

# Migration and Public Health

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In an increasingly globalized world more people have the possibility to settle in a country other than the one in which they were born. To the new country migrants bring their lifestyle choices and other important risk factors and defense mechanisms for health. If the immigrants are refugees, a period of uncertainty awaits them before their life in a new country can begin. The newcomers often end up in low-status neighborhoods, are reduced to heavy and low-wage jobs and often also continue to be socially vulnerable because of discrimination.

Immigrants in Sweden of non-European background report three to four times as often as Swedish-born people that they suffer from poor or very poor health. Male immigrants smoke more than Swedish-born men, while alcohol-related diseases are less common among many immigrant groups. The incidence of a number of specific public health problems, such as allergic diseases and diabetes, varies widely across different immigrant groups. The particular background of refugees makes them especially susceptible to psychiatric morbidity, a susceptibility that is further increased by the stresses that occur during the asylum process. Undocumented migrants have very limited access to health and medical care in Sweden.

## Immigration to Sweden

In the period 1850 to 1930, 1.4 million Swedes, or about 20 percent of the Swedish population, emigrated. Most of them emigrated to North America. During this same period the returnees from America also dominated immigration to Sweden.

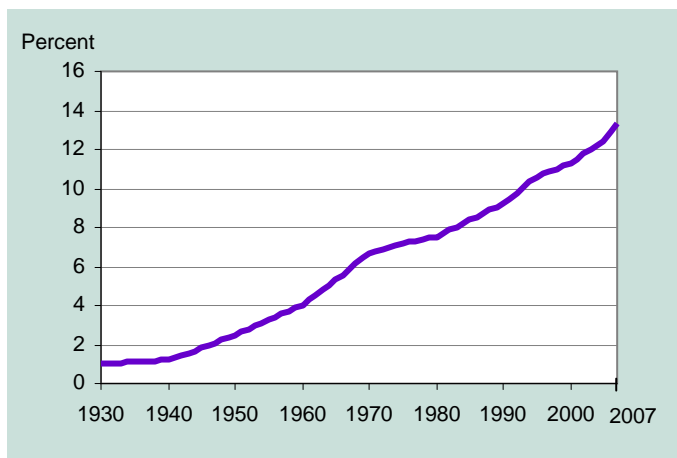
During the 1930s and 1940s the trend shifted and the proportion of foreign-born people in the Swedish population has since then gradually increased (Figure 1). During the 1940s it was primarily refugees from the Second World War who made their way to Sweden. During the 1950s and 1960s there was a big demand for labor within Swedish industry, which led to an immigration of labor from our neighboring Nordic countries. Gradually immigrants also came from southern Europe and Turkey. This immigration of labor culminated during the final years of the 1960s. At the beginning of the 1970s the demand for labor in Swedish industry fell drastically and refugees and their relatives have dominated immigration to Sweden ever since [1].

In the 1970s and 1980s many refugees from the dictatorships in Latin America and the Islamic revolution in Iran settled in Sweden. During the 1990s and the first years of the 2000s, refugees have come mainly from the disintegrating former Communist countries Yugoslavia and the Soviet Union, as well as from civil war-plagued Iraq and Somalia.



### Figure 1. Foreign-born people

Number (percentage) of foreign-born people in the Swedish population, in the period 1930–2007



Source: Statistics Sweden

As of December 31, 2006, 17 percent of the Swedish population was of foreign origin, i.e., was either born in a country other than Sweden (13 percent) or had two foreign-born parents (4 percent). Of these, 52,000 were international adoptees. Then there are also the asylum seekers and other migrants without a residence permit who are not included in the population statistics.

The majority of those who have immigrated to Sweden in the post-war period have been children or young adults in the 25–35 age group. After 1975, however, the immigration of refugees has led to an increased proportion of immigrants in the 40–60 age group. The percentage of elderly among the immigrants has always been low but the percentage of foreign-born people among the elderly in the Swedish population is increasing. The increase in elderly immigrants is likely to continue at a fast pace over the next few decades as a consequence of the immigration of young adults from the 1960s onwards. The sex distribution among immigrants has been fairly uniform over the years. In the 20–35 age group there is a certain overrepresentation of women, mainly due to the fact that more foreign-born women than men move to Sweden in order to marry native-born Swedes [1].

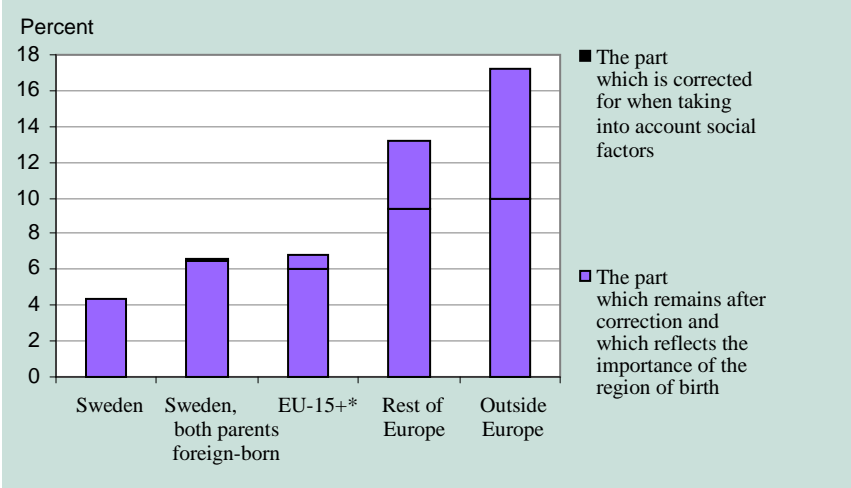
Migration is part of a global development process in which the world is being linked closer and closer together through increased trade and improved communications [2]. This development affects public health in Sweden in many different ways. This section deals only with the public health of those who have migrated to Sweden from other countries and that of their children. Health risks which Swedes are exposed to when they travel abroad, infectious diseases, for example, are not dealt with in this chapter but instead in the chapter on infectious diseases. Nor does this chapter deal with the health situation of national minorities who for a long time now have been represented in the Swedish population and who have special entitlements according to Swedish law: the Sami, the Finnish-speaking Finns domiciled in Sweden, the Torne Valley Finns, the Romanies and Jews.

