrant group under study and/or proxy measures such as language proficiency or host country length of stay) and 16 of the studies identified that more acculturated women were more likely to smoke than less acculturated women, whereas among men the opposite was true.

**Comment (AM):** This study is helpful in understanding patterns of smoking in Asian migrant populations on arrival and the positive impacts of acculturation. Similar to studies of smoking initiation conducted in Asian countries, in New Zealand, Asian women are less likely to be current tobacco smokers than European women (4% versus 15%), while Asian and European men are similar (17% versus 15%). The study shows that migrants will adapt to the smoking behaviour of the host country. In New Zealand, the level of smoking among the Asian communities has not changed since 2002-2003 (Scragg 2016). However, the study of *Asian Health in Aotearoa in 2011-2013: Trends since 2002-2003 and 2006-2007* shows that there is an encouraging sign that smoke-free education is having a positive impact in achieving smoke-free homes and cars in Asian families in New Zealand (Scragg 2016). Asian time trends show that there is a pattern of decreased smoking inside the house and car in each Asian ethnic group from 2006-2007 (6%) to 2012-2013 (2%). If smoking prevalences can be maintained, particularly those of Asian women, their parental model of non-smoking will mean that their children are less likely to take up tobacco smoking when they become adults, so that the burden of tobacco-related diseases among the Asian community is minimised in the future.

**Reference:** *Tob Induc Dis.* 2015;13(1):11

[Abstract](#)

## Are ethnic inequalities in 30-day ischaemic stroke survival emerging as treatment becomes more effective?

**Authors:** Sandiford P et al.

**Summary:** This was an analysis of time trends in 30-day case fatality rate (CFR) of ischaemic stroke in New Zealand in Māori, Pacific, Asian and European people over two 5-year periods (2000-2004, 2010-2014). The age-sex standardised CFR in Europeans fell from 13.4% (95% CI 13.0 to 13.9%) to 10.7% (10.3 to 11.1%) between the 2000-2004 and 2010-2014 time periods. Between the same time periods the CFR declined in Māori from 18.2% to 16.2%, but rose in Pacific and Asian people although neither of these differences were significant. The CFR was higher in Māori than in Europeans in 2000-2004, and for all ethnic groups compared with Europeans in 2010-2014, after controlling for socio-demographic variables, service factors and comorbidities. The ethnic inequality in CFR rose over time, with a significant change in Pacific ( $p = 0.033$ ) and Asian ( $p = 0.010$ ) people, with borderline significance in Māori ( $p = 0.053$ ).

**Comment (GG):** This is a New Zealand study where 30-day CFRs of ischaemic stroke were compared in Māori, Pacific, Asian and European people between two five-year periods from routinely collected national data. The study showed increased inequality in CFR over the two time periods for Pacific ( $p = 0.033$ ) and Asian ( $p = 0.010$ ), and of borderline significance for Māori ( $p=0.053$ ) when compared with Europeans. The study suggests that the ethnic inequalities in 30-day ischaemic stroke survival may be due to differences in severity at presentation; non-European ethnic groups are less likely to present with milder strokes and there are ethnic differences in access to and use of services/interventions for stroke. This study implies that health literacy must be increased among the ethnic groups and culturally appropriate stroke intervention services be available to decrease these ethnic disparities.

**Reference:** *N Z Med J* 2016;129(1437):8-14

[Abstract](#)

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## To move or not to move? Exploring the relationship between residential mobility, risk of cardiovascular disease and ethnicity in New Zealand

**Authors:** Darlington-Pollock F et al.

**Summary:** These authors modelled the risk of cardiovascular disease in the NZ population according to ethnicity, residential mobility status, baseline deprivation and transitions between deprivation statuses from a cohort of 2,077,470 participants using encrypted National Health Index (eNHI) numbers linked to individual level data. The relationship between residential mobility and cardiovascular disease risk varied between ethnic groups and was strongly influenced by an inter-relationship between residential and deprivation mobility. Much of the variation in cardiovascular disease risk between ethnic groups was due to differing deprivation experiences.

**Comment (AM):** Scragg's (2016) study of Asian health in New Zealand shows that the prevalence of cardio-metabolic diseases (i.e. cardiovascular disease and diabetes) was generally higher among Asian people compared to European & Other. This was particularly so for South Asians who had significantly increased prevalences of hypertension, high blood cholesterol and diabetes and for Other Asians who had an increased prevalence of diabetes. The prevalences of these conditions have remained unchanged since 2002-2003 suggesting that preventive efforts are having no effect. Darlington-Pollock et al., offer a nuanced approach to understanding which groups within the Indian population are at greatest risk. Using residential mobility data in New Zealand, they demonstrate that those living in more deprived areas and those who are residentially mobile are at even greater risk of being hospitalised for cardiovascular disease. They conclude that these groups must be the focus of policies aiming to reduce cardiovascular disease in New Zealand populations; and of effective engagement by health practitioners.

**Reference:** *Soc Sci Med.* 2016;165:128-40

[Abstract](#)



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