



Diabetes: what, why and how Tibb can help

Prof. Rashid Bhikha and Dr. John Glynn

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Background

Diabetes is a real threat to the health of more and more South Africans – some actually call it an epidemic. It is a chronic, debilitating disorder which has a major impact on the physical, social and working life of those who suffer from it. It is now

A recent study estimated that 347 million people have diabetes worldwide. Of these more than 1.5 million are South Africans.

one of the leading causes of disability and premature death in South Africa. The highest levels are in the Asian community, with the white and coloured groups not far behind. In black people it has increased alarmingly, particularly in city dwellers. Diabetes seems to be closely

linked to unhealthy living which eventually leads to serious disturbance in the person's basic metabolism. Tibb is well placed to correct this situation, by improving the diabetic person's Lifestyle Factors, especially with dietary changes, increased physical activity and better sleep.

Someone with diabetes can do much to minimise the symptoms, and by dealing with the underlying causes avoid serious complications which invariably follow if not treated properly. Education on the reality of the disorder, and the danger it poses to all those affected, should be a priority, as awareness is generally very low. Again, Tibb can help in this context.

What is diabetes?

“A disorder of carbohydrate metabolism in which sugars in the body are not metabolised to produce energy, due to a lack of the pancreatic hormone insulin” [Oxford Medical Dictionary]

Simply put, someone with diabetes has abnormally high levels of sugar in the blood. This is due to (a) inability to produce the hormone insulin in the pancreas; or (b) a decreased response by the cells in the body to insulin, so sugar cannot enter the cells quickly enough.

Diabetes is a complex disorder affecting the person's internal chemistry. If untreated, it usually leads to serious complications, such as problems with the eyes, kidneys, heart and brain. Fortunately, it does provide an early warning by way of clear signs and symptoms. If acted on promptly, by making changes to lifestyle and personal behaviour, the ravages of the disorder can be avoided.

As mentioned, the defining feature of all types of diabetes is an abnormally high and persistent level of sugar, or glucose, in the person's bloodstream. The cause of these abnormally high levels is either a lack of ability to produce the hormone insulin in sufficient amounts, or a lowered sensitivity to existing insulin by the body's cells.

The higher the blood sugar level is, the greater the chance that diabetes will develop.

The term for abnormally high levels of glucose in the blood is *hyperglycaemia*. When the blood glucose exceeds a certain threshold level, it spills over from the blood into the kidneys and appears later in the urine. The appearance of glucose in the urine is called *glycosuria*. Both urine and blood can be tested for sugar to see if diabetes is present.

Types of diabetes

There are two main types of diabetes, with different causes and treatment.

Type 1 diabetes is the more severe form, but fortunately occurs in only 5% to 10% of those affected by diabetes. The main features are:

- This form of diabetes is not preventable.
- It usually affects younger people – that is, those under 30 years of age. This is why it is sometimes called *juvenile-onset diabetes*.
- The cause of this type is not known, although genetic make-up is a factor, with an unhealthy lifestyle (especially faulty diet, little physical activity and stress) acting as a trigger.
- A person with Type 1 diabetes needs to inject regularly with insulin to keep blood glucose levels in the normal range.
- Insulin is produced in clumps of cells (*islets*) which are embedded in the pancreas. In this type of diabetes these islets are severely damaged, or even destroyed.
- Treatment is usually regular injections of insulin, supplemented with dietary advice and controlled physical exercise.

Type 2 diabetes accounts for 90+% of cases of diabetes, but is not as severe as Type 1. It usually responds to weight loss or lifestyle changes. The main features are:

- This form of diabetes is preventable – by lifestyle and behavioural changes.
- Type 2 diabetes usually develops relatively late in life – that is, in people aged 40 and over. This is why it is sometimes called *maturity-onset diabetes*. However, it is now appearing in 12-year old and even younger children.
- The pancreas does produce *some* insulin, but not enough. What's more, the body cannot use it effectively because the body's cells have developed *insulin resistance*.
- There appears to be a strong genetic pre-disposition.
- People with Type 2 diabetes sometimes need a little insulin, but generally the condition can be controlled with changes to their personal behaviour and lifestyle, especially regarding food and drink, exercise and sleep.
- Most people with Type 2 diabetes are overweight or obese, often from poor lifestyle habits. Fat is more than just a storage site for extra nutrients. It also acts as an endocrine organ, producing hormones that affect appetite and insulin action.
- Treatment is based initially on dietary changes and exercise, with oral anti-diabetic drugs added if necessary.

