Special Needs Fact Sheets

Diabetes Fact Sheet for Child Nutrition Professionals

INTRODUCTION

When a child is diagnosed with diabetes it presents a significant challenge for the child, the family, and the child nutrition staff. Today's families lead busy lives and are pulled in many directions. Diabetes can add additional stress to an already hectic lifestyle. The provision of appropriate meals and snacks by well-informed school or day care staff can do much to relieve the stress of these families as well as positively impact the health of the child. Federal laws may require that schools and day care facilities participating in the National School Lunch, School Breakfast, and Child and Adult Care Food Programs accommodate children with medical conditions such as diabetes. Regardless of the law, knowledgeable school staff are essential in providing a safe school environment for children with diabetes. Here are some key points to keep in mind. Retain all diet prescriptions on file. Diet prescriptions should only be changed by the physician or appropriate health professional. It is a good idea to maintain documentation of conversations with parents and health care professionals regarding special diets. When planning special school events and field trips, consider the diabetic child.

WHAT IS DIABETES?

Diabetes results from a lack of insulin or the decreased ability to utilize insulin. Symptoms that may occur are frequent urination, excessive thirst, unexplained weight loss, extreme hunger, vision changes, and feeling very tired. Insulin is essential for glucose (sugar produced from food) to enter body cells where it is converted into energy. Without insulin, the glucose cannot enter the cell and remains in the blood, leading to elevated blood glucose (blood sugar). High levels of glucose in the blood can damage the blood vessels of the body and leave the cells starved for energy. Maintaining a normal blood glucose is essential in preventing the day-to-day as well as the long-term complications of diabetes. Generally speaking, the longer the duration of diabetes, the greater the risk of developing complications. For this reason children with diabetes are of special concern since they have more years ahead to suffer from the consequences of complications than would a newly diagnosed older adult.

WHAT IS THE DIFFERENCE IN TYPE 1 AND TYPE 2 DIABETES?

Diabetes is classified into two main types: Type 1 and Type 2. With Type 1 diabetes, the body does not produce insulin. Type 1 is usually diagnosed in children and used to be commonly known as juvenile diabetes. However, Type 1 diabetes can occur at any age. Children with Type 1 diabetes are usually not overweight and may have lost weight prior to diagnosis. Insulin injections must be taken daily. Type 1 diabetes accounts for only 5 to 10 percent of diabetes. Type 2 diabetes is the most common form of diabetes and

used to be called adult onset diabetes. Type 2 diabetes can also occur at any age and accounts for 90 to 95 percent of diabetes. Type 2 diabetes is increasing among Americans of all ages, including children. Obesity and lack of physical activity increase the risk of developing Type 2 diabetes. Approximately 85% of children diagnosed with Type 2 diabetes are either overweight or obese. With Type 2 diabetes, the body either does not produce enough insulin or does not make efficient use of the insulin it does produce. In managing both Type 1 and Type 2 diabetes, diet, medication, and exercise must stay in balance in order to keep blood sugar levels within a normal range.

PRINCIPLES OF MEAL PLANNING

Meal planning begins with the written diet order or prescription. The goal of meal planning is to provide the diabetic child with a nutritionally balanced meal that provides adequate calories for normal growth and development and promotes normal blood sugar levels. Good communication between the school or day care staff and children and their families is essential in order to achieve this goal. Meal planning may be accomplished through the use of exchange lists or by counting carbohydrates. The first step in working with a diabetic child, therefore, is to learn what method he or she is using. Depending on the variety of choices offered and the age and skill of the child in using exchanges or counting carbohydrates, the diabetic child may be able to manage his own meal planning without the school's providing a special tray or menu. The school health care team, including the child nutrition staff, should still communicate with the child and parent or guardian to ensure that adequate provisions are being made at school to help the child to selfmanage.

EXCHANGE METHOD

Exchange Lists for Meal Planning is published jointly by the American Diabetes Association and the American Dietetic Association. The exchange lists provide a pattern to follow instead of telling the diabetic the exact foods to eat. Using the exchange lists, foods may be substituted or exchanged within each group. *Exchange Lists for Meal Planning* lists the foods contained in each exchange group as well as the amount of that food which makes a portion or exchange. The exchange lists can provide significant flexibility and are most effective when the pattern is developed individually between the patient and the registered dietitian or diabetes educator. Since meal patterns using exchanges may vary with medication, lifestyle, and caloric needs, the child nutrition staff must obtain the current pattern for each diabetic child using this method of meal management.

