DIABETES
GUIDE

Prevention and management for this global lifestyle disease

Diabetes Guide

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Disclaimer

We hope you enjoy reading our report, however we do suggest you read our disclaimer. All the material written in this document is provided for informational purposes only and is general in nature.

Every person is a unique individual and what has worked for some or even many may not work for you. Any information perceived as advice by must be considered in light of your own particular set of circumstances.

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Introduction

One of the best ways to stay healthy is to stay informed. Certainly, knowing more about insulin and blood glucose is a must not only for all diabetics but for their family members too.

Significantly, statistics indicate that if type two diabetes hasn't affected you or your family already, it will, sooner or later. Diabetes is becoming a global epidemic. Type 2 diabetes is on the rise even among small children.

Modern lifestyles – predominantly food choices and eating behaviors – means conscious and mindful effort is required to avoid the seemingly inevitable progression from overweight, through obesity and pre-diabetes to full-blown type two, with all its health risks.

It is most important to realize that this is not inevitable. We do have control, if we choose to exercise it. Look at your diet and your lifestyle and that of your family.

It is important to understand how our food choices affect insulin release and how it impacts our overall health.

Prevention and management starts at home…with you. Understanding a few factors is a good beginning.

Insulin and Blood Glucose

Most of us have heard about insulin. In the past, we mostly hear about it in relation to those people affected with Type 1 Diabetes. This condition requires those affected to inject insulin in order to survive. They also need to constantly monitor their sugar intake to better manage their condition.

Today, incidence of type 2 diabetes far outstrips that of type 1. Type 2 diabetes is rapidly becoming the greatest single disease risk in developed countries. The tragedy is that as it is a lifestyle disease, it is preventable.

What Is Insulin?

Insulin is a peptide hormone that is produced by the pancreas. Insulin signals the tissues in our muscles, fats and liver to extract excess glucose from the blood so it can be used for energy requirements or stored as glycogen, and ultimately bodyfat.

In a healthy person, eating a balanced diet, insulin is released on demand, in metered amounts to match the levels of glucose that the blood contains.

When the amount of glucose in the blood is within normal levels, the process of releasing insulin will either slow down or stop.

The foods that we eat and the beverages we drink each day directly impact insulin release in the body and can have profound effects on how we feel, how we perform, and on our short and long-term health.

Why Do We Need Glucose?

Our cells require glucose for their energy source. Our bodies cannot create our own glucose, so we rely on our food intake in order to obtain it. Much of what we eat has some glucose extracted from it during digestion.

Regardless of where it comes from, glucose obtained from our diets will end up traveling into the bloodstream so it can reach those tissues that need it.

The different chemical composition of different food types determines how much glucose is extracted from it, and how quickly that occurs as we digest the food.

Too Much is NOT a Good Thing

Simplistically it may seem that as we need glucose, the more the better, and the faster extracted the better. Unfortunately, the opposite is true, for two main coexistent reasons.

Firstly, our bodies evolved processing complex carbs, protein and fats.

For our paleolithic ancestors, simple carbs were almost non-existent, certainly very irregular. Glucose release was steady, and all was used by energy demands. Diet problems related to lack of food.

Secondly, the reverse is true today. Diet problems revolve around too much rather than too little. Even more importantly, predominant food types have changed.

Far too much of many diets contain an excess of simple carbs, which flood our blood stream with glucose in amounts far in excess of our immediate energy requirements.

Not only is this excess dangerous, much of it is very quickly converted into bodyfat.

Carbs, Protein and Fats as Glucose Sources

Carbohydrates are most easily converted into glucose. Simple carbs are chemically little different from sugar, and easily and rapidly converted to glucose. Our saliva also contains enzymes that break down these simple carbohydrates even before they reach the stomach.

Complex carbs require more digestion than simple carbs to convert the glucose.

Proteins are converted into sugars through the process called gluconeogenesis. Fats are also being converted into glycerol derivatives and glucose.

Protein and fats yield much less glucose per gram of food than do carbohydrates, and also requires more digestive effort to break it down to release the glucose molecules.

High GI carbs contain higher volumes of simple sugars. These are broken down to blood glucose rapidly and can cause problematic or dangerous 'sugar spikes'.

Complex, low GI carbs and fats and proteins break down more slowly and are more safely handled by the body's metabolic processes.

This means that the glucose obtained from protein, fats and complex carbs are released at uniform, useable rates. In response, insulin only needs to be released at low levels to perform its vital tasks.

Insulin Panic Response

Conversely, when we consume simple carbs, from sweets, soft drinks, many processed foods, or anything else that contains sugar, our blood is almost immediately flooded with glucose.

As the body cannot utilize the flood of glucose immediately, this causes a panic insulin release, an insulin “dump”, to sweep the excess glucose from the blood.

