

JOIN THE GLOBAL FIGHT AGAINST URBAN DIABETES

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#UrbanDiabetes  
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# cities changing diabetes

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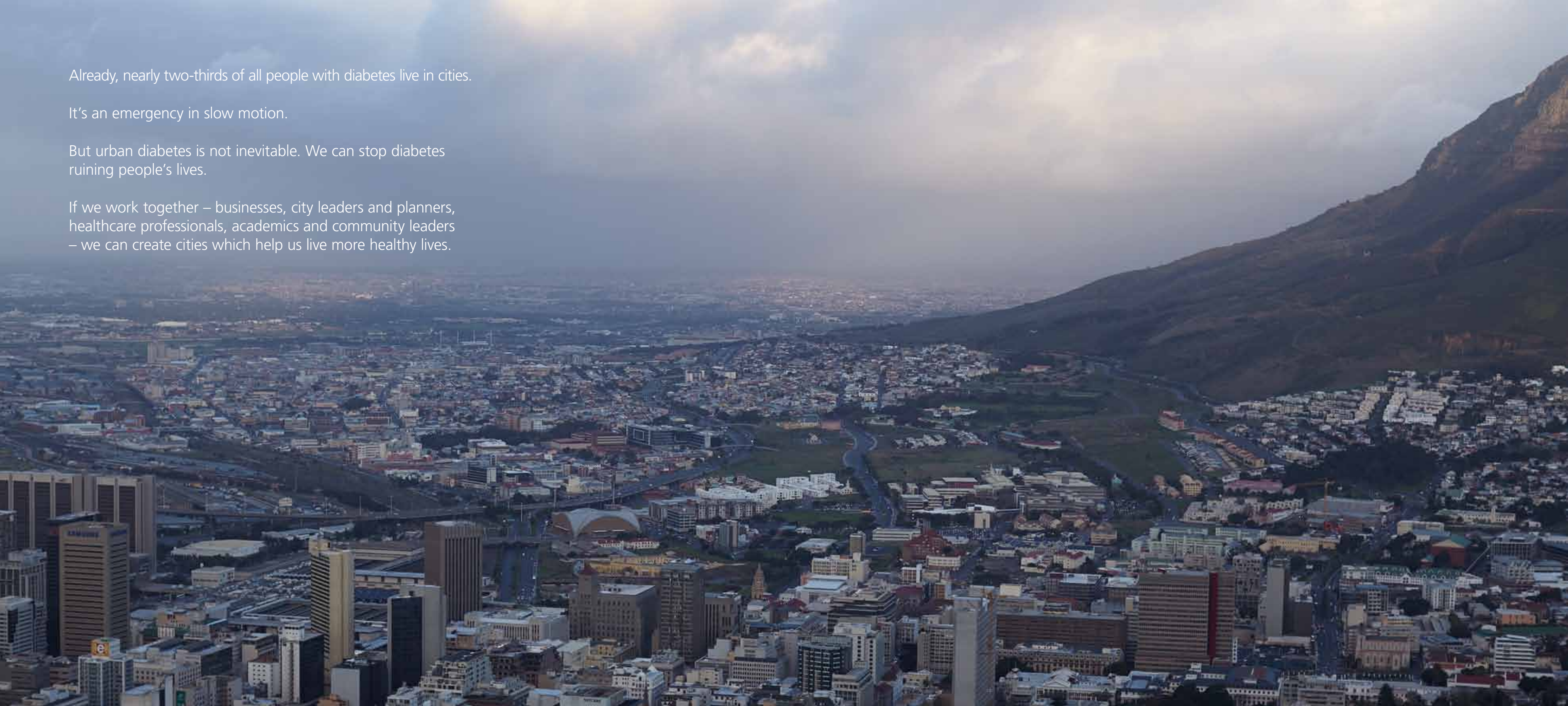


Already, nearly two-thirds of all people with diabetes live in cities.

It's an emergency in slow motion.

But urban diabetes is not inevitable. We can stop diabetes ruining people's lives.

If we work together – businesses, city leaders and planners, healthcare professionals, academics and community leaders – we can create cities which help us live more healthy lives.







