



The German Diabetes Association

German College for Psychosomatic Medicine

Patient Guidelines: Psychosocial Factors and Diabetes Mellitus

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This brochure gives you a summary of the most important findings on the mental and social aspects of diabetes, based on the results of scientific studies and as agreed by national and international experts.

Introduction

In diabetes management, the patient takes on a decisive role since he/she must carry out the essential therapeutic measures on in day to day life, in a responsible manner and on a permanent basis. As a consequence, the prognosis for diabetes largely depends on how successful the patient is in this endeavour, taking into consideration his or her social, cultural, family, and work environment..

This aim is difficult to achieve if the person with diabetes

- § does not know enough about the illness and its treatment, and does not have enough training to manage living with the illness on a daily basis,
- § has not accepted the diabetes on an emotional level,
- § has a very negative attitude toward the illness and diabetes therapy,
- § has problems dealing with the demands of treatment and possibly severe complications (e.g., secondary illnesses, severely low blood glucose),
- § does not change habits in lifestyle that stand in the way of successful self-treatment (such as eating habits),
- § has personal problems or difficult living circumstances that are an obstacle to successfully managing diabetes in daily life,
- § has additional mental problems or illnesses (such as depression, anxiety, eating disorders, addictions).

There are a number of effective resources for emotional and social assistance designed to aid patients with diabetes in successfully managing their therapy and maintaining a good quality of life in spite of the illness.

Patient education

- § Diabetes education programmes provide diabetic patients with information about the disease and teach them skills to deal with the illness, empower patients to integrate the diabetes into their lives based on their own decisions, avoid acute (e.g. low blood glucose) or long-term negative effects of the diabetes (e.g. secondary illnesses), and maintain a high quality of life.
- § Structured patient education programmes are an indispensable part of treatment for people with diabetes.
- § Every person with diabetes has the right to a diabetes education programme. If at all possible, basic education should take place directly following the onset of the illness. Depending on an individual's level of knowledge, requirements for therapy, and needs, the patient should undergo an introductory, intermediate, refresher, or problem-specific course.
- § The content of an education programme and method followed depend on the type of diabetes, form of therapy, age, abilities, and motivation of an individual. As a consequence, education programmes must take these various influencing factors into account. Therefore it is not advisable to include in the same programme patients with different forms of the illness (e.g. type 1 and type 2 diabetes), different forms of therapy (e.g. with and without insulin therapy), or widely varying background knowledge, skills, or ages (e.g. diabetic youths and diabetic seniors).
- § Within the framework of the patient education programme, patients should be motivated to set personal treatment goals, and should receive appropriate support to attain these goals in daily life.
- § A modern education programme should cover the following points:

Assistance in dealing with the illness

Blood glucose awareness training

- § Approximately 20%-30% of all type 1 diabetes patients are affected by severe, recurrent low blood glucose (hypoglycaemia), which can have various causes. One primary cause is that patients fail to perceive the first signs of low blood glucose (hypoglycaemia awareness disorder).
- § Structured blood glucose awareness training has proven itself effective in treating disturbed hypoglycaemia perception.
- § Patients with insufficient hypoglycaemia perception and/or severe recurrent low blood glucose and/or problems connected with low blood glucose should therefore undergo blood glucose awareness training.

Stress

- § In type 1 diabetes there is no conclusive evidence that stress directly influences the manifestation of diabetes. On the other hand, stress appears to promote the manifestation of type 2 diabetes.
- § Stress does have a proven effect on the metabolism of diabetic patients. Yet stress can have completely different effects on the blood glucose values in different situations, in different people, and depending on the type and extent of the stress.
- § High amounts of stress can, above all, lead to problems in performing therapy and consequently to poorer therapeutic results.

- § Despite isolated indications of effectiveness, it has not yet been proven beyond a doubt that stress reducing measures (such as relaxation techniques like progressive muscle relaxation and biofeedback) are effective in improving blood glucose levels.
- § However, measures for reducing high levels of stress are generally just as advisable in persons with diabetes as they are in persons without.

Aid in coping with the illness

- § It is imperative that the diabetic patient accept the illness on an emotional level and cope with it so as to be able to manage the diabetes; if the patient is not able to do this, it can have a negative effect on the attitude towards therapy and on blood glucose levels.
- § Persons with diabetes who have severe secondary illnesses and/or mental illnesses report having greater difficulties in coping and dealing with the disease.
- § If patients have severe problems accepting their illness, it might be advisable for them to undergo psychotherapy with the aim of improving how they cope with the illness.

