MYTH

Only wealthy people get diabetes (Indonesia)
Diabetes is caused by eating too much sugar
Being overweight causes diabetes

FACT

Diabetes can affect anyone, whatever their income or social background, and it is not simply caused by eating too much sugar or being overweight. However, eating more food than the body requires and being physically inactive increase the risk of developing Type 2 diabetes.

MYTH

Diabetes is always inherited (Indonesia)
Obesity is hereditary, so dieting and exercising are useless (Indonesia)

FACT

There does seem to be a genetic element to both Type 2 diabetes and obesity, which is why they can sometimes run in families. However, environmental factors, including diet and exercise, play a huge part in the development of both these conditions. It is important for everyone to eat healthily and exercise regularly to reduce the risk of developing Type 2 diabetes or obesity.

Diabetes —
what causes it and who gets it?

MYTH

Children can outgrow diabetes
Diabetes only affects the elderly (US)

FACT

Type 1 diabetes, also known as insulin-dependent diabetes, is usually diagnosed in childhood and is caused by the destruction of insulin-producing cells in the pancreas. As these cells cannot grow back once destroyed, this form of diabetes is life-long. Type 2 diabetes is uncommon in children, but the number is increasing. This type of diabetes is also life-long. Type 2 diabetes more usually develops in people who are over 35 years of age, with the incidence of Type 2 diabetes increasing throughout middle age.

MYTH

Diabetes is contagious (Turkey, US)

FACT

Both Type 1 and Type 2 diabetes are diseases of metabolism and are not contagious — you cannot contract diabetes by contact with a person with diabetes.

MYTH

Diabetes can be caused by a traumatic incident in the person's life or by being bewitched or cursed (Germany, Kenya)

FACT

The underlying causes of diabetes do not include a curse or a traumatic incident. Type 1 diabetes is a result of the body's own immune system destroying the insulin-producing cells in the pancreas. Type 2 diabetes is due to the body becoming insensitive to its own insulin and then being unable to produce sufficient insulin to overcome that insensitivity. Stresses, such as an infection, can reveal diabetes that is already present but had not been recognized. An injury or operation that causes someone to require medical attention may also lead to diagnosis of already present diabetes.

MYTH

Type 2 diabetes is less severe than Type 1 diabetes because you don't need injections and you take tablets instead (Kenya)

FACT

While highly manageable, both the two main kinds of diabetes — Type 1 and Type 2 — may cause severe damage to future health if not managed properly. People with either type of diabetes are at risk of damage to their eyes, kidneys and feet as time goes on. However, the risk of developing these complications can be greatly reduced with good control of blood glucose.

People with Type 2 diabetes have a shorter life span, as they are older at diagnosis and — without preventative measures — are at a higher risk of heart attacks. Due to the natural development of the condition, many people with Type 2 diabetes eventually require insulin treatment. If insulin is started early enough, many of the serious complications may be avoided. All people with diabetes should have regular checks of their eyes, feet, kidneys and heart so that any changes can be detected and treated.

MYTH

Type 2 diabetes is not always caused by lack of insulin because some people with diabetes don't need to take insulin

FACT

In Type 2 diabetes, the body has increased insulin needs due to the reduced responsiveness or insensitivity of body cells to insulin, and the pancreas cannot produce enough insulin to meet these increased needs of the body. The diet, exercise and drug treatments for Type 2 diabetes attempt to both overcome insulin insensitivity and to stimulate more insulin secretion. Ultimately, however, the ability to stimulate the cells of the pancreas to produce more insulin is not enough and insulin injections are usually needed to achieve good control of blood glucose.

Type 1 and 2 diabetes —
what's the difference?

MYTH

Type 2 diabetes can turn into Type 1 diabetes

FACT

The type of diabetes a person has does not change with age. After a period of time, many people with Type 2 diabetes will require insulin injections to adequately control their blood glucose: insulin is a normal part of the treatment of Type 2 diabetes and does not reflect a change of diabetes type.

Type 1 diabetes develops quite differently and insulin injections are required from diagnosis. Type 1 diabetes that comes on in middle age or later can be slowly progressive, and can thus appear to be Type 2 diabetes. Also, some people with Type 1 diabetes can develop features of Type 2 diabetes (obesity, high blood fats, high blood pressure); these people will still need insulin injections, however, as they produce no insulin of their own.