Symptoms of diabetes

Someone with diabetes will probably complain about one or more of the following symptoms:

- Feeling very thirsty
- Feeling tired or lethargic
- Frequently urinating / bedwetting
- Feeling physically weak or exhausted
- Surprising changes in body weight
- Prone to mood swings

Unfortunately, most people affected by diabetes are free of symptoms in the early stages. This means that active treatment may not start until well into the disorder, when complications may already have set in. Others may complain of unusual cravings for food, frequent infections on the skin and genitals, and blurred vision. Often these are blamed on something else – being “run down”, stressed, or not sleeping properly.

A symptom is what someone complains of, like a headache or nausea. A sign is what the nurse or doctor can detect by their senses or from diagnostic tests, like sugar in the urine.

As the disorder progresses, other symptoms will appear, due mainly to the effect of abnormally high blood sugar. When the blood sugar level reaches a certain level, the kidneys cannot reabsorb the excess glucose, so sugar leaks into the urine – glycosuria appears. This “pulls” water with it, and this causes the frequent urination. This in turn

leads over time to chronic dehydration. During this time Physis is trying to restore fluid balance by inducing a strong feeling of thirst.

Fatigue is also a common symptom, due to a diminishing supply of energy-providing glucose. Also, as the body’s cells cannot get the glucose they need to provide energy, they switch to fats as their energy source. This eventually leads to the person losing weight and continually feeling hungry.

Causes of diabetes

For someone with Type 1 diabetes probably had a serious problem with his or her pancreas early on in life. In Type 2 diabetes, a poor, unhealthy lifestyle is probably responsible. Unwise, slowing of the person’s metabolism with age, eating habits, lack of exercise and poor sleep quality all contribute to probably the most common cause – a state of being seriously overweight. A family history of the disease most likely plays a part, as does a stressful life. For some, an infection during childhood may have been the trigger.

Type 2 diabetes and pre-diabetes are due to insulin resistance, a form of inflammation.

Dire poverty, especially at a time of increasing urbanisation, indirectly underlies many of these influences. Regularly eating cheap energy-rich, sugar-dense food is emerging as an important influence. Also, smoking is a likely contributory factor.

Diagnosing diabetes

Hippocrates, the acknowledged “Father of Medicine,” is first on record as diagnosing diabetes. He described the three classic symptoms of frequent urination, severe thirst and increased appetite. Maintaining the tradition, Tibb diagnoses the disorder by: (a) noting the classic signs and symptoms, plus others, such as irritability, drowsiness, tingling in the feet, and fatigue; (b) inspection of the patient’s temperament, personal and familial medical history and (c) confirming the diagnosis if there is some doubt with simple blood and urine tests. The Tibb practitioner’s intuition, based on empirical experience, also comes into play.

Conventional medicine, in contrast, is more objective. It places great emphasis on laboratory tests, for both blood glucose and *glycated haemoglobin*; and more elaborate tests, such as glucose tolerance and insulin challenge.

Complications of untreated diabetes

Both Type 1 and Type 2 diabetes are life-threatening disorders, and both need to be treated effectively.

Anyone with untreated, uncontrolled diabetes runs the risk of developing serious complications, especially if they have the Type 1 version. These will definitely have a huge impact on the person’s Quality of Life.

- *Failing sight* – Small blood vessels in the eyes are damaged by the high glucose levels. This is called *diabetic retinopathy*, and can lead to blindness.

