

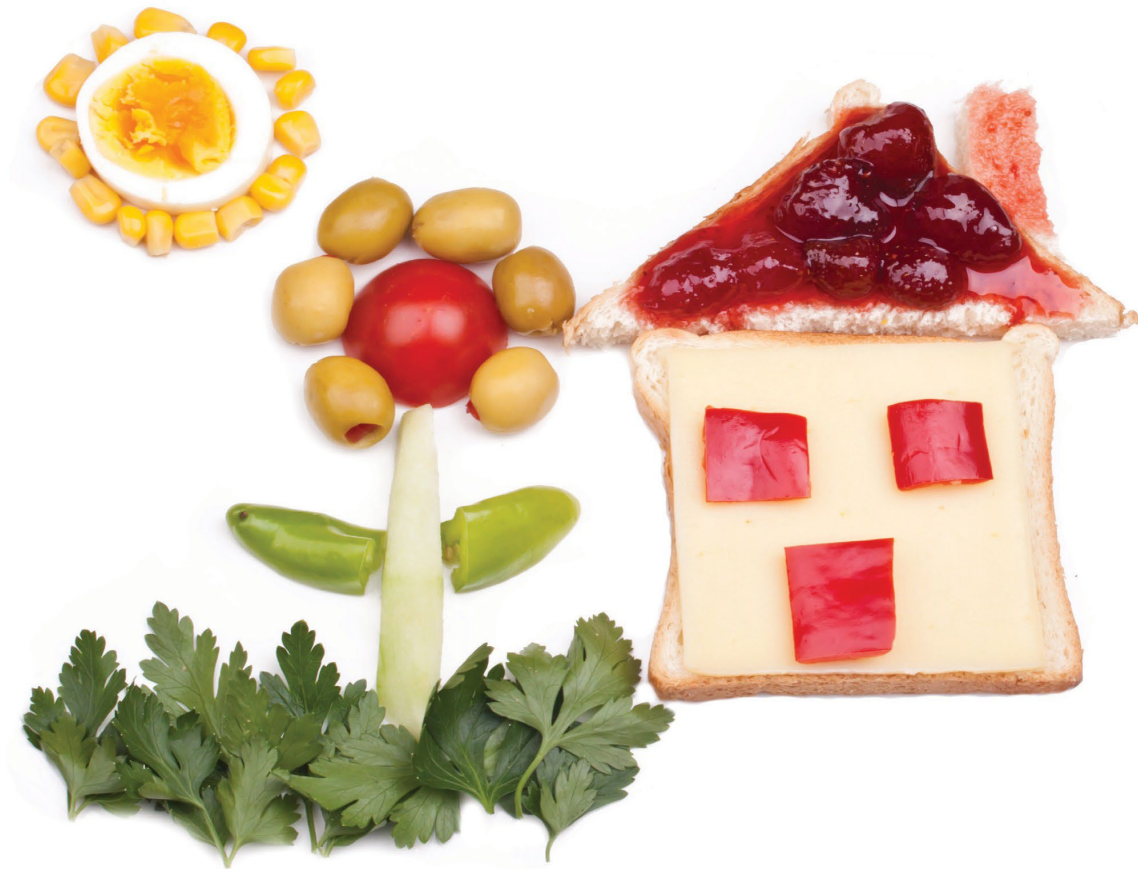



Diabetes
Education & Camping
Association

Nutrition Manual

For Diabetes Camps and Retreat Programs

Best Practices for Healthy Nutrition & Education





Healthy eating is a cornerstone of improving the quality of our lives. When an individual also has type 1 diabetes, it becomes an important tool to help regulate blood glucose and lipid levels.

Camp is a perfect place to provide an example of healthy eating and physical activity. It is the goal of this manual to promote camper and staff members' understanding of balanced, healthy eating through creation of Nutrition Education & Management Guidelines for Camps.


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(Type 2 diabetes)	



DECA has members from around the world who are camp directors and staff, doctors, nurses, nutritionists, mental health professionals and diabetes industry representatives.

The Diabetes Education and Camping Association (DECA) was established in 1997 to help diabetes camps and others who care for children and families with diabetes in their lives. DECA helps to strengthen and expand programs by offering education and sharing expertise and resources. DECA has members from around the world who are camp directors and staff, doctors, nurses, nutritionists, mental health professionals and diabetes industry representatives. These individuals share their expertise to ensure programs continue to give children with diabetes, their families and friends a place to find education, shared experiences and the motivation to live well with diabetes.

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INTRODUCTION, GOALS AND PURPOSE

The following goal guided the project:

Healthy eating is a cornerstone of improving the quality of our lives. When an individual also has type 1 diabetes, it becomes an important tool to help regulate blood glucose and lipid levels, and to protect blood vessels for long-term health. Camp can be an effective place to both teach about and provide an example of healthy eating and physical activity.

It is the goal of the DECA Nutrition Best Practices Project to enhance campers' and staff members' understanding of balanced, healthy eating by creating nutrition resources for diabetes camps.

The goals of nutrition management at diabetes camp are similar to those at home: to help campers achieve/maintain the pleasure of eating while serving healthy foods; to enhance the camper's understanding of healthy blood glucose levels and the role food plays in achieving them; and to discuss and promote healthy portions for each individual camper. Overall, campers are encouraged to try

new foods and enhance their understanding of the importance of coordinating food, insulin, and exercise to promote optimum health. Nutrition, health care and program staff all set an example for campers, and a message of healthy nutrition for a lifetime can be fostered in the diabetes camp setting.

