Summary

Non-western migrants form an increasing proportion of the populations of many Western countries, including the Netherlands where 11% of the population comprises non-western migrants and their children. In the Netherlands Surinamese, Turkish and Moroccan migrants form approximately 6% of the population. Among these groups the prevalence of overweight and obesity is high, more than half of Surinamese, Turkish and Moroccan adults aged 35 years or older are either overweight or obese. Overweight and obesity confer an increased risk for cardiovascular diseases, type 2 diabetes, cancer, musculoskeletal disorders and respiratory diseases. In addition overweight or obese individuals may be subject to social bias and discrimination potentially reducing quality of life, educational and professional achievement.

The aetiology of overweight and obesity is complex but at the most basic level is due to behaviour that results in excessive energy intake or insufficient energy expenditure. Influences on behaviour include genetic, biological as well as environmental factors. Among some migrant groups higher overweight and obesity prevalence may be partly attributed to genetic susceptibility, however, it is generally accepted that genetic influences interact with environmental factors.

This thesis focuses on two important determinants of overweight in four non-western migrant groups living in the Netherlands: Surinamese Hindustani and Creoles, Turks and Moroccans. Firstly, diet as part of the energy balance equation and, secondly, the perception of overweight as an important underlying motivator for engaging in weight control. Three environmental influences form the basis of the studies described: physical, economic and socio-cultural determinants and the changes herein as a result of migration.

Information regarding these is necessary to guide the development of effective promotional activities that target healthy living and eating.

To address this goal we formulated the following questions:

1. What are important influences on the diet and dietary habits of migrants?
   
   This question particularly focuses on socio-economic, socio-cultural influences as well as the impact of the physical environment.

2. a) What is the body size preference and body weight perception of migrants?
   
   b) What influence do migration, acculturation, socio-economic and socio-cultural
factors have on body size preference and body weight perception?
c) How do body size preference and weight perception relate to weight loss practice?

The studies described in this thesis were based on three sources of data. Quantitative data were obtained from the LASER study which included Turkish and Moroccan men and women aged 18-30 years and from the SUNSET study which included Surinamese and ethnic Dutch men and women aged 35-60 years. In addition we conducted a qualitative study which included Turkish and Moroccan participants in Amsterdam and Moroccan women in Morocco. The first part of the thesis which includes chapters 2 and 3 focuses on the diet of migrants.

Chapter 2 describes a study of diet quality and the intake of specific food groups among Surinamese and ethnic Dutch men and women. The associations with ethnicity, acculturation and educational level were explored. Compared with ethnic Dutch, Surinamese men and women scored higher on overall diet quality and reported more frequent intakes of fruit, vegetables and fish as well as less frequent intakes of red meat. However, breakfast intake and salt use were less favourable than among ethnic Dutch men and women. Educational level was positively associated with diet quality in ethnic Dutch, as is typical in many Western populations, but we did not observe similar associations in the Surinamese groups. Furthermore we found no consistent associations between acculturation level, measured on the basis of social contact with ethnic Dutch, and diet. Finally, residence duration which on average was 22 years, and age at migration, average 21 years of age, were not associated with diet. Therefore we concluded that ethnic origin, in and of itself, was associated with differences in diet, suggesting that it should be considered in the development of nutrition health promotion activities.

Chapter 3 describes a focus group study among Turkish and Moroccan men and women. This study aimed to gain insight into the mechanisms underlying ethnic differences in diet by exploring the perceived socio-cultural influences on food intake and their relevance considering migration-related changes in physical, social and cultural context. A major theme that emerged in the focus groups was that of hospitality. Participants discussed that within their cultures it is a highly valued concept that is promoted and ‘rewarded’ by their shared religion, Islam. In the Turkish and Moroccan cultures food plays a central role in expressing hospitality, resulting in a social context where food is abundant and difficult to refuse. Improvements in economic situation that come about as a result of migration serve to enhance existing traditions; the host’s status is enhanced by serving an abundance of luxury foods to guests. Participants contrasted their food cultures with what they perceived as the mainstream Dutch culture and reflected on the relevance of food culture for ethnic identity. Additional issues discussed were the difficulties encountered
by migrants in reconciling the lifestyle from their home countries with that in the Netherlands and indicated that some of the more “unhealthy” eating practices (overeating and irregular meal patterns) are a result of this mismatch. There were indications that, as may be expected, a certain degree of dietary acculturation is occurring; new foods are being adopted and young migrants often have a preference for the foods consumed by their peers. At the same time, it seems that the traditions that govern food behaviors are valued, also by younger members of the groups studied. The value placed by migrants on their foods and food culture lead us to conclude that the social and cultural context of food intake cannot be ignored if interventions aimed at these groups are to be effective.