## FOREWORD

# LARS REBIEN SØRENSEN

The rise of diabetes is one of the world's most serious health challenges. The statistics are worsening year on year. According to the latest estimates, more than 382 million people have diabetes – and that number is set to hit 592 million by 2035.<sup>1</sup>

There are many factors fuelling this trajectory – but one of the most striking is the growth of cities. Not only do almost two-thirds of people with diabetes live in cities,<sup>1</sup> but people who move to cities are significantly more likely to develop diabetes than those who remain in rural settings. In Novo Nordisk, we are specialists in diabetes treatment, and always have been, so we feel that we must play our part in pushing back on urban diabetes.

That's why we are launching Cities Changing Diabetes – a commitment to act as a catalyst for urgent action on the urban diabetes challenge. Our plan is to do three things: to map in detail the urban diabetes challenge, focusing initially on a selection of cities; to share what we learn with other cities on the global stage; and to play our part in taking long-term action against urban diabetes. For us, that means putting our resources to use in scaling up interventions that prove to be promising for the future, and responding to the gaps and challenges that emerge.

In making this commitment, we are motivated by two basic beliefs. First, that the global diabetes challenge is an emergency in slow motion. We cannot afford to be complacent

about what's happening. The world needs to wake up to the diabetes challenge now.

Our second belief is that this is not inevitable. We are optimistic that we can beat urban diabetes and we know what we need to do. In its time, the world has faced a huge range of public health challenges and stood up to them, one by one. What we want now is to do the same with diabetes. It's a call to arms for people around the world to join forces and work together to fix this for the long term.

We are pleased that Mexico City is the first city joining together with us, and our aim is that they will soon be joined by other cities in North America, Europe and Asia. We will draw on the academic expertise of University College London, the global experience of Steno Diabetes Center, and work with a broad range of people and organisations who are managing and designing the cities of the future. Together we will strive to put the challenge of urban diabetes to the top of the global health agenda.

The world needs cities that help us live more healthily. Join us in the fight against urban diabetes.

**Lars Rebien Sørensen**  
Chief executive officer

*"Cities Changing Diabetes – a commitment to act as a catalyst for urgent action on the urban diabetes challenge."*

## FOREWORD

# JOSÉ ARMANDO AHUED ORTEGA

There is no question about it: diabetes is the number one health challenge in Mexico City.

Back in 1975, Mexico City was one of the world's first megacities, and today we are one of the largest metropolitan areas in the world. Over the years we have tackled head on the challenges that come with being a city of our size, from air pollution to water security, crime to transport. Today, we must rise to the challenge of urban diabetes.

There is much already going on across the city. Earlier this year I set out a strategy against overweight and obesity in the city. This important step brings together a range of initiatives, from programmes to make it easier for people in the city to exercise, to medical units in the subway for early detection of disease and world-class specialist diabetes clinics. I'm proud of the work going on at all levels across the city, and by some of the success I am witnessing: the city saw a significant reduction in prevalence of overweight and obesity in the adult population between 2006 and 2012. What's more, Mexico City has recently been selected as champion for the control of overweight and obesity by UCLG, the global network of cities, local and regional governments.

Despite this progress, diabetes remains an enormous burden for health services in the city. The city has the highest prevalence of overweight and obesity in Mexico, exceeding

the national average across all age groups. What's more, living conditions and access to care across the city vary greatly. We are one of the most important and prosperous global economic hubs, but at the same time the less developed 'Zonas Marginales' across the city can be harder to reach with education and health services.

In Mexico City we have the building blocks to tackle urban diabetes: some 26,000 healthcare professionals; nearly 700 medical units; formidable partnerships with important foundations and academic institutions; expertise in urban planning; and the collective recognition of the scale of the challenge that we face. For me, Cities Changing Diabetes is a catalyst to sharing and learning about the dynamics of urban diabetes, and is a spur to concerted action across all of us who can make a difference in my city and beyond.

I'm delighted to work alongside a new and broader set of partners, and am proud to be a part of the global fight against urban diabetes.