This is a critical body reaction as the high level of glucose in the blood is dangerous to many parts of the body. The insulin triggers cells to uptake the glucose, either to be used as an energy source or to be sent to the liver to be converted to fat for longer-term storage.

Type 2 Diabetes – Why Does It Develop?

If this occurrence is rare, the body can deal with it, however if high GI simple sugars are a constant component of a person’s diet ongoing problems occur. Firstly, the body’s cells become insulin-resistant, and require ever-increasing amounts of insulin to trigger a response.

In turn, the pancreas will tend to overcompensate by releasing larger amounts of insulin in order to cope with the excess glucose in the body, due to the failure of resistant cells to respond effectively, so insulin is released in ever-increasing amounts, more and more each time.

At a certain point the body cells are so desensitized to insulin that the blood glucose stays in the blood for much longer than it should.

This is an extremely dangerous condition, and this is type 2 diabetes!

Carbohydrate Cravings – a Big Diabetes Risk Factor

Pre-diabetes is a condition in which an individual's blood glucose levels are higher than the acceptable range but not high enough to be diagnosed as diabetes. Being given a diagnosis of pre-diabetes means essential changes to lifestyle (predominantly diet, but also exercise) *must* be undertaken immediately to prevent further progress towards type 2 diabetes.

Weight gain and sedentary lifestyle greatly increases a pre-diabetic person's risk of developing Type 2 diabetes. Reducing weight now is no longer a matter of vanity, it is a crucial health concern.

A basic understanding of how type 2 diabetes develops should give a realization that the problematic food type is carbohydrates, specifically simple carbs. One of the best ways to avoid gaining weight, and to reduce bodyfat, is teaching yourself to overcome your carb cravings.

Things You Should Know about Carb Cravings

Many people's food cravings include French fries, chocolates, potato chips, soft drinks, pastries and cakes. Unfortunately, these foods are loaded with sugar, fats and sodium.

There is no doubt that these foods do taste so good they make an individual crave for more. Food manufacturers and processors are very aware of this, and use these ingredients to enhance their products. They are included because they taste good, not for their nutritional value.

A big part of avoiding type 2 diabetes comes down to making adult choices – am I mindfully eating for my health's sake, or simply at the mercy of my taste buds?

Like every indulgence, cravings can become addictions and may eventually turn into a temptation that a person can hardly resist. Continuing to indulge in these tempting foods can be causing and adding to problems with your health.

Fats and Type 2 Diabetes

For preventing and overcoming type 2 diabetes, fats are a preferable food source to simple carbs. In a healthy diet containing few simple carbs, fats are an excellent fuel source. However, if simple carbs are the dietary mainstay, some fats can exacerbate the problem. Avoiding the food types above will reduce consumption of both bad fats and simple carbs.

How to Resist Your Carb Cravings

Overcoming your carb cravings may seem to be a very challenging task but it is certainly possible. We have all received different advice in the past for breaking bad habits, but there some proven steps for dealing with changing food behaviors.

Planning, Not Willpower

Don't rely on willpower, that is setting yourself up for failure. Make realistic action steps and plans and follow them always.

Determine your problem points when they occur. Instead of wallowing in guilt afterwards, analyze the situation and look backwards to the events preceding the point of failure. Make changes for next time so the issue does not re-occur, so that your willpower is not tested.

For example, the first thing that you should do is to make your house, car and office devoid of any temptations.

Stop putting cookie packages in the cupboard and cakes or sodas in the refrigerator. Seeing these foods in your kitchen or anywhere in the house will only turn on your brain's pleasure system which has become fixated on craving for these foods.

Change what you buy at the store, so you don't have them tempting you. Don't kid yourself that you will buy things you shouldn't 'just in case' or in case someone turns up for coffee or a chat. If they are there in front of you, they will be eaten at some stage.

Replace these food items with fruits, carrots, and nuts that are nutritious snacks to easily grab should your cravings haunt you again.

Don’t shop for groceries when you are hungry!

Change Your Food Types

Our child-mind, the one that responds to taste temptations, has convinced us over time that only responding to our cravings can satisfy our hunger. This can lead us to limit our intake of better food types such as protein and healthy fats.

When you stop eating simple carbs and eat some protein at every meal, in a very short time you will be surprised at how you don’t feel hungry all the time. This is a natural condition, it is how it meant to feel, but this feeling is taken away by a diet that is constantly based on sugary simple carbs.

Ditching these bad habits may entail a lot of failures in the beginning but with persistence you will find it easier to resist your cravings. After a while you will find the cravings are not there, unless triggered by exposure to the foods themselves.

Once you do decide on conquering your food cravings, be determined enough to follow it through.

Care enough about yourself to make conscious healthy food choices for yourself, instead of letting your taste buds do it for you.

Studies reveal that those who are pre-diabetic can still prevent Type 2 diabetes by making a conscious effort to lose weight and eat properly.