The purpose of this manual is to provide nutrition information and guidance to diabetes camps worldwide. Content focuses on type 1 diabetes; however, if your camp serves children and adolescents with type 2 diabetes, please see Appendix A for additional information.

TYPE 1 DIABETES

Type 1 diabetes is an autoimmune disease, the cause of which is not straight-forward. The body produces antibodies that attack the cells in the pancreas (beta cells) that make insulin. Because insulin is a hormone essential in glucose metabolism, and therefore necessary for survival, children with type 1 diabetes must receive insulin from an outside source. Insulin can be delivered by syringe, pen, or pump. Insulin cannot be taken orally or as a pill. When there is

not enough insulin available, the body uses fat for energy. Ketones, a by-product of fat metabolism, are molecules that cause a pH imbalance in the blood, and can lead to severe illness and even death (if not treated).

WHEN THERE IS NOT ENOUGH INSULIN AVAILABLE, THE BODY USES FAT FOR ENERGY.


The goal of managing type 1 diabetes is to avoid blood glucose (BG) levels that are either higher or lower than the safe, healthy target range agreed upon by the child's health care providers and parents.

Normal blood glucose levels are generally 70-120 mg/dl. Because diabetes comes with glucose variability, it is typical for a child's target to be higher than this, for example, 70-180 mg/dL.

Hypoglycemia, or low blood glucose, is any situation where there is too much insulin working and not enough glucose for it to work on. This can happen when a camper gets too much insulin for any reason, or when a camper gets their usual insulin dose

and then doesn't eat as expected or engages in unplanned activity.

Severe hypoglycemia is a diabetes emergency in which a child has a low blood glucose event that causes unresponsiveness, unconsciousness, or seizure activity. While hypoglycemia is typically defined as a blood glucose level below 70 mg/dL, and generally severe low glucose is considered to be <55 mg/dl. However, clinical manifestations of hypoglycemia can occur after a prolonged period of low blood glucose, or if the blood glucose drops rapidly. Severe hypoglycemia is the brain's way of saying it doesn't have enough glucose to function properly and children should be monitored for signs and symptoms.



Severe lows can be more likely at night (when a child is less likely to be aware of a low and therefore does not wake up and treat it) and after prolonged activity or a recent hypoglycemic event.

Severe lows can be more likely at night (when a child is less likely to be aware of a low and therefore does not wake up and treat it) and after prolonged activity or frequent hypoglycemia events. The liver and muscles store glucose in a form called glycogen. When a child has a low blood glucose, their liver will break down glycogen and turn it back into glucose to help raise the blood glucose level. If this happens a few times in a row, glycogen stores can be low or even depleted, and a severe low can occur. In a severe low situation, a camper is not able to treat him- or herself (take glucose tablets, juice, etc.).

Camps should have a form of glucagon available in case of severe low glucose in a child that cannot eat carbohydrates. Glucagon and Gvoke are injectable forms of the hormone glucagon (this is also made by cells in the pancreas, but children with type 1 diabetes cannot rely on their own glucagon). They have historically always been given by injection into the subcutaneous (fatty) or muscle tissue. Glucagon works by triggering the liver to break down glycogen and send glucose into the bloodstream. Baqsimi (a nasal form of glucagon) is now an available option that is less invasive but still an effective treatment. If glycogen stores are low, glucagon is not helpful. Another treatment for severe hypoglycemia is intravenous dextrose. Check with your camp Health Care Team to find out what method they prefer for treating severe low blood glucose and to clarify your role in helping out.

THE ROLE OF NUTRITION STAFF IN HYPOGLYCEMIA TREATMENT

The role of nutrition staff in detecting, treating, and managing low blood glucose (hypoglycemia) varies from camp to camp. You may play an integral role in developing standard protocols for treatment of hypoglycemia at your camp. Establishing effective procedures, having adequate treatment supplies, training staff and documenting procedures will ensure a safe and fun camp experience for everyone. Check with your Health Care and Camp Administrative Teams to determine your responsibilities for helping with hypoglycemia.

Camps put together kits for storing/carrying supplies to detect and treat low blood glucose events. These kits are typically located in key places throughout camp and carried by all program staff members. Often, dietitians have a role in making sure these kits are stocked and ready for use on a daily basis.

When a camper or staff member feels “low,” they check their blood glucose level and treat if it is below 70 mg/dL*. Generally campers are wearing a continuous glucose monitor and the reading is readily available. However, if that reading is not available doing a check with a glucose meter is appropriate. If it is not possible to check glucose at that time (although blood glucose monitoring supplies are usually readily available at diabetes camp), it is safer to treat a low and be a little high later than to wait until blood glucose monitoring supplies are obtained.

Typically, there are enough people around that someone who needs blood glucose treatment quickly can still have a BG checked (the whole process takes less than a minute). But always err on the safe side – when in doubt treat first.

The “rule of 15” is simply to treat a BG below 70 mg/ dL with 15 gm of carbohydrate, wait fifteen minutes, check BG again, and treat with another 15 gm of carbohydrate if still below 70 mg/dL. That has changed with the introduction of automated insulin delivery systems. In such systems, the insulin is reduced or suspended when approaching a predetermined target so less carbohydrate is needed to treat a low glucose. Start with 5-8 grams and continue to monitor as more carbohydrates could be needed.

