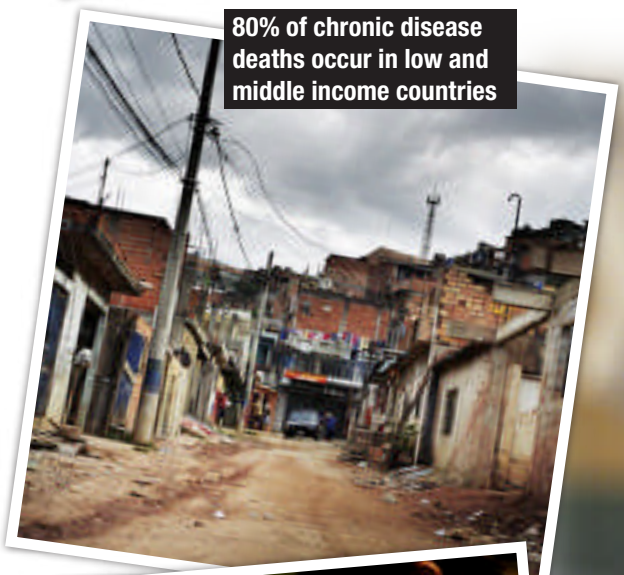
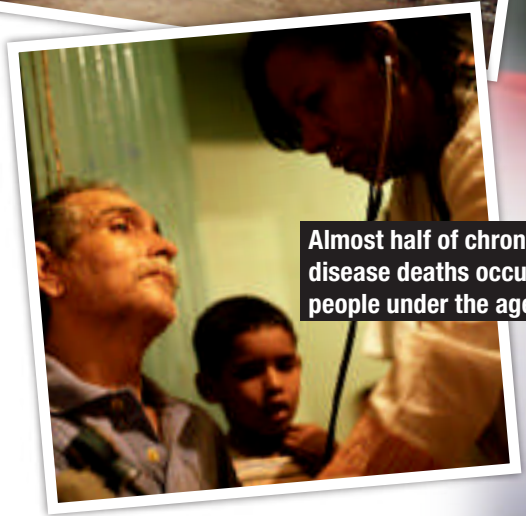
MISUNDERSTANDINGS *vs.* REALITY

Chronic disease is responsible for 60% of all deaths worldwide



80% of chronic disease deaths occur in low and middle income countries



Almost half of chronic disease deaths occur in people under the age of 70

MARIAM JOHN, 13, HAD BIG PLANS FOR THE FUTURE – to become the health minister of her country, the United Republic of Tanzania. Her dream was to be able to help others and spare them from going through an experience similar to her own.

Mariam was diagnosed with bone cancer in February 2005, soon after her knees had swollen to the point that she could barely walk. She was able to receive chemotherapy and radiotherapy treatment, but even this treatment was almost unbearable. "I am willing to have my leg amputated if it can take my pain away," she said.

One of Mariam's legs was amputated in December 2005. Three months later, she lost her battle to cancer, passing away in March 2006.

Contrary to common perceptions of chronic diseases, cases like Mariam's are not exceptional. Cardiovascular diseases, cancer, chronic respiratory diseases and diabetes are not just diseases of the elderly and the wealthy in developed countries. They mostly affect poor people and half of all chronic disease deaths occur in people under 70 years of age.

Mariam John battles bone cancer in Tanzanian hospital

Several enduring misunderstandings have contributed to the global neglect of chronic diseases – which claimed the lives of 35 million people in 2005. Notions that chronic diseases are a distant threat are dispelled by strong evidence.

Around the world, chronic disease affects women and men almost equally

While many people associate chronic diseases with high income countries, the reality is that four out of five chronic disease deaths occur in low and middle income countries.

These countries are at the centre of both old and new public health challenges. While they continue to fight infectious diseases, they are also experiencing a rapid upsurge in chronic disease risk factors such as obesity and tobacco use.

Four out of five chronic disease deaths occur in low and middle income countries.

In all but the least developed countries of the world, poor people are much more likely than the wealthy to develop chronic diseases and, after prolonged suffering, to die from them. Chronic diseases often hit poor individuals and families who are already in tight financial situations, forcing them into further poverty.

Another widespread misunderstanding is that chronic diseases mostly affect men. Statistics show however, that chronic diseases affect women and men almost equally.

Many people believe that chronic diseases are lifestyle-related and that those who become ill have no one to blame but themselves. This is one of the most damaging misunderstandings because it discourages collective action to create healthier environments. Many chronic diseases are not related to lifestyle at all, as in the case of Mariam. And while eating more healthily, increasing physical activity and refraining from tobacco use are to some extent personal choices, there needs to be a supportive environment to make such choices possible.