# How healthy are Swedes of foreign background?

Statistics Sweden in its Surveys of Living Conditions (ULF) during 2000–2005 asked a representative selection of the Swedish population about their health. People of foreign backgrounds uniformly reported having poorer health than those of Swedish background [3]. Interviewees who were born outside of Europe reported having the worst health, followed by those who were born outside the EU15 region. Those who were born within the EU15 region had a similar pattern of health to that of native-born Swedes.

These distinctions were found for almost all health-related questions. The differences were particularly pronounced for self-assessed “poor health,” diminished work capacity and physical disabilities, but also for anxiety and nervousness. It was three to four times more common for foreign-born interviewees with origins outside the Western world to assess their health as “poor” or “very poor” compared with interviewees of Swedish background (Figure 2). When the analysis was corrected for differences in social factors among the groups, such as how common it was for the interviewees to be laborers, to have poorer economic resources and to live in rented accommodation, the differences in health decreased significantly [3]. This indicates that it is the social living conditions in Sweden that to a great extent are responsible for the subjective ill-health reported by people of foreign background . Other important causes of a poorer state of health include, for example, risk factors attached to being a refugee and being a newcomer in Swedish society. It takes at least ten years for an immigrant or a refugee to attain living conditions that are equivalent to those of the remainder of Sweden's population [4]. If people feel that they are being discriminated against, this probably contributes to poorer health as well [5].

Figure 2. Country of birth and subjective health  
 Percentage of the respective group which reports having poor or very poor health, by region of birth



Predicted percentage based on a logistic statistical model adjusted for social factors (socioeconomic group, type of housing and available funds).

\* Besides EU15, North America, Australia and New Zealand are also included

Source: ULF surveys 2000–2005, Statistics Sweden and the National Board of Health and Welfare [3]

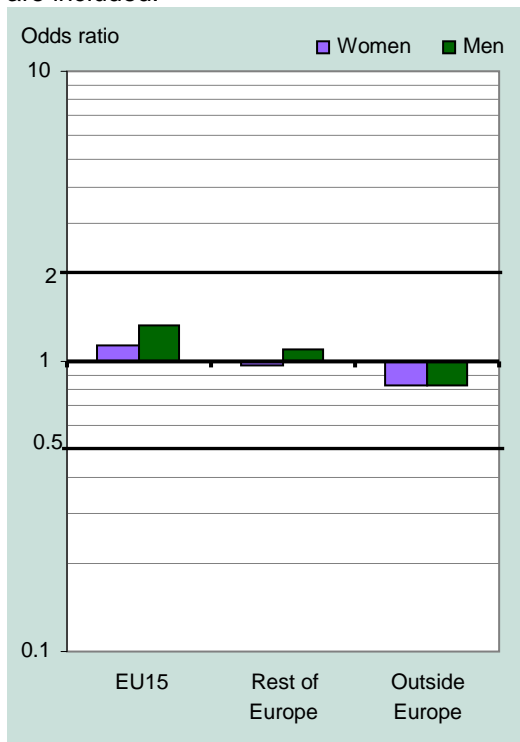
Foreign-born women report, just as Swedish-born women do, having more instances of ill health than men of the same background. The National Board of Health and Welfare's immigrant study in 1996–1997 showed that the health of women born in Turkey and Chile differed more from that of Swedish-born women than did the health of men in the corresponding groups [3]. In the ULF study during 2000–2005 the differences in ill health

between Swedish-born and foreign-born people were equally large for women and men. This shows that the results cannot be generalized so that they apply to all immigrant groups [3].

As far as the risks of death are concerned, the picture is different. Both men and women of non-European origin tend to have a lower risk of early death than Swedish-born people (Figure 3).

**Figure 3. Mortality in foreign-born people**

Increased and reduced risks (odds ratio) of death for foreign-born people (according to region of birth) during the period 2001–2005. Only people with some form of recorded income in the 25–64 age group are included.



Control group (relative risk=1) consists of people born in Sweden. Adjusted for age and sex.  
 Source: Cause of Death Register, National Board of Health and Welfare; LISA (Longitudinella Integrationsdatabasen för Sjukförsäkrings- och Arbetsmarknadsstudier) [Longitudinal Integration Database for Health Insurance and Labor Market Studies], Statistics Sweden.