Below is a list of common treatment items for hypoglycemia:

- ☒ Juice boxes (4 or 6 oz.)
- ☒ Glucose tablets
- ☒ Glucose gel
- ☒ Sports drink that contain carbohydrates
- ☒ Sports Beans or Honey Stinger Chews

Severe hypoglycemia requires the help of another person to treat. Treatment can include glucagon injection, Baqsimi nasal spray or IV dextrose for someone who is unable to swallow food or liquids. Check with the Health Care Team at your camp to determine how severe hypoglycemia is managed.

*If someone is in the middle of an activity that involves expending a lot of energy (running, dancing, etc.), they may treat a low blood glucose at a level higher than 70 mg/dL. For instance, if a camper’s blood glucose is 85 mg/dL and he or she is playing soccer, it is likely that the blood glucose will continue to drop during the activity; therefore, treatment at a higher level is warranted.

NUTRIENT CONTENTS OF FOOD AND HOW THEY AFFECT BLOOD GLUCOSE

There are several “micro” nutrients” and three “macro” nutrients in the foods we eat. Micronutrients are vitamins and minerals, and they will not be discussed in any detail in this manual. Macro nutrients include protein, fat, and carbohydrate. Each of these is important to healthy management of diabetes. While protein and fat have a much smaller and slower effect on blood glucose, carbohydrate starts raising the blood glucose about 15 to 20 minutes after it is first eaten.

Carbohydrate is an important source of energy for the cells of the body. Campers and staff at diabetes camp eat a lot of carbohydrate foods: crackers, bread, fruit, and starchy vegetables (such as potatoes and corn). Because carbohydrate has the largest and quickest impact on blood glucose, people with type 1 diabetes take insulin to “cover” the carbohydrate foods they eat.

CARBOHYDRATE IS AN IMPORTANT SOURCE OF ENERGY FOR THE CELLS OF THE BODY.

Carbohydrate counting is a method of measuring the amount of carbohydrate about to be eaten and taking insulin accordingly, with a goal of achieving target blood glucose levels.

Campers and staff members will have a “carbohydrate ratio” (“carb ratio” or “insulin-to-carb ratio”) which tells us how many grams of carbohydrate they eat for every one unit of insulin.

This ratio will either be programmed into their insulin pump and used whenever they take a mealtime dose of insulin (called a “bolus”), or the ratio will be used to calculate how much insulin they need to inject for the meal.

Examples of protein include meat, fish, and eggs. Foods such as nuts, olives, avocado, and many dairy products are fat (cream, butter, cheese). Milk contains protein and carbohydrate, and if it is whole, 2%, or 1% milk it also contains fat. Other high fat foods that may be used at camp include peanut or other nut butter, bacon, and sausage. These non-carbohydrate foods are generally not considered in the amount of insulin needed to cover the meal.

Camp gives us a unique opportunity to both offer healthy choices to campers and to encourage them to eat new items. Our goal, therefore, is to incorporate teaching the basic principles of healthy eating and food measurement into games, activities and mealtimes. By doing so we can send campers home prepared to make healthy mealtime choices.

NUTRITION EDUCATION AT DIABETES CAMP

Education is one of the most important responsibilities of the camp nutrition team. It cannot be overstated that what campers learn at camp goes with them in the short term and for a lifetime. Education at camp can be informal – in the dining hall, during crafts, while walking to activities and on the sidelines of an activity – or it can be formal, such as a group discussion or game. The following suggestions and ideas for nutrition education can serve as guidelines and jumping off points for you as you create your own education portfolio for camp.

Nutrition Messages

It is important that campers learn the overarching message of healthy nutrition while they are at camp. By serving healthy food and talking about healthy eating choices, campers will take this message home with them and live it. People with diabetes are taught the same principles of healthy nutrition as those who don't have diabetes.

Eat whole foods; fruits and vegetables, whole grains, low fat dairy; limit saturated fats and trans fats; everything in moderation.

Teaching and Learning

Camp is a wonderful place to teach and learn. Campers learn from staff and staff members in turn learn from campers. Everyone learns from each other. “Teachable moments” happen all day long – at the eating table, during games and activities, and at quiet times. What children and adolescents learn at camp they take with them for life. It's our job to make sure the messages are clear, positive, and consistent.

It is not only important to teach campers the tasks of diabetes management – glucose monitoring and glucose targets, drawing up and administering insulin, changing pump infusion sets, choosing sites – it is also important to teach them about healthy nutrition and fitness. The goal is to match messages about fitness and nutrition to what campers do at home. Do they play sports or do they hope to someday? What we teach campers at camp they can and will take home. Camp is an ideal place to integrate learning and doing in a healthy, fun, and engaged way.

It is also important to teach campers in ways that are appropriate for their age group. Younger children learn and integrate information differently than adolescents. Each age group needs and deserves for us to meet them where they are and approach teaching accordingly. Avoid talking up to children or talking down to teenagers. Ask them how they want to do things, what they do at home and what they feel they are ready to do. Find out about their fears regarding food and diabetes.

Education Resources

The Diabetes Education and Camping Association (DECA) has several resources available to camp staff. Check out this resource at DKit for games and other education ideas. DKit's educational activities and games are aligned with the American Association of Diabetes Educator's 7 Self-Care Behaviors and are categorized by age and category.