Children, for example, cannot choose the environment in which they live, and they are too young to understand how their actions may affect their health. Poor people also have limited choices about their living conditions, including the food that they eat – "energy-dense" foods, such as fried or processed foods, are often cheaper on a per-calorie basis than healthier alternatives.

Some people also say that as we all have to die of something, and there is not much to be done about chronic diseases, we might as well accept them. This may be the most damaging misunderstanding of them all. Certainly everyone will die one day, but death does not need to be slow, painful, or premature.

Moreover, chronic disease prevention interventions are very cost–effective and can be easily implemented in all countries of the world. By supporting people to eat more healthily, exercise more, and not use tobacco, at least 80% of premature heart disease, stroke and type 2 diabetes and over 40% of cancer would be prevented.

The major risk factors for chronic disease are an unhealthy diet, physical inactivity, and tobacco use

Exceptions of course exist – people with many chronic disease risk factors sometimes live long and healthy lives and people with no chronic disease risk factors nonetheless sometimes develop chronic disease. But these cases are rare. The grim reality is that a largely preventable epidemic of chronic disease is disabling and killing millions of people each year.

Chronic diseases are preventable. Death does not have to be slow, painful, or premature.

Dispelling the misunderstandings regarding chronic disease is the first step in changing the way people think and react to this global public health problem.

If the major risk factors for chronic disease were eliminated, at least 80% of premature heart disease, stroke and type 2 diabetes would be prevented; and 40% of cancer would be prevented

For further information, visit www.who.int/chp.

WHAT CAN YOU DO TO PREVENT CHRONIC DISEASE?

5 easy suggestions

- **Arm yourself with knowledge – know that the three main chronic disease risk factors are tobacco use, unhealthy diet and lack of physical activity.**
- **Eat better – snack on fruits; consume less salt, less sugar; limit consumption of saturated fats and trans fatty acids.**
- **Get moving – get at least 30 minutes of physical activity per day. Walk to work/school, take the stairs, dance, take part in sports.**
- **Take your blood pressure – know if you are at risk.**
- **Say goodbye to tobacco – tobacco use kills 5 million people each year.**

CHRONIC DISEASE AND POVERTY

A VICIOUS CYCLE

Roberto Severino Campos lives in a shanty town on the outskirts of São Paulo, Brazil, with his seven children and 16 grandchildren. He used to be the family's breadwinner, but is now completely dependent on his family to survive.

Roberto Severino Campos suffered multiple strokes which paralysed his legs and left him permanently unable to speak.

Roberto never paid attention to his high blood pressure, nor to his drinking and smoking habits. He didn't know that these habits could lead to chronic diseases such as heart disease, stroke and cancer. He suffered his first stroke at the age of 46 – it paralysed his legs. Four years later he suffered two consecutive strokes, which left him permanently unable to speak.

Roberto's strokes have taken a heavy toll on his family, which was already having a hard time making ends meet. Roberto's wife started working longer hours as a cleaner, and much of the family's income is now used to buy the special diapers that Roberto needs. The whole Campos family has fallen into a downward spiral of worsening poverty.

Roberto is just one of millions of people worldwide living with chronic disease. In 2005, chronic diseases were responsible for 35 million of the 58 million deaths worldwide. More than three quarters of these deaths occurred in low and middle income countries. Roberto's story shows the impact of this invisible epidemic on individuals as well as their families. Most importantly, it illustrates the vicious cycle of chronic disease and poverty.

In all but the least developed countries of the world, poor people are much more likely than the wealthy to develop chronic diseases and, after prolonged suffering, to die from them. There are many reasons for this, including greater exposure to health risks and less access to health services and education.

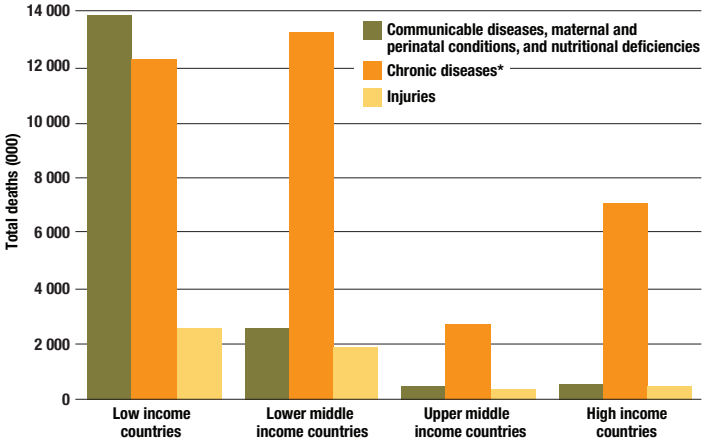
The leading risks for developing chronic disease are tobacco use, poor diet and lack of adequate physical activity. Unfortunately, in most countries these risks are concentrated among the poorest members of society. Once a country emerges from extreme poverty, it is the poor – not the rich – who are most likely to have chronic disease risk factors.