MYTH

Diabetes is cured by lowering your blood glucose to 'normal' levels (Spain)

FACT

Diabetes is a long-term progressive condition that is managed rather than cured. An aim of diabetes treatment is to reduce blood glucose levels to target levels that prevent diabetes complications, such as heart problems. The target identified by the International Diabetes Federation (IDF) is normal or near-normal blood glucose levels with an HbA_{1c} (a measure of long-term blood glucose control) goal of <6.5 % for adult, non-pregnant individuals. This has been shown in trials to be associated with fewer long-term eye, kidney, nerve and heart problems. Occasionally, some overweight people control their food intake and increase their physical activity to such an extent that their diabetes effectively goes away — but it will return in time if they return to their previous lifestyle.

MYTH

Intensive diabetes management means more episodes of low blood glucose (Uzbekistan, UK)

FACT

Using a treatment plan that helps people with diabetes achieve as closely as possible the blood glucose levels seen in people who do not have diabetes inevitably reduces the scope for error. As a result, blood glucose reactions ('hypos') may be more frequent in some people. But without intensive management, the same overall level could only be achieved with a much greater risk of associated hypos.

Management of diabetes —
is it all about glucose?

MYTH

A high level of blood glucose is normal for some people

FACT

This is simply untrue. People with diabetes should always try and keep their level of blood glucose as close to the normal range as is possible and convenient. High levels of blood glucose lead to an increased risk of eye, heart, kidney and foot problems. Some people who have very high blood glucose levels for long periods will feel uncomfortable at normal levels, due to adaptations made by their brains — this effect can take some time to reverse.

MYTH

People with diabetes can estimate their blood glucose level without testing

FACT

Testing is the only reliable way to monitor blood glucose levels. However, it is possible to recognize the early signs of low blood glucose, such as increased heart rate, trembling, sweating, slow thinking or lack of concentration, and irritability. Any change in lifestyle or health that might disturb blood glucose control (up or down) should be followed by more careful blood glucose monitoring in order to prevent a possible low blood glucose episode (hypo) or failure to detect high levels. Training courses in how to recognize low blood glucose are available for people who have difficulty in recognizing hypo symptoms. People who attend these classes often realize how difficult it is to predict blood glucose levels without testing.

MYTH

Marijuana, thyme and parsley can help to lower blood glucose

FACT

There is some evidence that marijuana can indirectly affect blood glucose levels, and some studies have also reported that particular herbs and spices (cinnamon, nutmeg, cloves) can improve blood glucose levels and the way the body uses glucose. However, these effects are small, and so marijuana, herbs and spices are not recommended as therapies to lower blood glucose in place of lifestyle changes, tablets and insulin.

MYTH

All people with diabetes need insulin injections (US)

FACT

Whether or not a person with diabetes needs insulin injections depends on many factors, including the type of diabetes a person has. All people with Type 1 diabetes need insulin and, later in the course of the condition, many people with Type 2 diabetes also have to use insulin to achieve target blood glucose levels. Insulin is unique in its ability to control blood glucose in people with diabetes once their own insulin secretion from the pancreas is severely reduced.

MYTH

Insulin has to be injected into a vein with a needle like those used for taking blood (UK)

FACT

Insulin is not injected into a vein but into the fat below the surface of the skin (the subcutaneous fat) on the front of the abdomen (the preferred site for meal-time injections), on the thigh (sometimes preferred for insulin designed to act overnight) or, alternatively, the upper arm or buttocks. The needles used are much finer and shorter than the needles used for blood withdrawal and are coated to easily slide through the skin.

MYTH

All tablets for diabetes are oral insulin

FACT

Insulin cannot be given orally in the form of a tablet. Insulin is a protein and if it is taken orally it is broken down (digested) in the gut. Insulin cannot then be absorbed into the blood stream and carried to the liver and muscles — its major sites of action. The tablets taken by people with diabetes to lower blood glucose levels have different kinds of effects, including: stimulating insulin release from the pancreas; inhibiting sugar production from other foods by the liver; slowing the absorption of sugar and carbohydrate from the gut; and making the body more sensitive to its own insulin.

Treatment of diabetes —
is insulin the only option?

MYTH

Insulin is addictive (Turkey)

FACT

Insulin is a natural hormone produced by the body and it is impossible to become addicted to insulin. People with Type 1 diabetes have to take insulin continually — this is not because they are addicted to insulin, but because insulin is continuously vital for controlling blood glucose and fat levels. Confusion sometimes arises due to the old term for Type 1 diabetes, 'insulin-dependent diabetes', but 'dependent' in this sense has no connection with the term 'dependence' sometimes used for addictive drugs.