Age-Appropriate Education

It is critical that information is provided to campers in ways (and words) that are empowering and age- appropriate. Use games that are fun and interesting for their age group. When concepts or information delivery are too advanced or too simplistic, campers will not pay attention nor stay engaged. Keep it fun, interesting and unique!

For example: have a scavenger hunt for photos of different foods in a food group, then have them come together and make a healthy plate. You can add counting carbs, calculating insulin dosing and learning how to compensate for exercise. Each tier adding complexity for campers as they understand more about diabetes management.

IT IS CRITICAL THAT
INFORMATION IS PROVIDED TO
CAMPERS IN WAYS (AND WORDS)
THAT ARE EMPOWERING AND
AGE-APPROPRIATE.

MENU PLANNING

Planning a menu for diabetes camp may seem like a daunting task. While it is possible to serve healthy food that campers enjoy in a camp setting, this takes careful planning, creativity, and a focus on budget. Open communication between the nutrition team members (dietitian, dietetic student/intern, food services manager/lead cook), camp administration team (camp director, executive director, person in charge of finances), and lead program staff (program directors, unit directors/head counselors) is critical to ensuring a menu that is cost effective, healthy, and successful. Everyone's goal is for camp to run smoothly, and food is a big part of each camp day. Nutrition staff members need to be aware of any special food needs, special events or activities, or other situations that require food planning.

Diabetes camp is a great place to set an example of healthy eating: a fruit and vegetable with every meal, lean meats and whole grains. Children usually eat what is offered to them; work with your food service to establish new, healthier menu ideas for campers.

Milk (fat-free, 1%, or 2%) is available for all meals. Water is encouraged at (and between) meals as well.

Due to the relatively high incidence of celiac disease in children and adolescents with type 1 diabetes, crafting menus that minimize the use of grains can minimize the need for substitutions.

Menus are designed so that suppers rarely require any substitutions. Other allergies are taken into consideration and options are available. There is also a vegetarian option if required for that camp cycle.

Menus will vary based on budget, length of camp (number of meals served), and ability to have food items donated. Are there inexpensive, healthy snacks?

**MILK (FAT-FREE, 1%, OR 2%)
IS AVAILABLE FOR ALL MEALS.
WATER IS ENCOURAGED AT (AND
BETWEEN) MEALS AS WELL.**

For the purpose of ordering adequate amounts of food, the serving size of food items is identified when designing a menu. In addition, serving size is critical to figuring out carbohydrate counts. For instance, a child may eat 1, 2, or 3 servings of a food item, and the carbohydrate "count" will help them calculate how much insulin to take for the amount of carbohydrate in their meal. Because carbohydrate values vary from one manufacturer to another (for example, the size of a bagel may vary widely), carbohydrate counts need to be done at camp when the food item and package are in hand. This is a critical part of the job of the dietitian and dietetic students, and for these reasons we have not included carbohydrate counts on the sample menu.

On the next several pages you will find a sample menu. These are suggestions for meals and snacks, and will require adjusting to fit your camp's needs. Please see the section on Special Food Considerations, Food Allergies and Intolerances for more information about gluten-free foods.