When cases of death among foreign-born people in the nationally registered population of Sweden are analyzed, it is important to bear in mind that deaths which occur while the person is staying outside of Sweden are not always reported to the Swedish authorities. This applies particularly when the death occurs outside of Europe. This underreporting leads to a systematic underestimation of the actual number of deaths.

Analyses which have especially tried to take into account the underestimation of the number of deaths indicate, however, that people born outside of Europe have a somewhat lower risk of early death than Swedish-born people [6]. This applies particularly to alcohol-related mortality. The EU15 group, of which the majority were born in Finland, on the other hand, has a substantially higher risk of dying early compared with Swedish-born people. This is explained by, among other things, an increased mortality resulting from cardiovascular diseases, alcohol-related diseases and cancer.

## **Children of immigrants**

For health reasons it is important that people who come to Sweden be integrated into society. This is shown by comparisons between the health of those who have immigrated to Sweden and that of the immigrants' children who were born in Sweden. Analyses of the ULF study provide a rather unequivocal image, which shows that both the health status and the social situation of Sweden-born children of immigrants is clearly better than that of their foreign-born parents. Interviews of children and youths in the 10–18 age group provide a similar image. There are slight differences in self-reported health, for instance psychosomatic symptoms, between children and youths of foreign background compared with those of Swedish background in the studies that were undertaken in the period 2001–2005 [7].

As far as serious psychosocial health problems such as suicide [8] and psychoses [9] are concerned, however, the pattern is the reverse: the children of immigrants run greater risks than the immigrants themselves. These problems are at least as widespread, and, in the case of illicit drug abuse, considerably greater for those children who have grown up in Sweden compared with their immigrant parents. Growing up in Sweden obviously has both advantages and disadvantages as far as the health of people of foreign origin is concerned.

## **International adoptees**

A great deal points to the fact that most internationally adopted children in Sweden are in good health. Children who are adopted from countries outside Europe, however, are treated in hospital two to three times more often during their youth for psychiatric disorder than are Swedish-born youths. The risk is even somewhat greater than for youths of foreign origin who have grown up with their biological parents—despite the fact that foreign adoptees live with families who have better socioeconomic living conditions than those in the average Swedish-born population, and much better conditions than other foreign-born people. The increased risk of suicide and suicidal behavior is especially pronounced among international adoptees [10].

That mental illness is more common among international adoptees can most likely be attributed to their exposed situation in the country of origin before adoption, with repeated separations, malnutrition and institutional stays. Nonetheless, one cannot rule out the possibility that influential factors following adoption, such as discrimination resulting from their divergent appearance and the difficulties they may have in connecting with their new parents, may also contribute to this vulnerability [11].

## **Divergent background and health among foreign-born people**

Immigrants come to Sweden for many different reasons, at different points of time, from different social situations and from many countries. The population of foreign origin is thus characterized by a considerable degree of diversity.

It is likely that labor immigrants belong to the healthier segment of the population they are moving away from. In contrast, for certain groups of refugees, a disability or a chronic illness, can be a contributing factor to their being granted asylum in Sweden. Therefore, in order to describe the health and living conditions of foreign-born people adequately, studies are needed which distinguish among foreign-born people based on such background and selection

criteria. At present there are no recurrent studies in Sweden with a sufficiently large number of immigrants for this to be possible. Instead, the following sections will describe significant risk factors and protective mechanisms affecting health among Swedes of foreign background. These factors contribute to the fact that the health situation often differs from that of the rest of Sweden's population.

Risk factors and defense mechanisms affecting health among Swedes of foreign background can be divided into three categories:

- factors relating to the society and the population which the person himself/herself or his/her parents has (have) moved away from
- factors relating to migration per se and to how migration is dealt with in Sweden
- factors relating to the individual's existence in Swedish society after the person has obtained a residence permit.

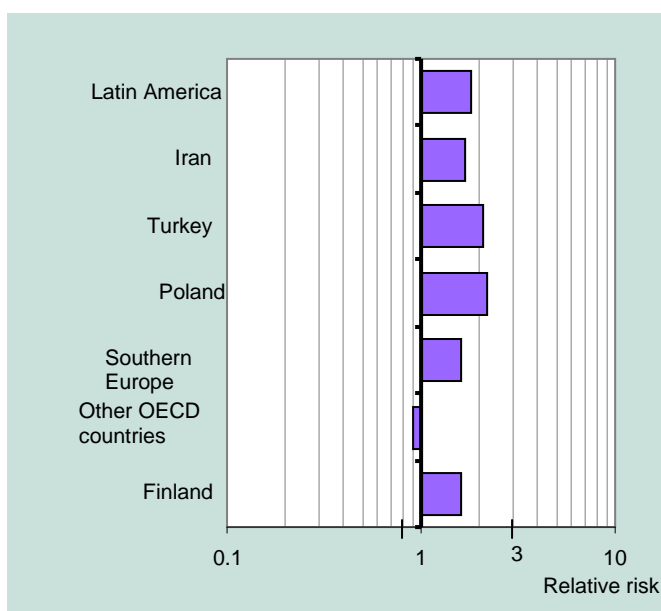
## Factors relating to the society one has moved away from

### Infections

Many foreign-born people have moved from countries where certain types of severe infections are considerably more common than in Sweden. The most important of these diseases are hepatitis B and C, tuberculosis and HIV. Prolonged direct and indirect contact with the country of origin can expose Swedes with a foreign background to these infectious diseases even after they have moved to Sweden.