**Dr José Armando Ahued Ortega**  
Minister of Health of Mexico City

*"In Mexico City we have the building blocks to tackle urban diabetes."*





# GLOBAL CITIES

When the history of the twenty-first century is written it will be the story of cities.

Since 2010, for the first time in history, more than half the world lives in a city. By 2050, urban populations are set to grow to almost 70% of the global population.<sup>2</sup>

This trend is creating a wide range of new opportunities and challenges. On the one hand, people are drawn to the social and economic possibilities of urban life. It also brings people closer to health services, meaning there's the potential for greater health service delivery and equity.

On the other hand, urban development is putting massive strain on services and infrastructure. And it's creating new tensions and social challenges, not least as a third of urban residents in the developing world live in urban slum conditions.<sup>3</sup> The UN estimates that by 2050 the number of people living in urban slums might triple to 3 billion unless decisive actions are taken.<sup>4</sup>

All this means that managing and running cities is one of the great challenges of this century.



# GLOBAL DIABETES

Diabetes may turn out to be the biggest epidemic in human history.

According to the International Diabetes Federation (IDF), more than 382 million people around the world had diabetes, diagnosed or undiagnosed in 2013. By 2035, that number will have risen to 592 million.<sup>1</sup>

What's significant about this trend is the link to cities. Already, around 64% of those with diabetes live in cities, the equivalent of around 246 million urban dwellers.<sup>1</sup>

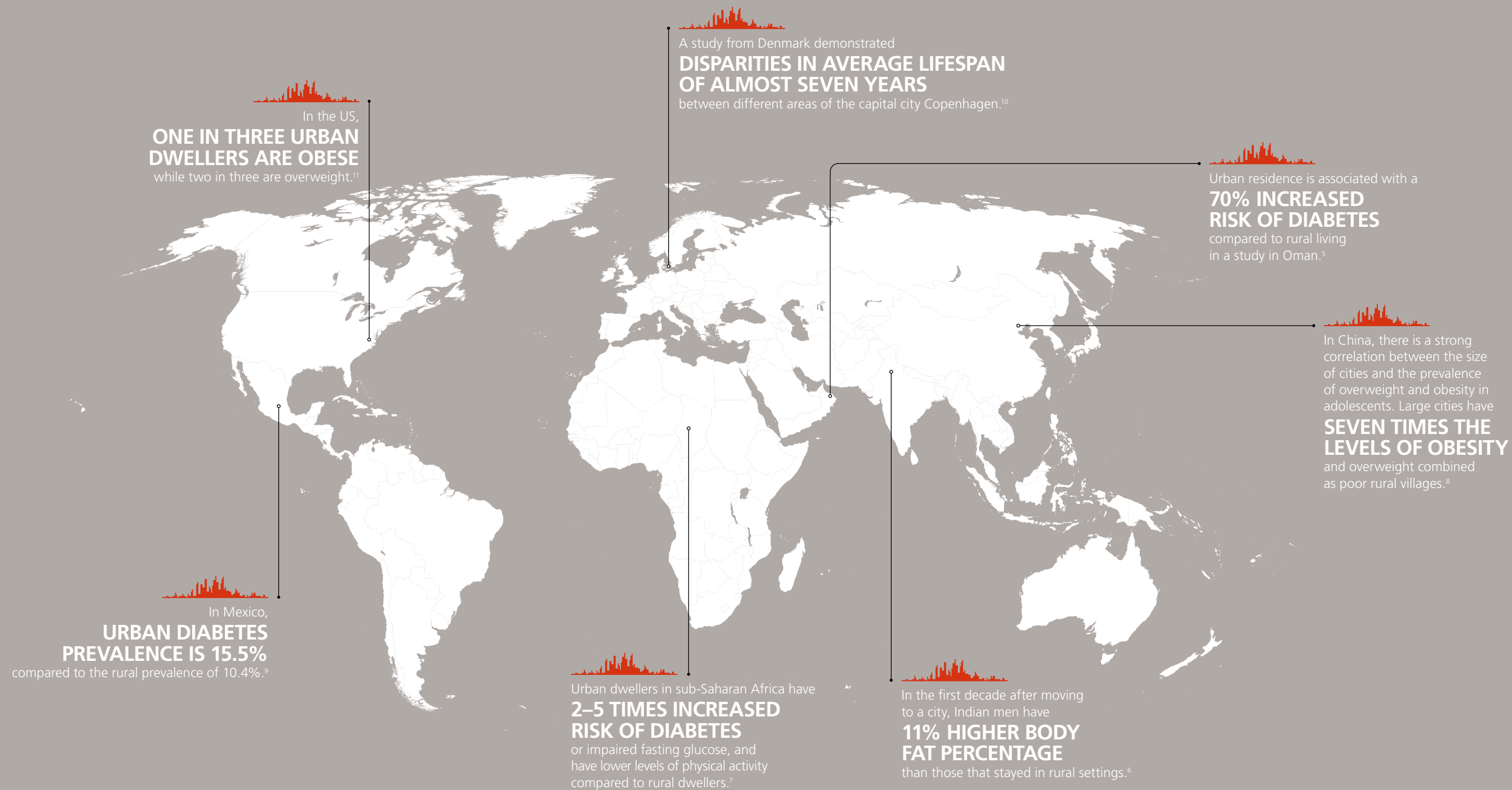
The number of people with type 2 diabetes is increasing in every country. The majority – some 80% – of people living with diabetes live in low- and middle-income countries,<sup>1</sup> where cities are also growing fastest.