SAMPLE MENU

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Eggs with cheese	No	
	Whole wheat toast	Yes	
	Margarine/butter	No	
	Yogurt	Ck label	
	Strawberries	No	
Lunch			
	Pita Bread	Yes	
	Gyro Meat	Ck label	No – cheese and Garbanzo beans are available
	Greek salad - romaine lettuce	No	
	Black olives	No	
	Red tomatoes	No	
	Red onions	No	
	Garbanzo beans	No	
	Feta cheese	No	
	Greek dressing	Ck label	
	Fresh fruit	No	
	Cookie, oatmeal raisin	Yes	
	Milk or crystal light options	No	
Snack			
	Fresh fruit plate	No	
	Cheese slices	No	
	Rice crackers	No	
	Water	No	
Dinner			
	Grilled chicken	Avoid gluten products	Yes
	Brown or wild Rice	No (no processed rice)	
	Peas	No	
	Green salad	No	
	Salad dressings	Ck label	
Snack			
	Chocolate or regular milk	No	
	Graham crackers	Yes	
	String cheese	No	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Oatmeal	Ck label	
	Raisins	No	
	Brown sugar	No	
	Nuts, slivered almonds	No	
	Toast	Yes	
	Margarine	No	
	Scrambled eggs	No	
	Fresh fruit	No	
Lunch (2/3 meat AND 1/3 Almond butter and Jam)			
	Whole wheat bread	Yes	
	Turkey and roast beef	Ck label	No – cheese is available
	Provolone and cheddar cheese	No	
	Lettuce	No	
	Tomato	No	
	Mayonnaise	No	
	Mustard	No	
	Almond butter	No	
	Jam	No	
	Fresh Fruit	No	
	Medium cookie	Yes	
	Fritos	No	
Snack			
	Trail mix	Ck label NO PEANUTS PLEASE	
	Apple, small	No	
Dinner			
	Turkey	No (do not use products with gluten)	Yes
	Baked potatoes	No	
	Sour cream	No	
	Margarine	No	
	Green Salad	No	
	Ranch dressing & oil/vinegar type dressings	Ck label	
	Pudding	Ck label	
Snack			
	Rice crackers	No	
	Hummus dip	No	
	Baby carrots	No	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Whole grain bread - Toasted	Yes	
	Ham	Ck label	Yes
	Poached eggs	No	
	Hash Browns	No	
	Margarine/butter	No	
	Jam	No	
	Fresh Fruit	No	
	Oatmeal option	Ck label	
	Raisins	No	
	Nuts, pecans	No	
	Brown sugar (limit to 2 teaspoons per bowl!)	No	
Lunch			
	Toasted cheese sandwiches on whole grain bread	Yes	
	Tomato soup	Ck label	
	Fritos	No	
	Apple slices	No	
	Vegetable/salad		
	Salad Dressing	Ck label	
Snack			
	Rice Cakes	No	
	Banana	No	
	Cream Cheese	No	
	Plastic knife for spreading	No	
Dinner			
	Black Bean Soup	No	
	Tortilla chips	Ck label	
	Guacamole/salsa	No	
	Green onions		
	Sour cream		
	Green salad bar	No	
	Ranch and oil/vinegar dressing	Ck label	
Bedtime Snack			
	Yogurt	Ck label	
	Almonds (individual packets if possible)	Ck label	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Scrambled eggs	No	
	Whole grain bread	Yes	
	Fresh fruit	No	
	Oatmeal option	Ck label	
	Raisins	No	
	Brown sugar (limit to 2 teaspoons per bowl)	No	
	Chopped pecans	No	
Lunch			
	Whole grain Bread	Yes	
	Turkey	Ck label	No – cheese available
	Swiss cheese	No	
	Lettuce	No	
	Sliced Tomato	No	
	Potato chips	Ck label	
	Mayonnaise and mustard on table	Ck label	
	Fresh fruit		
Snack			
	Apple slices	No	
	Jerky	Yes	
Dinner			
	Corn tortillas (tacos)	No	
	Ground beef with spices for tacos (no gluten!)	No	No
	Lettuce	No	
	Tomatoes	No	
	Sliced jalapeno peppers	No	
	Cheddar cheese shredded		
	Refried beans	No gluten	Vegetarian – no lard
	Salsa		
	Black olives - sliced		
	Cole Slaw	No gluten	
	Canned pineapple chunks, in it's own juice		
Snack			
	Chocolate or regular milk	No	
	Graham crackers	Yes	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Egg Sandwich (egg, sausage patty, whole grain English muffin)	Yes (in muffin)	Make without sausage as well
	Hash browns	No	
	Canned fruit cocktail, light	No	
	Milk	No	
	Cheerios	Yes (Chex cereal is GF)	
	Raisin bran	Yes	
	Milk for cereal	No	
	OJ (no sugar added)	No – use 4 oz cups	
Lunch			
	Whole grain bread	Yes	
	Tuna salad sand with light mayonnaise and celery	Yes (in bread)	
	Lettuce	On table	
	Almond butter	On table	
	Jam	On table	
	Pretzels (package)	Yes	
	Fruit salad	No	
Snack			
	Watermelon	No	
	Yogurt	Ck label	
Dinner			
	Chicken stir fry	Do not use products with gluten or wheat	YES (tofu)
	Green salad	No	
	Salad dressing	Ck label	
	Brown rice	No	
	Broccoli, carrots, cabbage etc. (don't mix with the chicken)	No	
	Teriyaki sauce	Ck label	
	Fortune cookie	Yes	
Snack			
	Popcorn	No	
	String cheese	No	
	Dill Pickles	No	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Veggie hash browns	No	
	Broccoli	No	
	Carrots	No	
	Onions	No	
	Cheese	No	
	Whole wheat toast	Yes	
	Margarine/butter	No	
	Fresh fruit	No	
Lunch			
	Sloppy Joes	Ck label	Yes
	Hamburger bun	Yes	
	Carrot sticks	No	
	Ranch dressing dip	Ck label	
	Cabbage and Pineapple salad	No	
Snack			
	Grapes	No	
	Mixed Nuts (no peanuts)	No	
Dinner			
	Grilled chicken Fajitas or Quesadillas	Gluten free tortilla option	Yes
	Green peppers	No	
	Onions	No	
	Tomatoes	No	
	Black Beans	No	
	Whole grain rice	No	
	Avocado slices	No	
Snack			
	Milk	No	
	Oatmeal cookie	Yes	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Egg casserole – with cheese, green peppers, onions	No	No meat
	Toast, whole wheat	Yes	
	Margarine	No	
	Orange slices	No	
	Raisin Bran	Yes	
	Cheerios	Yes	
	Milk for cereal	No	
Lunch			
	Pizza (vegetable; Canadian bacon with pineapple; and cheese pizza options)	Yes	
	Raw vegetable platters	No	
	Crystal light	No	
Snack			
	Kind bars and granola bars - variety	Yes	
Dinner			
	Grilled chicken	No	
	Corn (on the cob)	No	
	Fresh fruit salad	No	
Snack			
	Ice cream (chocolate and vanilla)	Ck label	
	Strawberries	No	
	Chocolate syrup (sugar free and regular)	Ck label	
	Pecans for topping	No	

Mealtime	Item	Gluten free option needed	Vegetarian option needed
Breakfast			
	Scrambled eggs	No	
	Cheese	No	
	Ham	Ck label	
	Biscuits	Yes	
	Margarine	No	
	Fresh fruit salad	No	
Bon Voyage Lunch (with parents/BBQ)			
	Hamburger patty	No	Yes
	Hamburger bun	Yes	
	Lettuce	No	
	Tomato	No	
	Mayonnaise	No	
	Mustard	No	
	Ketchup	No	
	Green salad	No	
	Ranch and oil/vinegar dressing options	Ck label	
	Potato salad (do not use pasta as it is not gluten free – thanks!)	Do not use gluten products	
	Watermelon	No	
	Cookie, chocolate chip	Yes	
	Small cans of diet soda (diet only); root beer, coke and 7-up	No	



Other Breakfast Ideas

Include small boxes of cereal as a breakfast option (pre measured and easy to count carbs).