An infectious agent whose significance has been demonstrated only in the past two decades is *Helicobacter pylori*. This bacterium is mainly known for causing stomach ulcers and gastritis but it is also an important risk factor for cancer of the stomach [12]. The infected person usually becomes infected in early childhood [13]. This is the probable explanation for why the bacterium, like stomach cancer, is significantly more common among foreign-born people than it is among the Swedish-born (Figure 4) [14, 15]. As the bacterium is primarily transmitted within the family, the children of foreign-born immigrants also constitute a risk group for diseases caused by *helicobacter* [15].

**Figure 4. Foreign-born women and the risk of developing stomach cancer**  
Increased and reduced risk (relative risk) of developing stomach cancer during 1991–1998 for foreign-born women, by region of birth



Control group (relative risk=1) consists of women born in Sweden.  
Source: the National Institute of Public Health [14]

## Lifestyle

When immigrants arrive in a new country, they come with lifestyle habits formed in the society which they have moved away from. These habits also influence the lifestyle habits they practice in the new country, and, to a certain extent, the lifestyle habits of their children as well.

## Food habits

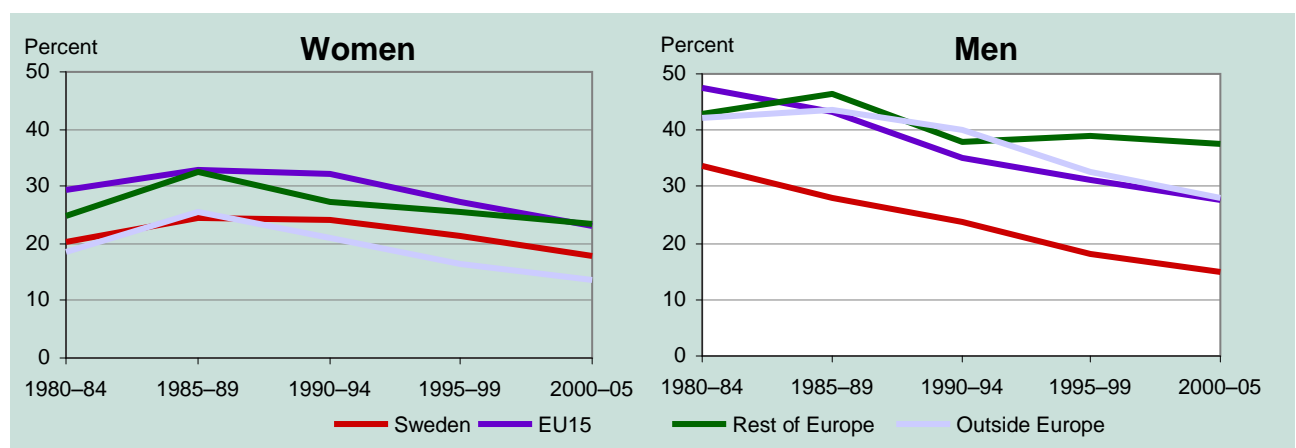
Food habits vary considerably across different societies, and this in turn leads to differences in the incidence of many diseases of the gastrointestinal tract, such as colon cancer. These differences are retained to a certain extent even among immigrants in Sweden [14]. A low level of fiber in the diet increases the risk of developing an inflammation of the colonic pouches (diverticula) of the colon, so-called diverticulitis. It is therefore likely that the high fiber intake among immigrants from southern Europe and non-European countries, a dietary habit they developed in their country of origin, explains the low risk of diverticulitis within these groups in Sweden [16].

## Tobacco

The percentage of male smokers in Sweden is low but foreign-born men smoke more than men born in Sweden, according to the ULF study (Figure 5). On the other hand, according to the same study, Swedish-born men use snuff considerably more often than foreign-born men. Women born in other European countries besides Sweden smoke more than Swedish-born women, while women born outside of Europe smoke the least. Infants of foreign-born parents are more often exposed to passive smoking in the home [17, 18]. This is mainly caused by the smoking of the infants' fathers since mothers from most of the non-European countries smoke less than Swedish-born mothers [19].

**Figure 5. Daily smokers by region of birth/country**

Percentage of daily smokers by country of birth. Women and men in the 16–64 age group, in the period 1980–2005. Standardized by age



Source: The ULF studies, Statistics Sweden

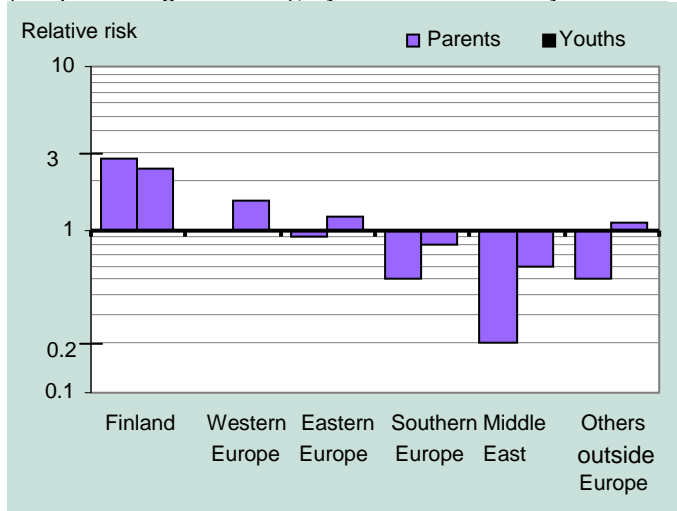
The ULF study shows that the percentage of smokers has declined gradually since the 1980s. This applies to both Swedish-born and foreign-born people with origins in western Europe and outside of Europe. Europeans outside of the EU15 region do not follow this same trend, which may be due to the influx of refugees from the former Yugoslavia in the 1993-95, which contained a large percentage of smokers