Poor families are likely to be faced with a limited choice of affordable healthy foods, and will often eat fried or processed high-fat and high-sugar foods instead. They may also be physically inactive owing to a lack of safe and easily accessible places in which to exercise or play, and as a result become overweight or obese. In most countries, tobacco use tends to be higher among the poor. Poor families also spend a larger proportion of their income on tobacco, money that cannot be spent on basic human needs such as food, shelter, education and health care.

"Governments have a crucial role to play in making it possible for vulnerable groups, such as the poor, to make healthy choices and reduce their risk for chronic disease," says

WHERE ARE THE DEATHS HAPPENING?

Projected deaths by major cause and World Bank income group, all ages, 2005



* Chronic diseases include cardiovascular diseases, cancers, chronic respiratory disorders, diabetes, neuropsychiatric and sense organ disorders, musculoskeletal and oral disorders, digestive diseases, genito-urinary diseases, congenital abnormalities and skin diseases.

Roberto Campos is completely dependent on his family to survive.

Dr Robert Beaglehole, Director of the WHO Department of Chronic Diseases and Health Promotion. "This can be done by improving access to better health education and by creating conditions and environments where healthy living can be a reality."

Sometimes people living in poverty wait until they are very sick to seek medical help, when it may be too late for effective treatment. This may be because they cannot afford to lose a day of work or because they have other, more pressing, needs on which to spend their money. The expense of just getting to a place of medical care may prevent some people from seeking help. "Fortunately his medications and check-ups are free, but sometimes we just don't have enough money for the bus to take us to the local medical centre," says Roberto's daughter, Noemia.

If poverty increases the chances of developing and suffering from chronic disease, the reverse is also true: chronic diseases cause poverty and draw individuals and families into a downward spiral of worsening disease and impoverishment.

People who fall ill often face a dire choice – to suffer and perhaps die without treatment, or to seek treatment and risk pushing their family into poverty. Some households may sell their possessions to cover health-care costs, which in the long run can drive them further into poverty. The greatest impact is often on children, who are taken out of school to care for family members or to compensate for the lost productivity of an ill or disabled adult.

The economic burden does not stop at families. The impact is multiplied and reflected in the macroeconomic development of many countries. In 2005 alone, the WHO-estimated losses in national income due to heart disease, stroke and diabetes were astounding: $18 billion in China, $11 billion in the Russian Federation and $9 billion in India (these figures are reported in international dollars).

Eighty percent of all chronic disease deaths occur in low and middle income countries. These countries are at the centre of old and new public health challenges. While many continue to battle against infectious diseases such as HIV/AIDS and malaria, they are at the same time experiencing a rapid upsurge in chronic diseases. Cardiovascular disease alone killed five times as many people as HIV/AIDS in these countries. But despite this evidence, chronic diseases are still not as high on the agenda of some governments as infectious diseases. The epidemic of chronic disease remains an invisible problem.

Chronic disease prevention and control can no longer be ignored as an important means of poverty reduction, and more generally, economic development. "We cannot afford to say 'we must tackle other diseases first – HIV/AIDS, malaria, tuberculosis – then we will deal with chronic diseases'. If we wait even 10 years, we will find that the problem is even larger and more expensive to address," says Nigerian President Olusegun Obasanjo.

It is possible to stop this global epidemic. Approximately 80% of premature heart disease, stroke and type 2 diabetes, and 40% of cancer could be avoided through healthy diet, regular physical activity and avoidance of tobacco. A whole range of chronic disease interventions are highly cost-effective in all parts of the world, including sub-Saharan Africa. For example, taxation of tobacco products can effectively reduce tobacco use while raising money that can be used to promote health, as has been shown in countries like Thailand. Other examples of very cost-effective interventions include salt reduction through voluntary agreements with the food industry and comprehensive bans on the advertising of tobacco products.

Achievement of a global goal set by the World Health Organization – to reduce chronic disease death rates by an additional 2% (on top of the already predicted reductions) per year over the next 10 years – would result in an accumulated economic growth of billions of dollars in many countries. But most importantly, achieving the goal would save the lives of 36 million people over the next 10 years – and perhaps spare them from becoming caught in the vicious cycle of chronic disease and poverty.