Choose options such as Rice Krispies, Raisin Bran and Cheerios with less added sugar.

Rice Krispies and Chex are gluten free cereals.

Oatmeal option with each breakfast is a nice touch – have the option of raisins or blueberries, nuts, premeasured brown sugar (2 teaspoons = approximately 9 gm carb) and milk.

Dinner

A salad bar is very popular:

- ☒ Romaine lettuce
- ☒ Spinach
- ☒ Tomatoes
- ☒ Cucumbers
- ☒ Peppers
- ☒ Cabbage
- ☒ Carrots
- ☒ Garbanzo beans
- ☒ Cottage cheese
- ☒ Gluten free dressings (Vinaigrette and Ranch options)

Sample menus for off-site trips (backpack, canoe etc.) and overnights

Breakfast

- ☒ Eggs (take frozen eggbeaters, they will begin to thaw but stay cool all night)
- ☒ Frozen pre-shredded potatoes
- ☒ Cheese
- ☒ Precut green peppers and onions to add
- ☒ Wraps

- ☒ Oatmeal
- ☒ Dried blueberries
- ☒ Pecans
- ☒ Powdered milk

- ☒ Granola
- ☒ Dried fruit
- ☒ Nuts
- ☒ Powdered milk

- ☒ Bread (can toast)
- ☒ Almond/peanut butter
- ☒ Dried bananas

Lunches

- ☒ Almond/peanut butter sandwich
- ☒ Jam
- ☒ Apples

- ☒ Bagel thins
- ☒ Cream cheese
- ☒ Oranges

- ☒ Crackers
- ☒ Cheese
- ☒ Jerky
- ☒ Dried fruit

Dinner

- ☒ Instant brown rice
- ☒ Stir fry vegetables (cabbage/carrots/onions)
- ☒ Canned chicken

- ☒ Mashed potatoes
- ☒ Cheese
- ☒ Green beans (freeze dried works great)

- ☒ Pad Thai with canned chicken
- ☒ Green peppers/onions
- ☒ Rice

- ☒ Beans, rice and corn burritos (use dried mix)
- ☒ Tortillas
- ☒ Cabbage
- ☒ Hot sauce

Snack Ideas

Snacks are typically simple foods, served according to carb counts (a typical carbohydrate serving is 15 gm). Some camps provide one standard serving and then “double snack” campers who need more, while other camps allow campers to choose how much of a snack they want. Some camps make snacks optional or do not serve three snacks each day. How your camp handles snacks is something to discuss with the Health Care, Program, and Camp Administrative Teams.



Below is a list of common snack foods at camp:

Snack ideas

Some snacks contain gluten (G) – be sure to read labels and provide alternatives. Consider mixing a carbohydrate and fat or protein with the snacks.

- ☒ Fresh fruit (apples, bananas, berries, grapes, nectarines, oranges, peaches, pears, plums) with string cheese
- ☒ Dried fruit and nuts
- ☒ Rice crackers, carrot sticks and humus.
- ☒ Yogurt and berries
- ☒ Rice cakes and cream cheese
- ☒ Energy bars (check the label for G)
- ☒ Fresh fruit and jerky (check the label for G)
- ☒ Ice cream cup and berries

Small amounts of carbohydrate for snacks (10-15 grams) will make insulin dosing easier and prevent stacking of insulin when dosing at mealtime. If the campers are active, insulin may not be needed for small snacks.

SPECIAL FOOD CONSIDERATIONS, FOOD ALLERGIES AND INTOLERANCES

Ideally campers with food allergies and intolerances will eat foods that are similar to what the general camp population is eating, as often as possible. The most common food considerations, allergies and/or intolerances that are managed at diabetes camp are celiac disease (gluten-free), lactose or dairy allergy/intolerance, and nut allergy. Other food allergies that you may see include egg, fish, soy, and food dye.

General reminders:

- ☒ Teach staff about the importance of safety when managing food allergies in campers and staff: reading food labels and cross contamination.
- ☒ Include a place on the health form where the parent/guardian and camper can communicate these allergies and provide any additional information. Kitchen staff needs this information ahead of time in order to order and prepare safe and appropriate foods.
- ☒ Ask about food allergies/intolerances during opening day assessment (if applicable) as well.
- ☒ Label food options in a way that makes it clear to the server which foods are which.
- ☒ Be careful about cross-contamination of cooking surfaces, equipment, and utensils.
- ☒ Be purposeful about placement of food items in salad bars.
- ☒ Gloves do not prevent cross-contamination!
- ☒ Check labels, recheck labels and check again when a new box/package arrives from the store or food delivery service. If you remove internal packaging from a shipping box, cut the label off the box, make copies, and apply them to the smaller packages.
- ☒ Set up a separate table for substitute foods for allergies and gluten free foods that is well labeled and easy for campers to access.
- ☒ There is a continuum of symptom severity for food allergies – best practice is to keep all campers/staff with allergies/intolerances safe by not using any foods that state, “this product may have been manufactured on equipment that also manufacture __.”