It is clear that urban lifestyles are driving a sharp rise in non-communicable diseases (NCDs). From rising wealth and increasing consumption, to more sedentary lifestyles and inequality of access to healthcare, urban living presents a challenge to health.

*This means we simply cannot tackle global diabetes unless we take on the problem in cities.*

# URBAN DIABETES

Across the world studies are beginning to expose the links between urban lifestyles and the prevalence of diabetes. It is vital that we create cities which help us live more healthily.





# IT'S AN EMERGENCY IN SLOW MOTION

While some disasters happen in a split second – sudden events which create untold damage and tragic injuries – others can take years to develop and no one realises what is happening until it's too late.

The global diabetes challenge falls into the second category: it's an emergency in slow motion and unless we act now, the world will have sleepwalked into a catastrophe. This is a devastating disease and we need urgent action to face up to it.

Among the multiple reasons why the rise of diabetes is an alarming global challenge, two stand out.

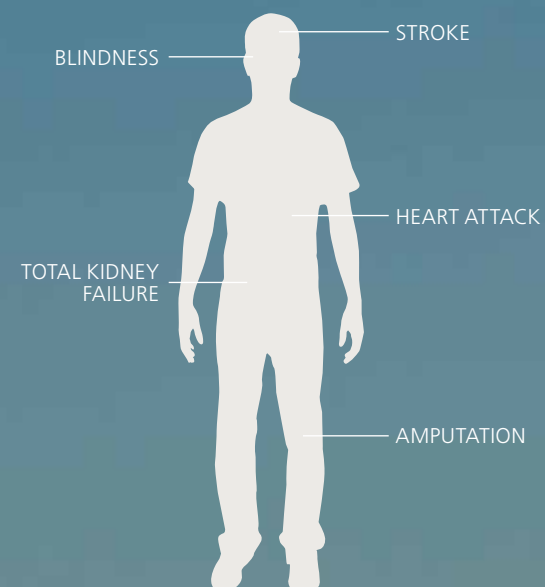
The first is the impact on individuals. Although diabetes care has greatly improved in recent decades, the truth remains that the potential complications from diabetes can be devastating.

There are still millions of people dying from the disease annually – 5.1 million in 2013 according to the IDF.<sup>1</sup> Others are losing their eyesight or requiring amputations because of poorly controlled diabetes. Uncontrolled diabetes also means an individual is three times as likely to suffer from kidney failure, three times more likely to suffer from a heart attack, and four times as likely to suffer from a stroke.

The second reason is the economic and financial burden of diabetes. As health budgets continue to be placed under massive strain, the cost represented by the rise of global diabetes will present a major challenge. We cannot assume that health systems will be able to cope if we continue along the current trajectory.

For both these reasons, diabetes is not an issue the world can take lightly.