- *Serial infections* – The person affected becomes more prone to microbe attacks, especially on the skin. Fungal skin infections are very common.
- *Foot ulcers* – Poor blood circulation holds back the natural healing processes, especially in the lower limbs. Damage to the sole of the foot heals slowly, allowing ulcers to form. The nerves serving the foot may also be affected. If gangrene develops, amputation may be necessary. This is made even worse if the person smokes.
- *Sexual impotence* – This comes about because the blood supply to the genital areas becomes sluggish as fatty deposits build up in the blood vessels.
- *Heart disorders* – The person may develop pains in the chest (*angina*) and even suffer a heart attack.
- *General weakness and tiredness* – This is largely due to poor nutrition of the body's muscle cells.

If someone with diabetes has not been treated properly for a long period of time, it can get even worse:

- *Severe damage to the kidney* – this is called *diabetic nephropathy*, and usually leads to fatal kidney failure.
- *Severe damage to the nerves* – this is *diabetic neuropathy*, and results in tingling pain in the fingers, feet, thigh and body.
- *Psychological problems* – unexpected mood changes and confusion may affect the sufferer, as 'mini-strokes' interfere with blood flow in the brain.

Many people, especially men, develop what is known as *Syndrome X*. This is a cluster of disorders which include:

- *Hypertension* – abnormally raised blood pressure. This can trigger a heart attack, kidney failure or stroke.
- *Atherosclerosis* – the build-up of cholesterol containing fatty deposits (plaques) in the major blood vessels, which leads to heart attacks and strokes.
- *Obesity* – a prominent "beer gut" develops.

Diabetes: a serious threat to health

Diabetes is now one of the biggest public health threats in modern times. Deaths from chronic disorders of lifestyle, such as diabetes and obesity, will probably overtake death from infectious diseases such as tuberculosis, malaria and HIV &

Diabetes is the leading cause of new cases of blindness in adults aged 20 to 74 years.

Aids in a few years. In most countries, life expectancy will fall significantly, and death rates rise, due to the impact of these non-communicable diseases.

On the positive side, diabetes, especially Type 2, can be managed effectively and relatively cheaply, and the serious medical consequences reduced. Type 1 diabetes, unfortunately, is not preventable. More important, Type 2 diabetes, which makes up by far the majority of cases, is largely a disorder of lifestyle. This means that effective measures can be taken to prevent both its onset and its progress. Another important factor is that conventional medical care is simply too expensive or inaccessible for most people in many developing countries, so lifestyle changes offer an attractive alternative.

The Tibb view of diabetes

Physis. Tibb regards diabetes as a classic case of *Physis* failing to maintain inner harmony. The inner control mechanisms which normally operate to keep the person in good health have been overwhelmed by poor diet, abnormal

The dangers of diabetes are reduced by diet, exercise, weight loss and improved blood glucose control.

lifestyle factors and imprudent behaviour over a sustained period of time. Type 2 diabetes is a form of inflammation, which is one of the mechanisms *Physis* brings in to counteract persistent irritation. *Physis*' control of blood sugar

levels, a critical component in the overall health picture, has been severely disrupted by disregard for the basic Lifestyle Factors. The capacity for inner healing has been seriously disturbed.

Lifestyle Factors. Tibb is well placed to treat diabetes, either alone or in combination with conventional practice. As the main culprits are poor food and drink intake, lack of regular physical activity and inadequate quality sleep, these can easily be addressed by simple dietotherapy, changes to daily physical activities and improved sleep hygiene.

Temperament. Most people with diabetes have sanguinous dominant/sub-dominant temperaments because of the quality of moistness associated with their temperament. People with a sanguinous/phlegmatic combination are at even more risk, as this temperamental combination has a dominant quality of moistness. Diabetes therefore reflects an imbalance, namely, an excessive quality of moistness. This means that any therapy has to be directed at reducing moistness by increasing qualities of heat, together with dryness. Treatment of diabetes with Tibb therefore acknowledges the uniqueness of the person affected. Tibb also takes note of the patient's temperamental nature before treatment starts, and this awareness guides treatment.