Celiac/Gluten-Free

Celiac disease is an auto-immune disease that causes intolerance or sensitivity to gluten, which is a protein found in food products containing wheat, barley and rye. If these grains are consumed, an immune response occurs in the body causing damage to the lining of the small intestine, which in turn can cause both immediate symptomatic issues and even further damage long-term. The only treatment for celiac disease is to consume a gluten-free diet. Cross-contamination is another concern for campers and staff with celiac disease. When cooking regular pasta for the campers, you will need to cook gluten-free pasta in a separate pot and serve it with separate utensils.

Up to 5-12% of people with type 1 diabetes also have celiac disease. Due to the relatively large number of campers and staff members with celiac disease, many diabetes camps provide gluten-free alternatives at every meal/snack. Some camps, however, may ask parents to provide gluten-free food for their own child. And some campers/parents may want to bring their own food because they have preferences or feel safer doing so.

Lactose Intolerance/Dairy Allergy

Lactose is a carbohydrate in milk that can sometimes cause an intolerance in individuals. Symptoms of lactose intolerance may affect blood glucose levels and can include stomach upset, cramping and overall physical discomfort. If someone is lactose intolerant it does not mean that they are allergic to milk; however, they may be sensitive to other dairy products as well (cheese, heavy creams and certain yogurts).

A milk allergy causes the body to think it has been invaded by a foreign nutrient. Milk allergy results in symptoms similar to lactose intolerance, typically with greater discomfort, as well as rash, itchy eyes and wheezing. Alternatives for those with lactose intolerance or a milk allergy include Lactaid milk, soy milk, almond milk, and rice milk/ice cream.

It is important to teach staff that many “non-milk” foods contain lactose, and it is important to follow strict label-reading and food preparation guidelines.

Nut Allergy

Nut allergies can be life threatening. Nut allergy symptoms can include itchy eyes, hives, and tingling lips/tongue, but a nut allergy can also lead to anaphylaxis (constriction of the airway, drop in blood pressure and other life-threatening symptoms), which would require immediate medical attention. Some camps choose to become completely nut free, while others designate a nut-free area where campers and staff with nut allergies can sit, eat, etc.

Always read the ingredients in any packaged foods as some packaged meals/snacks may be thickened with ground peanuts. Some, but not all persons who are allergic to peanuts are also allergic to other tree nuts, so be sure to find out. Check food labels for statements such as “may contain nuts” or “processed on equipment that also processes peanuts or other tree nuts.” Similar to maintaining a gluten-free environment, be cautious of cross-contamination of foods containing peanuts on cooking surfaces, equipment and utensils. Some alternatives to peanut butter include Sun butter, soy nut butter, and Wow butter.

All staff, including dietary and kitchen staff, need to be taught emergency procedures for anaphylaxis.

*If possible, incorporate more green leafy vegetables, spinach and broccoli into the camper’s meal plan to make up for the lower amount of calcium that is consumed on a lactose/milk-free diet.

Other things to consider

Depending on your camp's budget and duration, you may want to consider asking the family to provide some of their own special food items, such as specific pastas, Lactaid milk, nut-free products, etc.

Some families will ask that their child follow a special food plan, for example, vegetarian or Kosher. Work with the parents and kitchen staff to use the resources available to accommodate those campers.

Use the food allergy topic as a teachable moment. Include the other campers in a discussion or nutrition learning activity so that they understand why their friend may not eat the same foods as them, and it will also be an opportunity for campers without any food allergies to try new food items!

Additional information about gluten (from celiac.org):

Wheat gluten can be tricky to find on ingredient lists because sometimes it goes by different names. Avoid the following ingredients, which contain wheat gluten:

Wheat

- ☒ Varieties and derivatives of wheat such as:
 - Wheatberries
 - » Durum
 - » Emmer
 - » Semolina
 - » Spelt
 - » Farina

- » Faro
- » Graham
- » KAMUT® Khorasan wheat
- » Einkorn wheat

- ☒ Rye
- ☒ Barley
- ☒ Triticale
- ☒ Malt
- ☒ Brewer's Yeast
- ☒ Wheat Starch

Common foods that contain gluten

- ☒ Pastas
 - » Raviolis, dumplings, couscous, and gnocchi
- ☒ Noodles
 - » Ramen, udon, soba (those made with only a percentage of buckwheat flour), chow mein, and egg noodles. (Note: rice noodles and mung bean noodles are gluten free)
- ☒ Breads and Pastries
 - » Croissants, pita, naan, bagels, flatbreads, cornbread, potato bread, muffins, donuts, rolls
- ☒ Crackers
 - » Pretzels, goldfish, graham crackers
- ☒ Baked Goods
 - » Cakes, cookies, pie crusts, brownies



☒ Cereal and Granola

- » Corn flakes and rice puffs often contain malt extract/flavoring; granola is often made with regular oats, not gluten-free oats