CARBOHYDRATE COUNTING METHOD

Another method used for meal planning is called "carbohydrate counting" or "carb counting." All foods and beverages (that contain calories) that are consumed are eventually converted to glucose or sugar in the blood. However, carbohydrates such as starches and sugars are converted more quickly to glucose. Therefore, using this method, grams of carbohydrates are counted and then balanced with an appropriate

dose of insulin. The carbohydrate-to-insulin ratio should be determined on an individual basis in conjunction with the diabetes healthcare team. Usually one unit of insulin must be injected for every 10 to 15 grams of carbohydrates consumed. Proteins and fats are still important and should be consumed in moderation. Carbohydrates consumed in combination with proteins and fats can help stabilize blood glucose levels better over time than consuming carbohydrates alone.

WHAT KINDS OF FOODS ARE EXCLUDED?

The leading diabetes authorities agree that there are no forbidden foods for people with diabetes - including sugar. The goal for a person with diabetes is the same as for a person without diabetes - to strive for health and balance. Foods or beverages containing sugar should be incorporated into a healthy diet consisting of fruits, vegetables, low-fat dairy products, lean meats, and whole grains. The foods eaten by a diabetic person should balance with physical activity and oral medications or insulin, regardless of the types of foods consumed.

KEY POINTS

Provide regular in-service training for staff who share responsibility for the diabetic child. Children with Type 1 diabetes are usually not overweight and may have lost weight. Their meal plan should provide adequate calories and nutrients for growth and weight maintenance. Children with Type 2 diabetes usually are overweight or obese. Their meal plan should provide adequate calories and nutrients for growth without leading to continued excessive weight gain. School and day care programs should promote healthy eating habits and regular physical activity. A child nutrition staff representative should be active on the school health team. Use non-food items such as pencils, stickers, books, and small toys to reward children for good work. Keep all special diet prescriptions and related documentation on file. Diet prescriptions should only be changed by the physician or appropriate health professional. Remember special needs children when planning special events and field trips.

RESOURCES

Local Resources

State agency staff

Nutritionists or registered dietitians at your local hospital or health department

Day care or school health team members

National and Government Organizations

American Association of Diabetes Educators
100 West Monroe Street, Suite 400
Chicago, IL 60603
800-338-3633
Fax: 312-424-2427
www.aadenet.org

American Diabetes Association
ATTN: Customer Service
1701 North Beauregard Street
Alexandria, VA 22311
800-342-2383 or 800-DIABETES
www.diabetes.org

American Dietetic Association
216 W. Jackson Blvd.
Chicago, IL 60606-6995
312-899-0040 or 800-877-1600
www.eatright.org

American Heart Association National Center
7272 Greenville Avenue
Dallas, TX 75231
800-AHA-USA-1 or 800-242-8721
www.americanheart.org/

American Optometric Association
243 North Lindbergh Blvd.
St. Louis, MO 63141
314-991-4100
Fax: 314-991-4101
www.aoanet.org/

Department of Veterans Affairs
www.va.gov/diabetes/

Diabetes Exercise and Sports Association
P. O. Box 1935
Litchfield Park, AZ 85340
800-898-432
www.diabetes-exercise.org/

Indian Health Service
National Diabetes Program
5300 Homestead Road NE
Albuquerque, NM 87110
505-248-4182
Fax: 505-248-4188
www.ihs.gov/MedicalPrograms/Diabetes/index.asp

Juvenile Diabetes Research Foundation International
120 Wall Street
New York, NY 10005-4001
800-533-CURE (2873) or 212-785-9500
Fax: 212-785-9595
www.jdf.org

National Diabetes Education Program
CDC Division of Diabetes Translation
P. O. Box 8728
Silver Spring, MD 20910
877-CDC-DIAB or 877-232-3422
www.cdc.gov/diabetes/projects/ndeps.htm

National Diabetes Information Clearinghouse
1 Information Way
Bethesda, MD 20892-3560
800-860-8747 or 301-654-3327
Fax: 301-907-8906
Email: ndic@info.niddk.nih.gov
www.niddk.nih.gov/health/diabetes/ndic.htm

National Eye Institute
2020 Vision Place
Bethesda, MD 20892-3655
301-496-5248
www.nei.nih.gov

National Food Service Management Institute Help Desk
The University of Mississippi
P.O. Drawer 188
University, MS 38677-0188
662-915-7658 or 800-321-3054
FAX: 800-321-3061
www.nfsmi.org

National Institute of Diabetes and Digestive and Kidney Diseases
Office of Communications and Public Liaison, NIH
Building 31, Room 9A04, 31 Center Drive, MSC 2560,
Bethesda, MD 20892-2560
Email: dkwebmaster@extra.niddk.nih.gov
www.niddk.nih.gov

Office of Minority Health Resource Center
US Department of Health and Human Services
P.O. Box 37337
Washington, DC 20013-7337
800-444-6472
www.omhrc.gov/

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