## Alcohol

The incidence of alcohol-related diseases among the foreign-born population mirrors attitudes and habits formed in the country of origin. Finns are treated in hospital for alcohol abuse more frequently than are Swedish-born people, while immigrants from the Middle East are treated less frequently than native Swedes (Figure 6) [14, 20]. Treatment for alcohol abuse among children of foreign-born people shows a pattern which lies somewhere between that of their parents and the pattern shown by the children of native Swedes (Figure 6), perhaps a sign that they have been more influenced by the alcohol habits of the majority of the Swedish population than their parents. Children in middle school whose parents come from countries outside Europe less often intoxicate themselves than other schoolchildren. This is shown by school surveys in Stockholm in 1996, and in Malmö and Värmland in 2005 [21, 22].

**Figure 6. Foreign origin and alcohol-related diseases**

Increased and reduced risks (relative risk) of being treated in hospital in 1991–2000 for alcohol-related diseases for youths born in 1968–1979 with two foreign-born parents as well as for adults born abroad (the parents' generation), by the adults' country of birth/region of birth



The control population (relative risk=1) consists of youths having two Swedish-born parents or adults born in Sweden (the parents' generation). Adjusted for age and sex.

Source: Hjern A., Allebeck P. [20]

## Acculturation, lifestyle and health

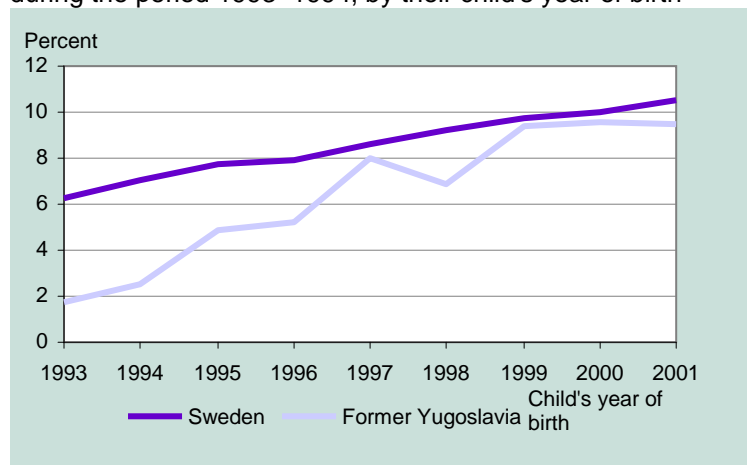
An immigrant's lifestyle is also influenced by the new society. Social anthropology has coined the term “acculturation” to describe the cultural influence and cultural transformation which occurs when societies with different cultural traditions meet [23]. A meeting of this kind often lead to that an ethnic minority's lifestyle and attitudes are transformed under the influence of the surrounding majority population.

Altered eating habits are an example of the impact of acculturation on public health. Studies of the Japanese in the Pacific region during the 1960s and 1970s show how the acculturation of the Japanese to North American eating habits led to a dramatic transformation in morbidity. The studies showed an increased incidence of heart and vascular diseases and colon cancer, and a reduced incidence of cancer of the stomach in pace with the acquisition of a North American lifestyle [24].

In Sweden changes in eating habits and diminished physical activity have led to a rapid development of obesity in certain immigrant groups, for example, among pregnant women who have immigrated to Sweden from the former Yugoslavia. Among them, the percentage of people with obesity increased from 2 percent right after immigration to almost 10 percent after eight years of living in Sweden (Figure 7). An even more rapid development of obesity has been described in refugee children from Chile after their arrival in Sweden [25].

### Figure 7. Pregnant women with obesity

Percentage of pregnant women with obesity from the former Yugoslavia who immigrated to Sweden during the period 1993–1994, by their child's year of birth



Based on information from registration at prenatal clinics. Obesity (BMI  $\geq 30$ )  
Source: The Medical Register of Births, the National Board of Health and Welfare

## Diabetes and asthma

Many major public health problems are caused by environmental factors in combination with genetic susceptibility. This genetic susceptibility varies across different population groups around the world. As a result, the risk of developing such a disease can vary significantly across different population groups, even though they have a similar lifestyle.

Juvenile diabetes is an example of a disease that is caused by hereditary factors in combination with lifestyle factors. The risk is greatest for people born in Finland or Sardinia, but compared with most of the world's regions the risk is also high in Sweden [26]. The incidence of child and youth diabetes varies according to the same pattern among children born in Sweden depending on their parents' country of birth. This means that children born in Sweden of Swedish-born parents have five times as high a risk of juvenile diabetes as have children born in Sweden of parents born in Latin America, and three times as high a risk as those whose parents were born in the Middle East or eastern Europe [27].