Empowerment. Tibb regards both education about the disorder and motivation of the sufferer as being important for a successful outcome. Many people are unaware of their diabetes until disturbing symptoms appear, by which time considerable damage may have been done. So information on early detection is essential. In addition, firm motivation for the patient to persist in the changes to lifestyle is crucial. This is best achieved by stressing the undoubted benefits to the Tibb-initiated changes. By taking the initiative for the management of the disorder, the patient can expect an improved Quality of Life.

Therapy. An important feature of Tibb's treatment of diabetes is that whatever measures are adopted, Physis has to be respected, and fully supported. Diabetes is managed in Tibb mainly by dietotherapy, the use of specific medications, changes to the Lifestyle Factors and physical therapies (*see later*). These have relatively little negative impact on daily life. The person is able to lead a normal life.

Tibb treatment of diabetes

Tibb accepts that diabetes, especially Type 2, is a complex disorder, due to severe disturbance to the person's qualitative balance. Treatment, therefore, is based on a multi-faceted approach, which restores equilibrium to the diabetic person. Some treatments involve lifestyle modification, others behavioural changes, and yet others herbal therapy.

- *Dietary changes.* Tibb provides sensible and realistic eating advice, which could benefit most people. The main feature is to limit the consumption of moist foods, which include white, refined sugar and flour products and increase heating and drying foods. Diet which are made up of protein, vegetables, whole grains, and nuts together with fish and low-fat dairy products are advised. Essentially hot and dry and cold dry foods are ideal. Eating oily foods high in saturated animal fats should be severely restricted. Regular and excessive fast food consumption should be curtailed.
- *Physical activity.* Regular, appropriate physical exercise and reduced sedentary behaviour is a main element in diabetes avoidance and treatment. Not only does this produce a partial recovery of the insulin-producing power of the pancreas, it leads to a drop in insulin resistance. It also improves blood circulation in the limbs, so reducing the risk of complications.
- *Other lifestyle changes.* Good sleep hygiene should be encouraged, aiming at a maximum of seven to eight hours

sleep nightly. This supports Physis in restoring homeostasis. Resolving stress-inducing situations should be attempted. These aggravate the disorder and can disturb other elements of the person's lifestyle and behaviour, such as diet, sleep and smoking.

- *Behavioural changes.* Smoking is a contributory factor to diabetes, so should be reduced or, ideally, discontinued. Cigarette smoke contains agents which constrict blood vessels, and so reduce blood circulation and so promote ulcer formation.

Foot hygiene is essential. Damage to the feet surfaces from bad fitting shoes, for example, should be treated immediately, and feet kept clean, dry and warm. These measures help prevent ulcers forming.

- *Body weight maintenance.* Obesity and diabetes, especially type 2, go hand-in-hand. Losing weight improves blood glucose levels and so is a central part of the treatment. Measures to gradually reduce excess body mass should be seriously considered and adopted. However, too rapid a loss of body mass is not advised, as this can confuse Physis, resulting in a rebound in body weight as compensation.
- *Pharmacotherapy.* Several herbs and spices have been used to good effect over the centuries, and their clinical benefits have recently confirmed in clinical studies. Interestingly most of these possess heating and/or drying qualities. Amongst these are:

Garlic. Moderate amounts of raw, cooked or aged garlic benefit diabetics. It helps to regulate blood glucose and can stop or reduce the effects of some complications, as well as fighting infections, reducing high cholesterol, and boosting blood flow.

Turmeric contains *curcumin*, which has traditionally been used for centuries to treat the symptoms of diabetes. It also helps in the fight against obesity and high levels of cholesterol, which often accompany diabetes. When combined with black seed and onions it has a positive effect on blood glucose, body mass, cholesterol and other blood lipids.

Cinnamon improves blood glucose and lipid levels in people with Type 2 diabetes, and may reduce risk factors associated with diabetes and cardiovascular disease.

Fenugreek seeds are high in soluble fibre, which helps lower blood sugar and improve glucose tolerance by slowing down digestion and absorption of carbohydrates. It can improve most metabolic symptoms associated with both main types of diabetes.