## POTENTIAL COMPLICATIONS OF UNCONTROLLED DIABETES<sup>12</sup>



.....  
**BLINDNESS**  
**Risk:** Diabetes is a leading cause of blindness.  
**Effective treatment:** Reduces deterioration in eyesight.

**TOTAL KIDNEY FAILURE**  
**Risk:** Three times as likely.  
**Effective treatment:** Reduces the causes of kidney failure.

**STROKE**  
**Risk:** Up to four times as likely.  
**Effective treatment:** Reduces stroke.

**HEART ATTACK**  
**Risk:** Three times as likely, and heart disease is up to four times as likely.  
**Effective treatment:** Reduces the risk of heart failure.

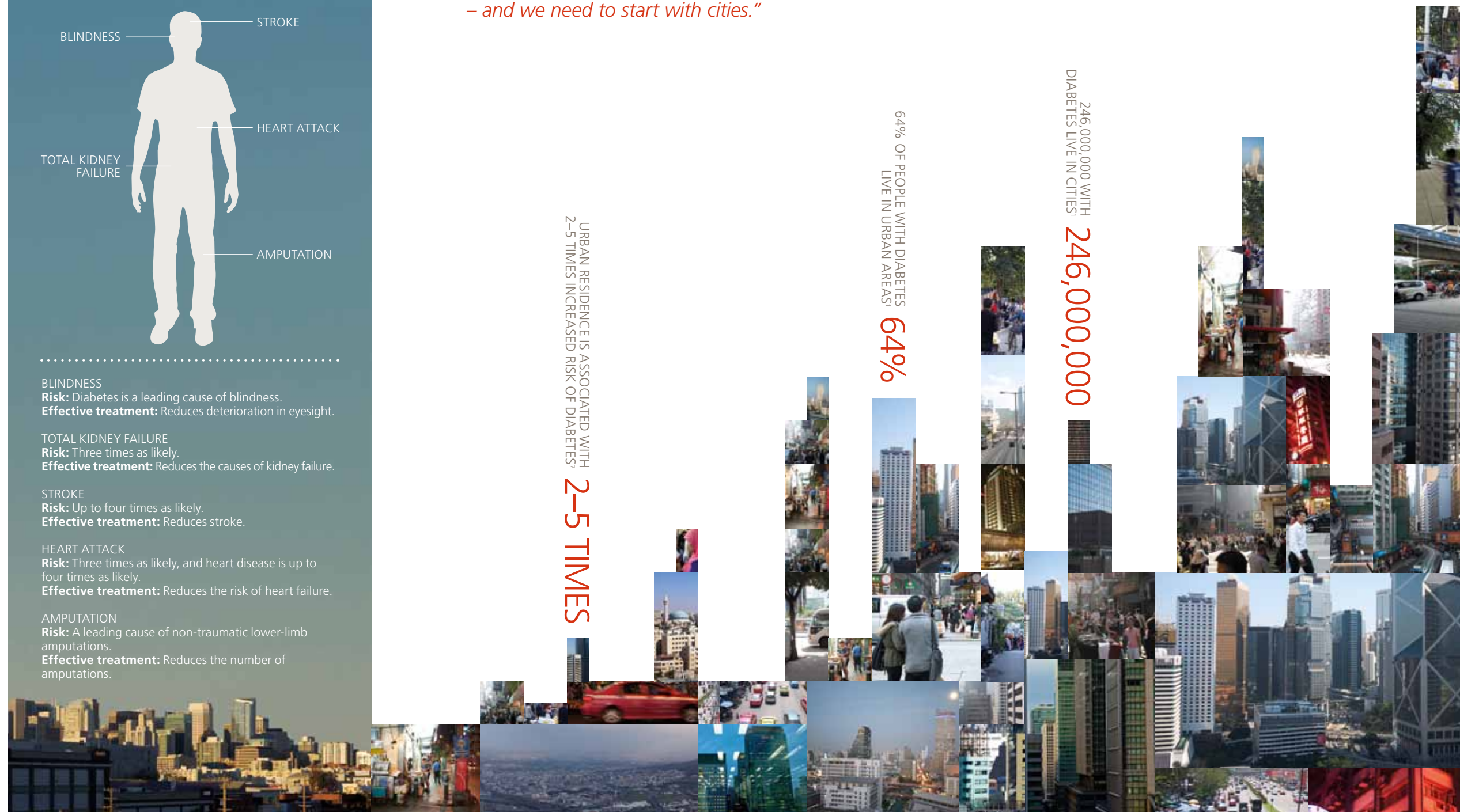
**AMPUTATION**  
**Risk:** A leading cause of non-traumatic lower-limb amputations.  
**Effective treatment:** Reduces the number of amputations.