There are big differences among various immigrant groups in Sweden as far as the incidence of allergic diseases is concerned. Allergies are, for example, particularly common in members of the population who are of Chilean origin compared with the rest of the population, while they are significantly less common in members of the population who are of Turkish origin. It is likely that the explanation for these differences also lies in an interplay of genetic susceptibility and lifestyle factors [28].

## Refugees, the asylum process and undocumented immigrants

Since the mid-1970s refugees and their relatives have dominated immigration to Sweden. Refugees have a different point of departure than those who move to another country for work or to form a family. People who flee their native country have almost always experienced a period of great stress before they leave the country. The very act of leaving the native country is often accompanied by privations and threats, and many families are split up for long periods. Upon arrival in the new country a period of uncertainty awaits during the asylum process before a new life can begin.

### **Traumatic stress in the country of origin.**

A large percentage of the refugees who come to Sweden have, before leaving their native country, experienced many frightening and abusive situations in connection with war or political persecution. The World Health Organization (WHO) calls such situations "organized violence." A quarter of the Latin American refugees who came to Sweden in the 1970s and 1980s declared that they had been subjected to torture in their native country [14]. Of the Kurdish refugees in the National Board of Health and Welfare's 1996 study of immigrants, as many as 40 percent reported having been subjected to organized violence in the country they left [29]. These experiences can sometimes lead to the development of a posttraumatic stress disorder (PTSD). PTSD is characterized by recurrent painful memories and disruptions of the brain's stress metabolism. Another common consequence of such experiences is depression [30].

The combined results of many studies of psychiatric morbidity among refugees in exile in the Western world show that an estimated 8–10 percent of adult refugees and 7–17 percent of refugee children suffer from posttraumatic stress syndrome. Four to 6 percent of adult refugees fulfill the criteria for depression and almost as many of the criteria for anxiety syndrome [31]. Follow-up studies of refugees show that these mental problems diminish over time but 13–14 years after their flight, mental problems are still more common in refugees than in the population of the receiving country [32, 33].

The posttraumatic symptoms can, consequently, cause the inflicted person to suffer for a long time. On the other hand, it is rather unclear to what extent these symptoms also affect the relationships and work capacity of refugees. A follow-up of Cambodian refugee youths in the United States shows, for example, that it is entirely possible to succeed in university studies and in having a family despite prolonged and severe symptoms of posttraumatic stress [34, 35].

## **The asylum process**

The person who applies for asylum is called an asylum seeker up to the point where their application has been fully processed by the Swedish authorities. Asylum-seeking adults are entitled to receive subsidized health and medical care for treatment “which cannot wait,” i.e., treatment when a moderate delay can result in negative consequences for the patient's health [36]. On the other hand, since 1994 asylum-seeking children have the same rights to health and medical care as other children in Swedish society.

Because asylum seekers lack a Swedish identification number, the ability to describe their health in Sweden is limited. A Swedish identification number would make it possible to identify them in the national health registers.

The dominant health problems among adult asylum seekers are mental illness and various forms of psychosomatic pain [36–40]. This is underlined by Danish studies which show that it is three times more common for asylum seekers to be treated in hospital following suicide attempts than it is for those in the rest of the population [41]. Stress during the asylum process is particularly harmful to refugees with difficult experiences of organized violence before their flight [42].

A Swedish study of mass-evacuated refugees from Kosovo, who had provisional residence permits in Sweden, showed that the number of people who fulfilled the criteria for posttraumatic stress syndrome increased proportionally according to the length of time the refugees had been in Sweden. With the aid of hormone analyses of their saliva, the study also showed that the body's stress management system was being gradually transformed [43]. Interview studies of refugees in Australia, who live in uncertainty because of their provisional residence permits, show similarly high levels of mental illness. The illness also increases depending on the period of uncertainty [44].

Many children also show signs of significant mental illness during the asylum period [45]. Asylum-seeking children are greatly overrepresented among the children being treated in in-patient child and youth psychiatric care [46]. During 2002–2005 hundreds of asylum-seeking children developed severe and prolonged loss of functions, so-called severe withdrawal syndrome [47]. Many of these children required energetic support interventions for long periods, including drip feeding and help with toileting. The number of children who have fallen ill in this way has diminished drastically following changes in refugee policy in 2005 and as a result of improved support for families where asylum-seeking children are in poor mental health. With few exceptions, the children who became ill have also recovered, often after a long period of rehabilitation during which they regained their activities of daily life step by step [48].

## **Support of family and friends**

Shortly after settlement in the new country, refugees have a sparse social network. Parts of their family are often in another country and they have not yet had time to establish close social contacts in exile. Interview studies of refugee families in Norway [49], Sweden [45] and Australia [50] show that the support of family and friends is of great importance for the mental health of refugees during their first years in a new country. In most cases they develop new contacts within their own refugee group. An American study of refugees from Laos shows that refugee policy can play an important role in such circumstances. Being reduced to living in a place where, for geographic reasons, it is difficult to establish contacts with members of one's own group is, it was found in this study, a strong risk factor for poor health [51].

## **Immigrants who are excluded from medical treatment**

People who live in Sweden without a residence permit and who are not asylum seekers are sometimes called undocumented migrants [52]. Most of these are asylum seekers who have had their application for a residence permit rejected or labor immigrants without a work permit [53]. For obvious reasons it is impossible to calculate precisely how many undocumented migrants are living in Sweden at a particular point in time, but it was estimated to be around 20,000 during the years 2003–2004 [54].