Ginger improves long-term blood sugar control for people with Type 2 diabetes. It increases uptake of glucose into muscle cells without using insulin, and may therefore assist in the management of high blood sugar levels.

Bitter melon or gourd, has long been used for a range of ailments, including type 2 diabetes. It contains at least three active substances with anti-diabetic properties, which work individually or together to help reduce blood sugar levels. It also suppresses appetite.

Aloe vera can help improve blood glucose levels of people with diabetes. It also decreases abnormally high blood lipids (fats). It is effective for treating diabetic complications.

Others. Indian gooseberry, Java plum and *Gymnema sylvestre* have benefitted diabetics in various parts of the world.

- *Combined herbal products.* Tibb is very much involved in the treatment of diabetes, and especially the symptoms which may trouble the sufferer, and the complications which may develop. Two are available in South Africa:
 - **Tibb Diabetes Plus:** Suitable for metabolic disorders, especially in the management of Type 2 diabetes. It is ideal for mild diabetics, and can be used as an adjunct to existing oral anti-hypoglycaemic agents
 - **Glucostop:** This increases the peripheral utilisation of glucose, by exerting an insulin-like action. By doing so, it reduces the glycated haemoglobin level, normalises the micro-albuminuria and modulates the lipid profile. It minimizes the impact of long-term diabetic complications.
- *Hands-on therapies.* Cupping promotes stimulation of both the pancreas and the liver.
- *Integrative treatment.* Tibb can readily be combined with conventional drugs in cases of diabetes where either treatment alone is not completely satisfactory. The usual drugs involved are: metformin (e.g. *Glucophage*); sulfonylureas (e.g. *Diabinese*) and acarbose (*Glucobay*). More recent hypoglycaemic drugs, the meglitinides, for example, may also be used. There seems to be no interactions between these drugs and herbal products at the recommended doses.

Summary

Diabetes is a medical disorder featuring constantly high blood sugar levels. The number of people with Type 2 diabetes has risen rapidly in South Africa over the last few decades, in common with much of the rest of the world. Some experts are calling it an epidemic. This rise has been firmly linked to major shifts in our lifestyles, particularly food consumption, reduced physical activity and poor sleeping patterns. People with diabetes are at increased risk of serious diseases of the eyes, heart, kidney, nervous system and blood circulation. Unfortunately, information on the dangers posed by diabetes, both Type 1 and Type 2, has not been as widespread as for, say, hypertension or cholesterol-related problems. However, we know that changes to lifestyle, of the sort recommended by Tibb, can cut the risk of diabetes enormously. Tibb in fact considers diabetes, especially the most common Type 2, to be largely preventable through meaningful lifestyle changes; perhaps even reversible. Tibb believes that information about the disorder leads to better understanding, and opens the door to patient empowerment and effective self-healing.

Working alone, or combined with conventional medicine where necessary, Tibb offers a cost-effective way of dealing with this pervasive, threatening and escalating disorder.

Further reading

On diabetes:

- Murray N & Pizzorno J. (2000). *Encyclopaedia of Natural Medicine*. Little, Brown and Company, USA.
- Vallee N and Bhikha R. (2003). *Cooking for your body type. Everyday meals to suit your personality*. Ibn Sina Institute of Tibb. Johannesburg
- SA Diabetic Association. Online at: <http://www.diabetessa.co.za>
- Type 2 diabetes. Online at: <http://www.diabetes.co.uk/type2-diabetes.html>

On Tibb theory and practice:

- Bhikha, R H. and Haq, M.A. (2000). *Tibb - Traditional Roots of Medicine in Modern Routes to Health*. Mountain of Light. South Africa.
- Chishti G M. (1991) *The Traditional Healer's Handbook. A Classic Guide to the Medicine of Avicenna*. Healing Arts Press.
- Bhikha R. (2006). *4 Temperaments; 6 Lifestyle Factors*. Tibb, South Africa.
- Ahmad J and Qadeer A. (undated). *Unani - The Science of Graeco-Arabic Medicine*. Lustre Press, India.