MYTH

Insulin can cause blindness (Spain)

FACT

While there is an increased risk of blindness associated with diabetes, by maintaining a healthy lifestyle and following the treatment prescribed, it can usually now be prevented. In diabetes, blindness is not associated with taking insulin, but rather with poor blood glucose control from lack of insulin and from high blood pressure. Eye damage occurs when high blood pressure and elevated blood glucose levels damage the small blood vessels in the retina (the light-sensitive part of the eye), causing leakage of fluid or bleeding. In the past, some doctors started insulin therapy too late, when eye damage was already advancing, and this, therefore, gave a false impression due to visual loss coming shortly after starting insulin injections.

MYTH

Laser treatment of eyes leads to loss of vision (UK)

FACT

Laser treatment is used by eye specialists only in people already at a high risk of loss of vision. Prior to the availability of laser therapy, loss of vision occurred in many of these people at high risk. Laser treatment has proved very successful in preventing blindness, as shown in large medical studies, but sadly sometimes it cannot prevent eye damage from progressing, and in those still with good vision at the time of treatment, this progression may be wrongly blamed on the laser treatment.

What happens is that early damage to the light-sensitive part of the eye, the retina (known as 'retinopathy'), progresses to a form where the damaged blood vessels close off. In response, fragile new blood vessels grow across the surface of the retina. These easily break and bleed, clouding vision. The new blood vessels can also cause scar tissue to develop, which can pull the retina away from the back of the eye. Ideally, this is prevented in the first place by good control of blood sugar and blood pressure levels. However, laser treatment can usually prevent the growth of the new vessels and, thus, preserve sight. It is best carried out just before the damaged retina gives rise to the fragile new blood vessels.

MYTH

Once a person with diabetes starts insulin therapy, it can never be stopped and they can never return to oral therapy

FACT

This is true of people with Type 1 diabetes. People with Type 2 diabetes may need to take insulin for short lengths of time, such as during a period of stress, during an illness, infection or surgery, or when taking particular medications. However, as their own insulin production from the pancreas decreases over time, people with Type 2 diabetes can also benefit from insulin in the longer term.

Treatment of diabetes —
is insulin the only option?

MYTH

Insulin can cause impotence (Turkey, Spain)

FACT

Insulin does not cause impotence, but long-standing diabetes can often lead to sexual problems in both men and women. Up to 75% of men with diabetes are affected by erectile dysfunction at one time or another and it affects 50% of men by the age of 60. This is due to damage to the nerves that control erections, or sometimes due to damage to the blood supply needed to fill the penis to make it erect. The likelihood of impotence increases with age (as in non-diabetic men). Drugs like Viagra® (sildenafil) can help many men if the blood supply is good. Unhealthy lifestyle habits such as smoking and excessive alcohol intake also increase the chance of erectile dysfunction and should be avoided.

MYTH

Prescribing insulin marks the terminal stage of the disease and the person with diabetes may not survive (India, Turkey, Kenya)

FACT

Insulin does not mark the terminal stage of the disease. For people with Type 1 diabetes, whose body cannot produce insulin, insulin injections several times a day are always necessary. People with Type 2 diabetes should be started on insulin long before they reach the late stages of diabetes. Indeed, by starting insulin therapy early and maintaining good control of blood glucose levels, complications can be prevented or delayed for years. Unfortunately, in some countries insulin is expensive, and in other places doctors may not be familiar with the modern, convenient forms of giving insulin. In these circumstances, insulin injections are often wrongly delayed until complications such as foot infections set in.

MYTH

Increasing insulin dosage means the diabetes is getting worse

FACT

There is no standard dose of insulin for people with diabetes, so the dose must be adjusted to achieve the best blood glucose levels. Some people are much more sensitive to insulin than others. When starting insulin, a low dose is chosen to avoid causing low blood glucose levels (hypos), but the dose should then be rapidly increased to optimal levels. Even after this, more insulin may be needed over longer periods of time, as a person's own production of insulin declines. A person without diabetes will secrete about 50–60 units of insulin into their blood stream every day, but obese people, pregnant women, ill people and those taking certain medications may require as much as two to three times this amount.