For further information, visit www.who.int/chp.

The poverty/obesity paradox

In middle and high income countries, obesity is more widespread among poorer members of society than among the rich, which has been viewed as something of a paradox. It is likely that several factors contribute to this fact, but one explanation is that "energy-dense" foods, such as chocolate, potato chips and processed meals tend to cost less on a per-calorie basis than fresh fruits and vegetables.

This helps explain why adopting a healthier diet is not just about personal choice. For poor individuals and families, financial restraints may effectively dictate the type of food they eat. For them, eating healthily may not be an option.

Drewnowski A. Obesity and the food environment: dietary energy density and diet costs. Am J Prev Med. 2004 Oct;27(3 Suppl):154-62.

Physical activity through the built environment

Boyle Heights in Los Angeles, California, is a 75% immigrant community whose median income is approximately US$ 21 500 – around half that of the national median. The community has no parks or public green spaces and was designated an area in need of redevelopment by government officials at all levels.

Community activists and residents of Boyle Heights worked with government officials to organize political and financial support for improvements to the built environment. The result was the creation of a 2.4 km rubberized asphalt path, appropriate for joggers and walkers of all ages. This has resulted in a substantial increase in the number of local people who walk or take other exercise. The example of this community shows what can be done at the local level when stakeholders with political know-how get organized.

Aboelata, M. The Built Environment and Health, 11 Profiles of Neighborhood Transformation. Prevention Institute, Oakland, California. July 2004.

NEWSLETTER

THE obesity CRISIS

Menaka Seni, 60, has lived with diabetes for almost 30 years and like many with the disease, has high blood pressure. But it took the death of her husband and bypass surgery for Menaka herself to make her appreciate that being overweight was one of the main reasons for their health problems.

Menaka's husband died of a heart attack. A year later, Menaka also suffered a heart attack and was lucky to survive. She underwent bypass surgery and learned, while recovering at the hospital, that it would take more than just medication to lower her health risks. Ever since, Menaka has been able to make positive changes to her life, taking daily walks and eating more fish, fruit and vegetables. "Taking medication for my heart and diabetes helps, but I learnt that you also need to change behaviour to lower your health risks," she explains.

Millions of people around the world share Menaka's physical profile. The World Health Organization estimates that there are more than one billion people – 1 in 6 of the world's population – who are overweight. Unfortunately, many of these people are – like Menaka before her heart attack – unaware of the true risks they are running.

Projections show an even gloomier picture – if current trends continue, it is estimated that by 2015 over 1.5 billion people will be overweight. "The sheer magnitude of the overweight and obesity problem is staggering," says Dr Catherine Le Galès-Camus, WHO Assistant Director-General of Noncommunicable Diseases and Mental Health. "The rapid increase of overweight and obesity in many low and middle income countries presages an overwhelming chronic disease burden in these countries in the next 10 to 20 years, if action is not taken now." So far, not one country in the world has been able to turn back the rising trend.

Overweight and obesity are major risk factors for chronic diseases such as cardiovascular disease and diabetes. Cardiovascular disease (mainly heart disease and stroke) is already the world's number one cause of death, killing 17 million people each year.

Once considered a problem only in high income countries, estimates show that overweight and obesity are dramatically on the rise in low and middle income countries. WHO estimates that over the next 10 years cardiovascular diseases will increase most notably in the Eastern Mediterranean and African Regions, where cardiovascular disease-related deaths are predicted to rise by over 25%.

One doesn't even have to be overweight to be at risk. Evidence shows that the risks caused by excessive weight increase from a body mass index (BMI) of 21, which is well below overweight (BMI ≥25), let alone obese (BMI ≥30).[1]

Over the past few years, a new frightening trend has begun to take shape – the rapid rise of overweight and obesity in children. Unlike most adults, children cannot choose the environment in which they live or the food they eat. They also have a limited ability to understand the long-term consequences of

[1] BMI is measured as follows: (weight in kg ÷ height in m²) x 10 000. Overweight is defined as BMI ≥25; Obesity is defined as BMI ≥30.

how *your* country **is doing**

Find specific data related to your country on the WHO Global Infobase.
WHO Global Infobase: http://Infobase.who.int – on this link, click on "country profiles" to see how your country is doing. You can see country levels of overweight and obesity as well as data related to diabetes, blood pressure, physical inactivity and tobacco use.
Information on some countries can also be found on the chronic diseases and health promotion site: http://www.who.int/chp/chronic_disease_report/media/impact/en/

http://infobase.who.int

their behaviour. The negative effects of globalization and urbanization are felt most by vulnerable members of society, namely children and the poor. This is due to a number of factors, including a global shift in diet towards increased energy, fat, salt and sugar intake, and a trend towards decreased physical activity due to the sedentary nature of modern work and transportation, and increasing urbanization.