*Chapters four and five* focus on the perception of body weight. In *chapter four* we aimed to evaluate body size preference, body weight perception and their relationship with actual weight in Turkish and Moroccan migrants. In addition we wished to explore whether acculturation level (measured on the basis of social contacts with ethnic Dutch, cultural orientation and generation level) was associated with preferred body size. We found a general preference for ‘thin’ body sizes in all groups. The majority of women in this study appeared to be dissatisfied with their body size, i.e. their ideal size was thinner than their current body size, whereas most men appeared satisfied with their current size. Among overweight participants (i.e. those with BMI 25-29.9 kg/m²), two thirds of men and one third of women perceived themselves as ‘average’. Finally, paying attention to own body weight was associated with a discrepancy between ideal and current size amongst women and with perceiving oneself as ‘overweight’ amongst men. Preferred body size was not significantly associated with acculturation level. We concluded that there are some similarities between these two study groups and typical Western populations; most women wished to be thinner than they were whereas men were more likely to be satisfied with their size, in addition, the majority of men was unaware of being overweight.

In *chapter five* we turned our attention to Surinamese (African origin and South Asian origin) and ethnic Dutch men and women. We aimed to investigate ethnic differences in the perception of overweight and its association with weight loss behaviour. We found that compared with their Dutch peers, overweight African origin men and women were less likely to perceive themselves as overweight. A similar but not significant trend was observed in overweight South Asian origin men, but not in overweight South Asian women. Nonetheless, African origin and South Asian origin participants were more likely than their Dutch peers to report trying to lose weight and to use physical activity rather than diet as a weight loss strategy. In all three ethnic groups, we observed only weak associations between reported weight loss attempts and reported dietary intakes and amount of physical activity. We concluded therefore that, contrary to
expectations, the fact that Surinamese men and women were less likely to perceive themselves as overweight did not appear to be a barrier to trying to lose weight. Among those trying to lose weight the ethnic differences in the strategies being used implies that interventions need to take these apparently different preferences into account. Finally, the weak association between lifestyle variables and reported weight loss activity implies that individuals (including ethnic Dutch men and women) require support in realising their intentions.

Chapter 6 reports the results of an explorative focus group study among Moroccan women living in Morocco and in the Netherlands. By comparing the perceptions of these two groups of women we aimed to gain some understanding of the socio-cultural context that has an influence on Moroccan women’s body weight. The contrast between Morocco and the Netherlands formed a thread that linked the major themes that emerged during the discussions. Women in all settings perceived the influence of the physical environment on the lifestyles of migrant women in a similar way; the abundance of food available to migrants in combination with limited opportunities for engaging in familiar and acceptable forms of physical activity were mentioned as important causes of overweight. The participants in all study locations mentioned that, within their communities, weight loss is viewed as a sign of psychological, economic and social problems. Women reported that traditional ideas were changing but also mentioned that they still persisted in others: women in the Netherlands talked about this being the case amongst older people and people in Morocco; in Morocco, women in the city talked about this being the case among women living in villages. Participants indicated that they are influenced by traditional norms in so far as they wish to avoid being perceived negatively by others in their social environment. We concluded that migration to a Western ‘obesogenic’ environment is perceived to impact on the lifestyle of migrants and seems to work in tandem with pre-existing cultural norms. Migrants’ maintenance of contact with Morocco (through their yearly summer vacation, their reliance on satellite television originating from Morocco and a preference for marriage partners from their land of origin) ensure the continuing relevance of these norms.

Finally, chapter 7 addresses the main findings of the studies, including some of the methodological limitations. The results are discussed in light of their relevance for public health practice and some recommendations for future research are made. The studies described in this thesis have led to the following main conclusions:

Firstly, the diet of migrants does not appear to change as readily as might be expected and is likely to contain both positive and negative elements. This is due to a complex interplay of factors that influence diet (such as cultural, social, economic and environmental influences) and the association between diet and migrants’ sense of identity. Interventions, therefore, need to
encourage the maintenance of the positive characteristics of diet while being sensitive to the value migrants attach to their dietary traditions in handling more negative aspects.

Secondly, a lack of awareness of personal weight status may be a barrier for weight loss among men (with South Asian men forming an exception). Raising awareness, therefore, is an important goal for interventions targeting male migrants. In contrast, overweight perception does not appear to be a barrier for weight loss among migrant women. Rather, it seems that the influence of social norms governing behaviour working in tandem with traditional cultural ideas regarding body weight may have greater influence on women’s body weights.

Thirdly, the high prevalence of overweight despite preference for thinner figures as well as the inconsistent relationships between reported weight loss activity and lifestyle variables (diet and physical activity) implies that migrants just like their ethnic Dutch peers require support in making appropriate changes in lifestyle in order to achieve weight loss. This would ideally involve interventions that account for physical, economic, socio-cultural and political environments at both the macro and micro level.