Adult undocumented migrants are only entitled to 'immediate' health and medical care, which is a very narrow concept of emergency treatment. They are also liable to pay for the care they receive [36]. This has stirred a lively discussion within the medical profession. In Stockholm, Gothenburg and Malmö special medical clinics for undocumented migrants have been opened, on a nonprofit basis [55, 56]. In 2000 the government and county councils came to an agreement whereby the children of families who have had their application for asylum rejected would have the same rights to health and medical care as other children in Sweden. Children in the remaining groups of undocumented migrants have, however, just as limited access to medical care as the adults.

Individual county councils have, on their own initiative, extended the rights of irregular immigrants to medical care but they receive no reimbursement from the government. In 2006 Sahlgrenska sjukhuset [Sahlgren Hospital] in Gothenburg introduced a policy giving irregular immigrants greater rights to medical care—it was the first hospital to do so in Sweden. In March 2008 the county council of Skåne [Scania] followed, introducing similar rules within both in-patient and out-patient care [57].

In the summer of 2005 Doctors Without Borders carried out an interview survey with patients who visited the organization's medical clinic for undocumented migrants [56]. Half of the migrants reported having refrained from seeking medical care because they were afraid of being reported to the police or because they knew of no caregiver who would accept them.

## **Living in Sweden with a foreign background**

### **A socially vulnerable situation**

Immigrants are newcomers to Swedish society and they are, moreover, exposed in many circumstances to discrimination, which means that they find themselves, more often than others, in a socially vulnerable position. Compared to the rest of Sweden's population, immigrants are more likely to be unemployed, they often have jobs which involve a poor physical and psychosocial work environment and they often live in confined quarters in low-status neighborhoods. There are also big differences among various immigrant groups. Non-European immigrants as a rule have poorer material living conditions than immigrants of European origin. As adults, the children of immigrants have better material living conditions in general than their parents [4].

The income of immigrants is greatly dependent on how long they have lived in Sweden. It takes at least ten years before an immigrant attains living conditions comparable to that of the rest of the population. Nevertheless, foreign-born immigrants, in general, improve their living conditions faster than other groups of low social status within Swedish society. This was not, however, the case during the crisis years of the 1990s, rather the reverse: the material living conditions of foreign-born immigrants deteriorated more than that of other groups. Unemployment increased significantly more among foreign-born people than among Swedish-born people. The refugees who arrived during these crisis years have also had a harder time establishing themselves in the labor market than those who arrived earlier [4].

## **Discrimination and mental illness**

Discrimination affects the living conditions of foreign-born immigrants. Discrimination in the labor market leads to lower incomes and unemployment. Discrimination in the housing market, in combination with relative poverty, means that the foreign-born population to an increasing extent is concentrated in low-status neighborhoods. At the same time, the percentage of Swedish-born people in the same housing areas declines [52].

Foreign-born immigrants with origins in northern Europe or other Western-oriented countries have about the same opportunities to settle in attractive housing areas as the Swedish-born. For foreign-born immigrants with origins in non-Western-oriented countries outside of Europe, this opportunity is, however, very limited. This is still the case a long time after they have immigrated [58]. Foreign-born immigrants of non-European origin are more likely to be exposed to violence and threats of violence because they more often live in low-status neighborhoods [4].

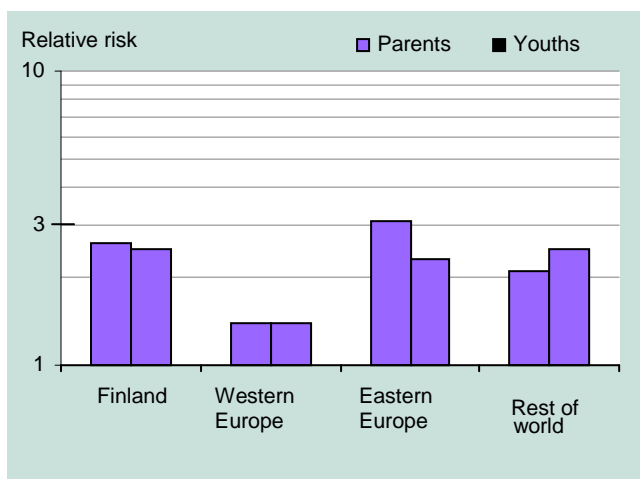
Discrimination can affect health indirectly by contributing to poorer living conditions. In addition, repeated experiences of discriminatory treatment have a more direct effect on one's health. Recurrent discrimination can be regarded as a form of chronic stress where the person discriminated against is always prepared to encounter negative reactions from their surroundings [59]. Immigrants who feel themselves discriminated against report being mentally ill twice as often as other immigrants, according to the National Board of Health and Welfare's Immigrant Study of 1996 [60, 61] and the National Institute of Public Health's *Public Health Survey 2006* [5]. The causal connection has, however, not been established in these longitudinal studies. A great number of other studies around the world have shown nonetheless that discrimination based on the color of one's skin leads to poorer self-reported health [62].