Worryingly, about 22 million children aged under five years are overweight worldwide. In Malta and the United States, to take two examples, over a quarter of children aged 10–16 years are overweight. The health implications are staggering.

Overweight and obesity are known risk factors for type 2 diabetes. Until recently, this type of diabetes almost only affected adults, hence the commonly used term "adult-onset diabetes". Fifteen years ago, type 2 diabetes accounted for less than 3% of all cases of newly-diagnosed diabetes in children and adolescents, whereas today in some countries it accounts for more than 45% of newly-diagnosed cases. Studies carried out in Asia and Europe also show an increase of type 2 diabetes in children.

If the current trend continues, some researchers have suggested that this generation of children may be the first to die at a younger age than their parents.

"The good news is that overweight and obesity, and their related chronic diseases, are largely preventable," said Dr Robert Beaglehole, WHO Director of Chronic Diseases and Health Promotion. "Approximately 80% of premature heart disease, stroke, and type 2 diabetes, and 40% of cancer could be avoided through healthy diet, regular physical activity and avoidance of tobacco use."

Recognizing this, many countries have adopted the WHO Global Strategy on Diet, Physical Activity and Health which describes the actions needed to support the adoption of healthy diets and regular physical activity.

At an individual level, people can reduce fat and salt in their diet while increasing fruit and vegetable consumption. Individuals can also increase physical activity to at least 30 minutes per day and stop tobacco use. The most vulnerable, such as the poor and children, are less able to take these measures without supportive and encouraging environments. For this reason, governments, private industry, civil society and communities have a vital role to play in shaping healthy environments and making healthier diet options affordable and easily accessible.

Health promotion initiatives implemented in several towns in France, the UK and other countries show that it is possible to get positive results with a little investment. But it will require the coordinated efforts of all countries and all sectors to turn back the trend of overweight and obesity, if not for our sake, then for the sake of future generations.

For further information, visit www.who.int/chp.

LOVING HIM TO DEATH

Malri Twalib is a five-year-old boy living in a poor rural area of the Kilimanjaro District of the United Republic of Tanzania. Health workers from a nearby medical centre spotted his weight problem last year during a routine community outreach activity. The diagnosis was clear: childhood obesity. One year later, Malri's weight hasn't changed for the better and neither has his excessive consumption of porridge and animal fat. His fruit and vegetable intake also remains seriously insufficient – "it is just too hard to find reasonably priced products during the dry season, so I can't manage his diet," his mother Fadhila complains.

The community health workers who recently visited Malri for a follow-up also noticed that he was holding the same flat football as before – with the word "health" stamped on it. Malri's neighbourhood is littered with sharp and rusted construction debris and the courtyard is too small for him to be able to play ball games. In fact, he rarely plays outside. "It is simply too hazardous. He could get hurt," his mother says.

Fadhila, who is herself obese, believes that there are no risks attached to her son's obesity and that his weight will naturally go down one day. "Rounded forms run in the family and there's no history of chronic diseases, so why make a big fuss of all this," she argues with a smile on her face. In fact, Malri and Fadhila are at risk of developing a chronic disease as a result of their obesity.

WHAT WORKS?

SÃO PAULO, BRAZIL – "Agita São Paulo" is an innovative plan developed by the State of São Paulo to encourage people to be more physically active. It promotes messages about the health benefits of physical activity through partner institutions and their networks and coordinates activities and large-scale events for the 37 million people living in the state. The government has invested the equivalent of only US$ 0.5 per inhabitant per year – and yet the programme has already shown positive results.

BOGOTÁ, COLOMBIA – Bogotá has made significant improvements in the physical environment and infrastructure of the city in order to promote physical activity. Some 128 km of streets are closed to traffic on Sundays and holidays and turned into recreational spaces. The city has implemented policies to reduce the use of cars and has built an extensive network of bike paths.

UNITED KINGDOM – The "Feed Me Better" school meals campaign led to greater national awareness and action that resulted in a major budget increase and the setting of national standards for school meals. Consumption of fruit and vegetables will be given priority, and junk food will be banned from schools.

OVERWEIGHT AND OBESITY ARE MAJOR RISK FACTORS FOR CARDIOVASCULAR DISEASE