Lack of support from others

- § A strong network of support from persons such as the partner, family, friends, work colleagues and/or physician/diabetes team is an important aid for successful self-management of diabetes.
- § Poor support or a complete lack of it can make it difficult for the person to successfully carry out therapy in daily life and can create a barrier to good metabolic control.
- § If patients have severe problems with other people and no network of support, the attending physician should determine whether psychotherapy could help the patient to meet the demands of therapy.

Mental illness in diabetes patients

Depression

- § In contrast to people without diabetes, those suffering from diabetes have twice the risk of developing/manifesting depression. Women are at greater risk of developing depression than men.
- § When depression develops, it is often accompanied by problems with performing therapy in daily life, poor blood glucose levels (increased HbA1c values), a considerable reduction in the quality of life, and dissatisfaction with therapy among persons afflicted with diabetes.
- § The risk of developing depression grows with the number of diabetic secondary illnesses.
- § Very severe, recurrent low blood glucose (hypoglycaemia) can increase the risk of developing depression.
- § Those who suffer from symptoms of depression have a higher risk of developing type 2 diabetes.

What are the signs of depression?

- § The primary signs of depression are an altered, depressed mood, loss of interest, loss of joy in otherwise pleasant activities, lack of drive, and increased fatigue. These symptoms must persist for at least 2 weeks and cannot be triggered by other illnesses or medications.
- § Additional signs of depression are a diminished ability to think and concentrate, lack of emotional reaction to otherwise joyous events, loss of self-confidence and self-esteem,

unfounded self-accusations, feelings of guilt, sleeping disorders, loss of appetite or weight (in rare cases weight gain), and recurrent thoughts of death, suicide, or suicidal acts.

- § Persons who exhibit these signs should consult their physician for a professional opinion as to whether they are suffering from depression. Generally, the diagnosis is easily determined in a doctor-patient interview. There are also questionnaires that can quickly give the correct diagnosis in an uncomplicated manner.

How is it treated?

- § For treatment to be successful, it is imperative that the patient understands that he/she is suffering from depression and that he/she wants to change this condition. When diagnosed early and accurately and with proper treatment, depression can be treated successfully (approximately 80 % improvement or cure).
- § The two most important therapeutic measures are psychotherapy and anti-depression drugs. A combination of the two methods can be more effective than one method alone. Psychotherapy aims to identify and change the conditions that triggered the depression and negative thoughts. Together, the therapist and patient develop better strategies for dealing with stress and stressful events in life. The patients are helped to work through the emotional aspects of the chronic illness and the social impairments.
- § Modern medications for depression have only a few side-effects and are not addictive. Their effect sets in after a certain period of time (generally 2 – 6 weeks). Patients should not stop taking the drugs abruptly. Medication of the tricyclic antidepressant variety can lead to a worsening of blood glucose control and to an increase in weight. Therefore it is recommended that patients with diabetes take medication of the “serotonin reuptake inhibitor” (SSRI) variety. Checks are necessary to assess whether insulin therapy needs to be adjusted as a consequence of taking the medication.
- § Treatment can be performed on an outpatient, inpatient, or partial inpatient basis. The appropriate form of treatment should be determined with the physician according to the type and severity of the depression, the presence of other illnesses, previous outcome of therapy, and the desire of the patient.

Anxiety

- § Anxiety about secondary complications and low blood glucose (hypoglycaemia) are the two greatest stress factors involved in managing diabetes. They can lead to considerable emotional distress and problems in successfully performing therapy.
- § Compared to those without diabetes, people with diabetes are roughly at the same risk of developing an anxiety disorder (currently approx. 9 %).
- § When an anxiety disorder arises in a person suffering from diabetes, it often leads to problems in carrying out therapy on a daily basis and a reduction in the quality of life.

What are the signs of anxiety?

- § The main signs of anxiety disorders are anxiety attacks and worry before or in certain situations (such as in large crowds, public places, when travelling). Due to these anxieties, the persons affected avoid these situations. Depending upon the form and type of anxiety disorder, these anxieties may arise only in specific situations (“specific phobia”), in very different situations (agoraphobia), or in areas of life (“generalised anxiety disorder”). In some cases they can also be tied to panic attacks (“panic disorder”). Memories of very stressful experiences (such as bad accidents, rape, sexual abuse) can also trigger anxiety (“post-traumatic stress disorder”).

Recurrent, pressing, compulsive thoughts that trigger anxiety and /or discomfort and/or lead to compulsive behaviour are characteristics of a compulsive disorder.