*"Diabetes is not an issue the world can take lightly. It's not too late for the world to wake up to what's happening – and we need to start with cities."*

URBAN RESIDENCE IS ASSOCIATED WITH  
2-5 TIMES INCREASED RISK OF DIABETES<sup>7</sup> **2-5 TIMES**

64% OF PEOPLE WITH DIABETES  
LIVE IN URBAN AREAS<sup>1</sup> **64%**

246,000,000 WITH  
DIABETES LIVE IN CITIES<sup>1</sup> **246,000,000**







*"We're launching Cities Changing Diabetes to help break the Rule of Halves in the big cities of the future, and stop urban diabetes from ruining millions more lives."*



# BUT IT'S NOT INEVITABLE

As Dr Jacob Kumaresan, director of the World Health Organization's Centre for Health Development has put it: "We are at a key turning point in history where we can take concrete actions to address the health issues associated with urbanisation trends."<sup>13</sup>

That's what Cities Changing Diabetes is all about.

Just as we believe that the rise of global diabetes is not inevitable, so we are convinced that the urban diabetes challenge is not something which has to keep worsening. This is a challenge we can take on and fix. But we need to act today.

In the past, the world has taken concerted action to stop global pandemics. We've come together to eradicate smallpox, and halt the spread of HIV, and malaria. We've launched massive public health campaigns to raise awareness, mobilise resources and fight back the rise of killer diseases. Now we need a similar ambition for diabetes.

We all have to work to change this. That means healthcare professionals on the front line, city authorities, urban planners, the pharmaceutical industry and other businesses, academics and community leaders. Our shared ambition is to break what's known as the diabetes Rule of Halves in the big cities of the future.

## ACCORDING TO THE RULE OF HALVES<sup>14</sup>

TODAY ONLY AROUND 6% OF PEOPLE WHO HAVE DIABETES LIVE THEIR LIVES FREE OF ANY RELATED COMPLICATIONS. THIS IS BECAUSE:



Only around half of the people with diabetes are diagnosed



Of these, only half receive care



Of whom, only half achieve their treatment targets



And only half of these achieve good outcomes.

CITIES CHANGING DIABETES:

# THE PROGRAMME

In cities around the world, important work is already being carried out to tackle urban diabetes. Health experts, academics, community leaders and city officials are all honing in on the issue. Our aim in launching Cities Changing Diabetes is not to replace or supplant these efforts, but rather to learn about the work that's happening today, and to join forces to build a concerted campaign for future action.

## THE PROGRAMME FALLS INTO THREE PHASES:

### MAPPING

#### 1. Mapping the challenge

We need to understand more about the dynamics of urban diabetes – the interplay of social, economic and environmental factors which are fuelling the rise of diabetes in cities. That's why the first stage of our programme, working alongside University College London and Steno Diabetes Center, is to map the problem in selected focus cities across the world by shining a light on what works best, identifying key barriers and the priorities for the future.

### SHARING

#### 2. Sharing solutions

We will take the learning gained to build understanding and collaboration within each of the focus cities, and share valuable best practice across the cluster of focus cities in the first year of the programme. What's more, we will draw together what comes out of the period of discovery to share with other cities around the world who are seeking solutions to the urban diabetes challenge.

### ACTION

#### 3. Taking action

Our aim is to use the greater understanding of what is going on in the selected focus cities to shape priorities for the future in cities across the world and to inform the global health agenda. Action plans in the focus cities will be developed in collaboration with policy-makers, health authorities, the private sector and the voluntary sector. We hope that the programme will catalyse concerted and focused action on the ground in cities across the world.