MYTH

Insulin use causes weight gain

FACT

Without sufficient insulin, digested food and muscle tissue are broken down and turned into glucose (sugar) by the liver. This excess sugar is lost in the urine, an unnatural process not found in people without diabetes. Improved blood glucose control will reduce this loss of sugar in urine, and the calories retained are stored as extra fat, as in people without diabetes. Weight gain can also occur if too much insulin is being taken and extra calories are being taken to prevent or treat low blood glucose levels (hypos). Sometimes with older types of insulin, people were given dietary advice that caused them to change their eating patterns and eat more food — this of course will result in weight gain. This should not happen when newer insulins are used together with good education on how to use them.

Treatment of diabetes —
is insulin the only option?

MYTH

Insulin use leads to an increased risk of heart disease

FACT

Insulin use does not increase the risk of heart disease, as shown in recent studies. Indeed, insulin therapy can both help prevent heart disease and has proved useful in treating heart attacks in people with diabetes.

MYTH

Insulin use is expensive

FACT

The cost of insulin varies between regions and from country to country. Many governments buy insulin at very good prices, but in other places fragmented buying, costs of distribution, and even taxes and import duties add to the cost. As a result, the cost of insulin can be high in relation to income. However, the comparative costs of complications in terms of money and quality of life must be factored into the overall 'cost' of insulin. Saving the lives of people with Type 1 diabetes is obviously cost-effective.

MYTH

Insulin cures diabetes

Traditional medicines, such as homeopathic and ayurvedic remedies, can cure diabetes (India)

Diabetes can be cured by the person with diabetes drinking their own urine (India)

FACT

Diabetes is a long-term condition that cannot be cured by any remedy — homeopathic, pharmacological or otherwise. Homeopathic and ayurvedic remedies and drinking urine are not recommended treatments for people with diabetes. Insulin therapy is necessary for all people with Type 1 diabetes and controls the condition, but does not cure it. Insulin is similarly used by many people with Type 2 diabetes. Insulin helps to maintain blood glucose at near normal levels and plays a key role in managing the symptoms of diabetes and in preventing complications. A cure is possible in some people by transplantation of the pancreas or parts of it, but transplantation means life-long use of strong anti-rejection drugs, which are associated with their own problems.

MYTH

People with diabetes cannot participate in sports (US)

FACT

Physical activity is important in the treatment and prevention of Type 2 diabetes, and has beneficial effects in helping to control blood glucose levels, high blood pressure and high blood fats (cholesterol). People with Type 1 diabetes can also benefit from the effects of activity. However, it is important that people with diabetes get advice on the risks and benefits before starting a physical programme, as some complications of diabetes can be worsened by exercise. For example, people who have lost the sensation in their feet should avoid walking or running as exercise because this places them at high risk of foot ulceration; in rare cases exercise can cause bleeding in the eyes of people with advanced eye damage caused by diabetes; and exercise can sometimes cause heart problems in people with diabetes who have poor blood supply to the heart muscle or some form of nerve damage. Exercise, however, is important to all people with or without diabetes and programmes can be individualized for the person with diabetes to avoid their areas of concern.

MYTH

A person with diabetes must stick to a limited diet and should not eat potatoes, any root vegetables or sweet-tasting fruit (India, Mauritius)
Diabetes can be controlled by eating just proteins and fats (US)

FACT

It is important for people with diabetes to have a healthy balanced diet, as this will help them to control their blood glucose levels and prevent them from gaining weight. A healthy diet should include food from all the major food groups — fats, carbohydrates (breads, cereals, vegetables, fruit, rice, pasta, potatoes) and proteins (fish, poultry, meat, beans, eggs); eating only one or two food groups is harmful for all people with or without diabetes. People with diabetes can still eat a full and varied diet, but, if using insulin, they will need to monitor the amount of carbohydrate they eat to enable them to match their meal-time insulin doses to the amount of carbohydrate they have eaten. A healthy diet is rich in both fruits and vegetables, but people with diabetes need to be aware of the high levels of 'hidden' sugars in some fruits and vegetables.

MYTH

People with diabetes cannot eat sugar, but pure honey is not harmful

FACT

Both honey and sugar can be taken in moderation in the diet of a person with diabetes, but people using insulin must remember to count them as part of their carbohydrate allowance. Honey is no 'better' than pure sugar for people with diabetes; it still has a very high sugar content and should be eaten sparingly.