Exercise for Diabetics

Exercising can do wonders to improve the health of those living with diabetes. Physical activities help the body respond more effectively to insulin and reduce levels of blood glucose.

Often, though not always, lack of exercise has contributed to succumbing to type 2 diabetes, however diet is usually the major factor. Exercise works best when used in conjunction with a diabetic meal plan, especially in controlling Type 2 Diabetes.

There are some diabetic cases, especially if advanced, that limit the ability to exercise. For many diabetics, mobility has become reduced, and the thought of exercise is not a palatable one.

Exercise does not have to be strenuous, and for those who are profoundly unfit, it should not be. For most diabetics, light exertion will greatly aid their recovery.

Through exercising, an individual will be able to improve circulation especially in their legs and arms, which are common problem areas for people with diabetes.

Studies have shown that older people tend to have lower levels of insulin sensitivity. One reason for this is the reduced physical activity in the senior years. Staying active, or resuming after inactivity, will benefit an individual for life.

Safety Tips for Exercising

If you have been diagnosed with retinopathy, it is best to avoid exercise routines that require heavy weight lifting. Otherwise, you will be at risk of damaging the fragile blood vessels in the eyes.

If you suffer from peripheral neuropathy, always choose durable but soft footwear.

If you have a history of heart attack or high cholesterol and triglyceride levels, it is highly recommended that you undergo a cardiovascular examination before deciding to start on any exercise program.

If your urine has ketones, or if you are experiencing pain, tingling or any discomfort in your legs, your doctor may recommend taking it extremely easy.

Recommended Physical Activities

Any aerobic activity that is done in moderate intensity may prove to be very beneficial for diabetics. These are the kinds of activities that allow the heart rate to increase and make the person sweat, without causing undue strain. If the exercise affect your ability to talk normally, back off the intensity a bit.

Popular physical activities include: fast-paced walking, bike riding, yoga, water aerobics and light jogging.

Exercise for Weight Loss

If you are exercising to reduce weight, it is important to remember that the body will call on ready-to-use blood glucose first. It will only start to metabolize and utilize fat reserves when excess blood sugar levels have been depleted.

If you eat or drink sugar-rich foods prior to or during exercise your body will release insulin, which in turn triggers the body cells to uptake or store the excess blood glucose. This is opposite to what you are trying to achieve.

Often this 'panic release' of insulin combined with exercise can result in a debilitating 'sugar slump', which can lead to feeling exhausted beyond what the exercise should have caused.

For more effective weight loss avoid foods containing excess sugar.

How to Avoid Leg Cramps

Before going to bed, do a little exercise first, by stretching your calf muscles up to three times. Make sure that your legs are not tucked in too tightly under your sheets in order to avoid any constriction or difficulty in moving your legs while sleeping.

You may also increase the intensity and duration of your exercise regimen but you need to do it in a gradual manner.

Flexing your toes towards your knees may also help avoid leg cramps. However, if you find this too painful to perform, try grabbing your toes by flexing them slowly toward your knees.

It is also helpful if you gently massage your calf. Applying ice packs or hot compresses will also help your muscles to relax. Try both ice and heat therapy and see what feels best for you.

Here is the best cramp-prevention tip of all. Don't eat any simple carbs or starches after mid-afternoon. The very same foods that worsen your risk of type 2 diabetes are a major cause of night cramps. If they persist, cut out starches such as bread, pasta, rice and potato as well.

Type 2 Diabetes and the Family

It can be stressful on the entire family when a diabetic diagnosis is confirmed.

There are many things that need to be taken into consideration including learning how to cope with new dietary changes while being supportive and patient with the newly diagnosed family member.

This can be an especially worrying time, particularly if it is a child or a teenager who has been diagnosed.

Children may be afraid of the lancets used for monitoring blood sugar levels. This is a huge lifestyle change for everyone and time to adjust is needed.

Rewarding kids for checking their glucose levels but don't reward with food treats as this may add to the problem.

Involve the family in grocery shopping together and hunting for new diabetic friendly recipes. Get everyone active and go for walks, swims or bike rides together.

Be patient with outbursts of denial or anger.

Don't allow guilt to make your feel like "things may have been different if only…"

Learn how to take control of diabetes in a safe, educated and healthy manner and don't let it take control of you.

Conclusion

These eBook does not intend to offend anyone and is not judgmental in any way. If anything it contains caused you offense, ask yourself why. Don't let past repeated behaviors be a justification for maintaining your status quo, if that is a place you don't want to be, health-wise.

It is possible to prevent type 2 diabetes and even overcome it, depending on the degree, however changes will need to made to your lifestyle. The same eating behaviors that caused the problem are not going to fix it.

Be your own best friend and take the advice you would give to someone you really care about, and follow it to a diabetes-free life.