- § Persons experiencing these signs should consult their physician who can determine whether they have an anxiety disorder. Guidelines and/or questionnaires generally make it possible to arrive at an uncomplicated and quick diagnosis.

How is it treated?

- § For treatment to be successful, it is essential that the patient understands that he/she suffers from an anxiety disorder and has the desire to change this condition. When diagnosed early and accurately and with proper treatment, an anxiety disorder can be treated successfully.
- § The two most important methods of therapy are psychotherapy and medication for the anxiety disorder. The therapy of choice is psychotherapy.
- If there are indications of diabetes-specific anxieties (such as anxiety about low blood glucose, anxiety about injecting insulin), then the first method of choice should be behavioural therapy carried out by a psychotherapist experienced in treating diabetes.
 - If a diabetes patient has a moderate to severe anxiety disorder and was unable to achieve adequate improvement through previous attempts at treatment, psychotherapy by a psychotherapist experienced in the treatment of anxiety is recommended.
 - In some cases, medication may aid in diminishing the anxiety (for instance serotonin reuptake inhibitors or possibly a short-term benzodiazepine). Benzodiazepine can trigger dependency when taken over a longer period of time.
- § Treatment can be carried out on an outpatient, inpatient or partial inpatient basis. The appropriate form of treatment should be determined together with the physician according to the type and severity of the anxiety disorder, the presence of other illnesses, previous outcome of therapy, and the desire of the patient.

Eating disorders

Anorexia nervosa

- § Anorexia occurs most frequently in teenage girls between the ages of 15 and 19 (in approximately 0.3 – 2.1 %). 90-95 percent of all those suffering from the illness are female. Persons with diabetes do not suffer more frequently from anorexia than the rest of the population.
- § In connection with diabetes, anorexia is usually accompanied by severe problems with performing therapy and a distinctly higher risk of developing secondary illnesses. Anorexia is a life-threatening illness, and among persons with diabetes, the danger of dying from it is greater.

What are the signs of anorexia?

- § Body weight is at least 15 % below the expected weight (either due to weight loss or weight that was never reached), or the Body Mass Index (BMI) is 17.5 or lower. Prepubescent patients may not achieve expected weight gain during their growth phase. Weight loss is self-induced by avoiding high-calorie foods, by self-induced vomiting or frequent use of laxatives, excessive physical activity, and/or the use of appetite suppressants or diuretics.
- § Anorexic patients generally do not feel that they are under-weight, have a panic fear of becoming too fat, and have a negative view of their body.

How is it treated?

- § Psychotherapy/psychiatric therapy is urgently recommended for the treatment of these patients.

Bulimia nervosa

- § Bulimia tends to occur particularly in young women (in roughly 2 to 4.5 %). 90-95 % of those suffering from the illness are women. Bulimia does not occur with any greater frequency in persons with diabetes.
- § The manifestation of bulimia in connection with diabetes usually means that patients have difficulty performing therapy and have a distinctly increased risk of developing secondary illnesses. Very often patients are suffering from depression as well.

What are the signs of bulimia?

- § Patients suffering from bulimia are pre-occupied with thoughts of food and their own body weight. They have a pathological fear of becoming too fat.
- § Again and again the patients have hunger attacks where they consume large amounts of food within a short period of time.
- § Afterwards the patients counteract the fattening effects of the food through self-induced vomiting, taking laxatives, a strict diet, or by intentionally not taking their insulin (to lose weight in the short term as a result of high blood glucose levels).

How is it treated?

- § Psychotherapy/psychiatric therapy is urgently recommended for the treatment of these patients.

Binge eating

- § Uncontrolled bouts of eating occur in about 2 percent of all people in the general population. This disorder does not occur with any greater frequency in persons with diabetes.
- § The binge eating disorder is more closely connected to type 2 diabetes since it usually occurs in overweight patients. The proportion of men who suffer from binge eating is at least 30 percent in the general population. **This disorder does not occur with any greater frequency in persons with diabetes. (Wiederholung)**
- § Due to the uncontrolled bouts of eating, in connection with diabetes it becomes very difficult for patients to perform therapy and there is a high risk of developing secondary illnesses.

What are the signs of binge eating?

- § Persons suffering from this disorder have repeated episodes of eating binges. Large quantities of food are consumed within a certain period of time (for instance within 2 hours).
- § While eating, patients have the feeling that they cannot stop eating or cannot control what and how much they eat. After the eating binge, a feeling of disgust towards themselves, depression, or feelings of guilt set in.
- § On average, the eating binges occur at least twice a week for a period of six months. They are not compensated by behaviours that would lead to rapid weight loss (vomiting, for instance).