MYTH

Taking insulin or tablets allows people with diabetes to eat anything they want

FACT

Even if a person with diabetes is taking insulin or tablets they still need to regulate their food intake, like anyone who does not have diabetes. Diabetes therapies aim to bring abnormally high blood glucose levels to near normal levels rather than offset any extra glucose load caused by an unhealthy diet. Meal-time insulin doses can be adjusted for larger or smaller meals, but regularly eating extra calories leads to weight gain in all people, with or without diabetes.

MYTH

People with diabetes cannot drink alcohol

FACT

Drinking a moderate amount of alcohol with food has no adverse effect on blood glucose or insulin levels in people with Type 1 or Type 2 diabetes. However, alcohol can cause low glucose levels (hypos) if taken on an empty stomach or in excess. Drinking alcohol may, however, affect the motivation to monitor blood glucose levels and the ability to recognize hypos. Beer contains a lot of carbohydrate, which counters the effects of the alcohol in causing hypos, but leads to weight gain if drunk regularly. People with or without diabetes can benefit from the heart protective effects of light to moderate intake of alcohol — red wine seems to be particularly beneficial.

MYTH

Eating very acidic or sour foods and drinks can replace treatment with oral agents or insulin (Mauritius)

FACT

Some people believe that acidic foods as part of a meal help slow the digestion of starches, which helps spread the glucose load of the meal. However, there is absolutely no evidence that acidic or sour foods can replace treatment with tablets or insulin. Nevertheless, replacing sweet foods that have high levels of sugars with sour foods, which do not, should have a beneficial effect on blood glucose levels.

MYTH

Women with diabetes shouldn't have babies — it's too risky

FACT

This used to be true up to about 30 years ago, but now it is possible for all women with diabetes to have babies without endangering their health. The key is to achieve very good blood glucose control before becoming pregnant and taking care to maintain that control throughout the pregnancy. Poor glucose control may lead to miscarriage or malformation in early pregnancy, and the risk of high blood pressure and having a baby prematurely is increased later in pregnancy. In addition, women with poorly controlled diabetes may have high birth-weight babies, leading to associated problems at delivery. Insulin is usually prescribed for pregnant women with both Type 1 or Type 2 diabetes, as the effect of glucose-lowering tablets in pregnancy has not been fully studied. Prior diabetes complications may worsen during pregnancy and should be carefully monitored and treated early. With good care, there is no difference between the pregnancy survival rate for women with and without diabetes.

MYTH

People with diabetes should stop their insulin therapy if they have a fever, stomach upset or other minor illness (India)

FACT

Blood glucose levels often rise during illness; therefore, insulin therapy may need to be increased when a person with diabetes has an illness, especially if they have a fever or stomach upset. Carbohydrate intake (breads, cereals, rice, pasta, potatoes and sugars) also needs to be maintained, blood glucose levels monitored more frequently, urine checked for ketones (an indication the body is burning fat rather than sugar) and medical help sought early if the diabetes becomes uncontrolled or general health deteriorates further.

MYTH

Diabetic foot infections can be treated by tying a sacred thread around the ankle or by dressing the wound with coconut paste and banana leaves (India, Fiji)

FACT

Damage to the blood and nerve supplies to the feet is a common complication of diabetes. This results in a high rate of foot problems, particularly when blood glucose control is poor. Diabetic foot infections are emergencies which, if not properly managed, can lead to amputation, and the rate of infection is very high in areas with warm to hot climates. To prevent loss of the limb, correct treatment should be started early and be aggressive. The treatment for diabetic foot problems includes high-dose antibiotics, removal of callus and dead tissue, appropriate dressings and very tight blood glucose control. Recovery should be followed by intensive education to prevent recurrence.

MYTH

Treatment for diabetes is pointless because people die from diabetes (Spain)

FACT

Every person dies of something, but a usual aim is to make good health last as long as possible and to die in old age. Diabetes is a long-term condition for which there is no cure, but for which there is very good evidence that the late complications that can cause death (particularly heart attacks, strokes or kidney failure) are all preventable or can be delayed for years. The key is good control of blood glucose, blood pressure and blood fats (cholesterol), stopping smoking and taking plenty of exercise. Through these measures, people with diabetes can lead active, full and normal lives. The treatments available for diabetes are effective and, when used properly, should not have a negative impact on a person's quality of life — future treatments should do even better.