# GLOBAL PARTNERS

## NOVO NORDISK

Novo Nordisk is at the forefront of one of today's great health challenges: diabetes.

As specialists in diabetes treatment, we're committed to finding the next generation of medicines through long-term investment in innovation. Our key contribution is to discover and develop these medicines, manufacture them to scale and make them accessible wherever they are needed.

But living with chronic disease is about more than getting the right medicine. That's why we're working on helping people to receive the right treatment and achieve the right outcomes. We want to stand as an advocate for the patient, and to change the experience of living with diabetes.

Now, more than ever, we have a critical role to play. We want to see a world where fewer people develop diabetes – and where everyone with diabetes is diagnosed, everyone who is diagnosed is treated, and everyone who is treated gets the best outcomes. We are committed to playing our part in the global fight against diabetes, and Cities Changing Diabetes is at the heart of this commitment.



## UNIVERSITY COLLEGE LONDON

Over the last few years, UCL has put its weight behind understanding the impacts of urbanisation. Under the banner of its 'Grand Challenge' commitments to Global Health, Sustainable Cities, Intercultural Interaction, and Human Wellbeing, a cross-disciplinary group has sought to contribute to urban sustainability by identifying health vulnerabilities and addressing the modifiable risk factors that can reduce the impact of NCDs globally. Increasingly we have turned our attention to how to shape cities for health, working hand in hand with UCL specialists in vulnerability assessment, NCDs, epidemiology, clinical medicine, illness behaviour and medical anthropology.

We are delighted to bring our expertise to bear through supporting research that will underpin Cities Changing Diabetes by working on the ground to gather data across the globe, setting a baseline to the challenge of diabetes, and acting as a platform for future action in specific locations. More than that, our approach is aimed at making an impact that is sustainable into the future, giving new momentum to this global initiative.



## STENO DIABETES CENTER

Steno Diabetes Center is a world leading institution in diabetes care and prevention, with a focus on the early stages of the disease. Established by Novo Nordisk A/S in 1932, we are a not for profit organisation working in partnership with the Danish healthcare system. We treat around 5,600 people with diabetes.

At a time when diabetes risks overwhelm modern cities, Cities Changing Diabetes is a concerted effort to diagnose the undiagnosed, and to stop the disease progressing. There is a clear alignment between our strategy and the aims of the programme, and we see the programme as an opportunity to contribute our experience and expertise. From our research into diabetes in the city setting, to healthcare professional training in cities across the world and our experience of providing care in Copenhagen, we believe we can make a significant contribution to the fight against urban diabetes.





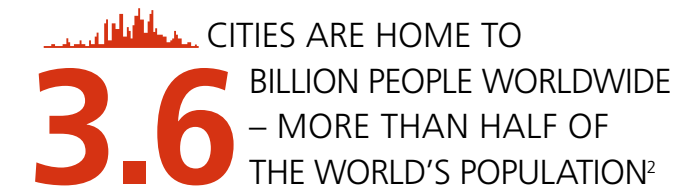
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DIABETES IS THE PRIMARY CAUSE  
**OF DEATH IN MEXICO,**  
AND THE NUMBER OF DIABETES-RELATED  
DEATHS WAS **70,281** IN 2013<sup>15</sup>

**URBAN VS RURAL**  
RESIDENCE WAS ASSOCIATED WITH A  
**70%** INCREASE IN RISK OF DIABETES  
IN A STUDY IN OMAN<sup>5</sup>



URBAN RESIDENCE IS ASSOCIATED  
WITH **2–5** TIMES INCREASED  
**RISK OF DIABETES**  
COMPARED TO RURAL DWELLERS<sup>7</sup>



An aerial photograph of a vast, densely populated city, likely Bogotá, Colombia, showing a mix of urban development and green spaces. In the background, a range of mountains is visible under a hazy sky. The text 'cities changing diabetes' is overlaid on the left side of the image.

# **cities changing diabetes**

JOIN THE GLOBAL FIGHT AGAINST URBAN DIABETES