Studies have shown an increased incidence of psychosis illnesses among immigrants in countries such as Great Britain, Holland and Denmark, among others [63]. Several studies

have pointed to the fact that chronic stress related to the experience of discrimination may be one of the reasons for immigrants' higher risk of psychoses [64, 65]. In Sweden, too, immigrants and the children of immigrants are treated in hospital two to three times as often as others for schizophrenia and other psychoses (Figure 8). This significant risk can to a great extent be accounted for by social factors such as low incomes, single parenthood and by the fact that those affected live in low-status neighborhoods. Discrimination is probably an important contributing factor behind this [9]. These factors are also behind the increased risk among youths of foreign background of being treated in hospital for suicide attempts or self-injury behavior [66], and the increased risk for youths of foreign background of being injured through violence [67].

### Figure 8. Foreign origins and schizophrenia

Increased risks (relative risk) for youths born in 1968–1979 with two foreign-born parents as well as for adults born abroad (the parents' generation) of being treated in hospital in 1990–2001 for schizophrenia, by the adults' country of birth/region of birth.



The control population (relative risk=1) consists of youths having two Swedish-born parents or adults born in Sweden (the parents' generation). Adjusted for age and sex.  
Source: Hjern, A., Wicks, S., Dalman, C. [9]

## Unintentional injuries

Social factors play an important role in morbidity and mortality resulting from accidents/unintentional injuries. Seen in its entirety, however, mortality resulting from accidents is in Sweden approximately the same for children and youths of foreign origin as it is for those of Swedish origin. Nevertheless, the patterns vary for different types of accidents. Foreign-born children and youths are less likely to be injured in moped and automobile accidents before the age of 18. They are also treated significantly less often in hospital for injuries which usually occur during camping trips and outdoor living, such as snake bites, injuries linked to boating trips and poisoning accidents in connection with materials used in gardening and agriculture. This mirrors differences in the social conditions of growing up: material scarcity can sometimes be a protective factor in these circumstances. Burn injuries caused by hot water are, however, more common among children of non-European origin under the age of 3 [68]. Also, drowning accidents linked to outdoor bathing have been

reported to be more common among schoolchildren of foreign origin. This is probably owing to a lower level of swimming skills.

## **When the Swedes differ**

Sometimes differences in health between Swedish-born and foreign-born people can be explained by successful Swedish public health interventions. Sweden has been a leader in the world as far as certain types of public health initiatives for children are concerned. This especially applies in areas such as child injuries, dental health and the corporal punishment of children. In these fields, Swedish public health work has, for example, involved publicizing information about the benefits of brushing one's teeth and of only eating candy on Saturdays, swimming skills and car safety seats. Sweden was also the first country in the world to introduce a law against the corporal punishment of children, in 1979. Newcomers in Swedish society, for obvious reasons, do not share this collective experience, and it is thus not surprising that children of foreign origin, regardless of the origin of their parents, are less likely to know how to swim, have cavities more often, more often travel in cars without a safety seat and are more often subjected to corporal punishment [68].

## **Public health initiatives**

Directing public health initiatives especially towards foreign-born people, or groups of foreign-born people with a specific background, involves a significant risk of stigmatization and a greater feeling of discrimination. As a result, such initiatives should have a very firm scientific foundation, and they should also be in demand by the immediate minority group. Initiatives against infectious diseases, such as tuberculosis, hepatitis B and HIV, are examples of measures which often fulfill these criteria [69].

Few people in Swedish society are as dependent on Swedish law and the Swedish authorities as asylum seekers. Sweden is one of the countries in Europe that restricts the right to medical care of people without a residence permit [70]. It is likely that these rules have mainly affected the public health of asylum seekers and irregular immigrants, who do not receive treatment for their illnesses and help with their disabilities. But they also affect the health of the rest of the population insofar as contagious diseases among people with limited rights to medical treatment are identified later in the course of the disease and are, therefore, spread more easily.

Asylum-seeking adults and children have many psychiatric and psychosomatic symptoms. Offering meaningful activities and social support to asylum seekers can, to a certain extent, prevent these [71]. For children, meaningful activity involves preschool and school, while for adults, in addition to education, it includes the opportunity to be gainfully employed.

All newly immigrated refugees are offered an introductory program in the municipality where they have settled. The aim of the program is first to introduce refugees to the labor market, but it also contains general information about Swedish society and Swedish language instruction. The introduction is also a useful platform for public health work—refugees can, for instance, obtain information about the successful Swedish public health programs for, among other things, dental health, injuries and corporal punishment. Another method that has been tried in connection with this involves secondary preventive methods of identifying refugees with severe psychiatric problems [72].

Analyses of health trends as a basis for prioritizing and evaluating previously implemented initiatives is an important foundation for successful public health work at the national level. In the present situation the ability of the National Board of Health and Welfare to follow health developments among the population of foreign origin or background is more limited than for the rest of the population. Repeated interview surveys, such as ULF and the LNU (Levnadsnivåundersökningarna) [the Swedish Level of Living Surveys] surveys, involve too few interviewees of foreign origin for them to be able to capture the heterogeneity of this part of the Swedish population. For that reason, the National Board of Health and Welfare undertook a special interview survey of four different groups of immigrants in 1996 [60]. If such studies were carried out on a regular basis, there would be a better basis for decision-making regarding public health initiatives affecting the population of foreign origin.

Social vulnerability and discrimination are the principal causes of ill health among the foreign population in Sweden. Prevention through national policy is an important part of the public health work on behalf of this part of the population.

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