How is it treated?

- § Persons suffering from uncontrollable eating binges should first undergo psychotherapy to treat their eating disorder. It is recommended that the frequently attending weight problems be treated at a later date through a weight reduction programme, preferably a programme incorporating psychological aspects.

Alcohol dependency

- § Alcohol abuse currently occurs in 4 percent of all people in Germany. 2.4 percent of the population over 18 is acutely dependent on alcohol. 10-12 percent of Germans consume alcohol on an order that may not be imminently dangerous (men > 40 g pure alcohol/day, women > 20 g pure alcohol/day) but carries a high long-term risk of leading to health and social problems.
- § Alcohol dependency does not occur with greater frequency in persons with diabetes than in the general population.
- § Alcohol abuse increases the risk of developing type 2 diabetes.
- § Chronic alcohol abuse can lead to an alcohol-related pancreatitis, which subsequently can lead to diabetes.
- § Dependency on alcohol increases the risk of diabetes-related diseases and secondary illnesses (such as high blood pressure, increased blood lipids, nerve pain in the legs/feet, diabetes-related foot problems, and erectile disorders in men).
- § Persons dependent on alcohol generally have great difficulty in treating their diabetes successfully.

What are the signs of alcohol abuse?

- § One characteristic of the illness is that persons affected deny or do not recognise the negative effects of alcohol abuse over a long period of time.
- § Signs of alcohol dependency include the following attributes: strong desire for alcohol, lack of control over drinking behaviour, physical signs of withdrawal (in the event that no alcohol is consumed), developing a tolerance to alcohol, limitation of living activities due to the alcohol abuse, and persistent consumption of alcohol despite clear existing evidence of damage and an awareness of the extent of the damage.
- § The diagnosis can easily be made by an experienced doctor based on drinking habits and drinking behaviour, as well as secondary physical and mental problems. There are also several easy to use questionnaires which can be used to determine alcohol dependency.

How is it treated?

- § Due to the increased health risks involved with alcohol dependency and its negative effects on diabetes treatment, it is crucial that patients with diabetes undergo treatment for their dependency. As a consequence, every alcohol-dependent patient should decide with his/her doctor which type of therapy is appropriate to treat the problem. Treatment can be carried out on an outpatient, inpatient, or partial inpatient basis.

Nicotine dependency

- § Altogether 28.5 percent of the population over 15 years of age (men 34.7 percent, women 22.2 percent) smokes in Germany. 96 percent of the smokers consume cigarettes, 87 percent smoke regularly. Around 70-80 percent of the smokers are nicotine dependent.
- § Persons with diabetes do not smoke any less than persons without.
- § As consumption grows, smoking increases the risk of developing type 2 diabetes.
- § Smoking is an important additional risk factor in developing diabetes-related or diabetes-associated secondary and accompanying illnesses, such as cardiovascular disorders, stroke, high blood pressure, nerve pain in the legs/feet, circulatory disorders, diabetes-related foot problems, and erectile disorders in men. Smoking also significantly increases the risk of developing a diabetic renal disorder.

- § Smoking in connection with diabetes correlates with an increased mortality rate. The risk is dependent on the duration of the smoking habit and the number of cigarettes smoked.

What are the signs of nicotine abuse?

- § Those affected often deny their nicotine dependence and underestimate the negative effects in terms of developing diabetes-related or diabetes-associated secondary and accompanying illnesses.
- § The degree of nicotine dependence is determined, among other things, by the number of cigarettes smoked daily (cigars, pipes), the time the first cigarette is smoked in the morning, the smoker's daily smoking habits, depth of inhalation, and by the brand of cigarette smoked.
- § A doctor can easily determine whether a person is nicotine dependent from his/her smoking habits and consumption. Easy to use questionnaires are also available for self-assessment.

How is it treated?

- § Due to the great health risks posed by nicotine dependence, programmes to stop smoking play a particularly important role among patients with diabetes. Every nicotine-dependent patient should therefore speak with his/her doctor about which nicotine treatment programme would be appropriate.

This draft of patient guidelines is based on the scientific version (Herpertz et al., 2003) and the clinical version (Albus et al., 2004) of the joint Guidelines of the German Diabetes Association and the German College for Psychosomatic Medicine on the topic "Psychosocial Factors and Diabetes".