☒ Breakfast Foods

- » Pancakes, waffles, French toast, crepes, and biscuits

☒ Breading and Coating Mixes

- » Panko, breadcrumbs

☒ Croutons

- » Stuffings, dressings

☒ Sauces and Gravies (many use wheat flour as a thickener)

- » Traditional soy sauce, cream sauces made with a roux

☒ Flour tortillas

☒ Beer (unless explicitly gluten-free) and any malt beverages

☒ Brewer's Yeast

☒ Anything else that uses "wheat flour" as an ingredient

Foods that may contain gluten (must be verified)

☒ Energy bars/granola bars – some bars may contain wheat as an ingredient, and most use oats that are not gluten-free

☒ French fries – be careful of batter containing wheat flour or cross-contamination from fryers

☒ Potato chips – some potato chip seasonings may contain malt vinegar or wheat starch

☒ Processed lunch meats

☒ Candy and candybars

☒ Soup – pay special attention to cream-based soups, which may have flour as a thickener. Many soups also contain barley

☒ Multi-grain or "artisan" tortilla chips or tortillas that are not entirely corn-based may contain a wheat-based ingredient

☒ Salad dressings and marinades – may contain malt vinegar, soy sauce, flour

☒ Starch or dextrin – if found on a meat or poultry product could be from any grain, including wheat

☒ Brown rice syrup – may be made with barley enzymes

☒ Meat substitutes made with seitan (wheat gluten) such as vegetarian burgers, vegetarian sausage, imitation bacon, imitation seafood (Note)tofu is gluten-free, but be cautious of soy sauce marinades and cross-contamination when eating out, especially when the tofu is fried)

☒ Soy sauce (though tamari made without wheat is gluten-free)

☒ Self-basting poultry

☒ Pre-seasoned meats

☒ Cheesecake filling – some recipes include wheat flour

☒ Eggs served at restaurants – some restaurants put pancake batter in their scrambled eggs and omelets, but on their own, eggs are naturally gluten-free

WORKING WITH A HOST CAMP/FOOD SERVICE MANAGER

In order to have an effective relationship with the host camp/food service manager it is important to remember that everyone is working toward the same goals:

- ☒ Safe, happy, healthy, well-nourished campers
- ☒ Smoothly running meals/snacks
- ☒ Staying on budget
- ☒ Successful camp experience

It is also important to establish open communication. If the staff members are new or new to diabetes camp, consider holding a meeting with key staff members (dietitian, host camp director, diabetes camp director, food services manager). This can help increase awareness and understanding – there can be significant differences in the way meals are prepared and served at a diabetes camp compared to a host camp.

- ☒ Ask and answer questions
- ☒ Be open to suggestions/new ideas
- ☒ Explain nutrition management in diabetes
 - » how food choices affect blood glucose levels, especially foods high in carbohydrate
 - » the role of nutrition staff in educating campers and staff at every meal and setting an example of healthy eating
 - » the importance of portions and understanding the nutritional content of menu items – often, once bulk foods are removed from the shipping box, nutrition information may be lost – encourage host camp staff to keep the nutrition information, even if it means cutting out a section of the box

- ☒ Make sure expectations are clear
- ☒ Discuss costs, budget, roles/responsibilities

If there is continuity from year to year, it is a great idea for the camp dietitian and food service manager to work together in the off-season or pre-camp season to plan the menu. It is even possible to team up and attend food shows together and to discuss nutrient contents of new menu ideas prior to camp.

Once everyone is comfortable with each other and expectations, camp dietitian, dietetic student/intern, and food services manager can begin working on the following:

- ☒ Menu: changes may be necessary if a “standard menu” is used at the host camp
- ☒ Food planning/ordering
- ☒ Special needs: gluten-free, vegetarian/vegan options, food allergies
- ☒ Staffing needs: food preparation, serving, clean-up for meals and snacks

ORDERING FOOD

The responsibility for ordering food may fall on the dietitian, food services manager, lead cook, or even someone on the Administration or Program staff. Check with your camp to determine who does the food ordering. In camps that operate within a host camp, the ordering may be handled by the host camp staff. This is a situation that can create challenges since meal content and portions may be different during diabetes camp. Be especially sensitive to the needs of host camp staff and make every effort to orient them to the importance of dietary management. Just “throwing in a little more” or “adding a little sugar” to spaghetti sauce can affect dramatic change on more than flavor at diabetes camp! Make that message loud and clear from day one.

BE ESPECIALLY SENSITIVE TO THE NEEDS OF HOST CAMP STAFF AND MAKE EVERY EFFORT TO ORIENT THEM TO THE IMPORTANCE OF DIETARY MANAGEMENT.

Ordering involves menu planning, portion calculation and budgeting. It is essential to understand all three aspects of this important function and to work with the camp management and food service team. Dietitians may want to order healthy foods that are outside of budget constraints and food service workers may yearn to add ingredients that may not meet the dietary needs of those living with a health condition. Understanding food composition and its effect on diabetes; educating food service staff and campers; creating an enjoyable menu and making eating fun requires creative problem solving and good management skills. Communication and organization are your keys to success.

It is good practice to convert your camp menu, including all meals and snacks, into a usable spreadsheet or electronic form, from which you can extrapolate portion size and quantities. When meeting with the food service company or placing an online order for the first time, make sure to enter (on your spreadsheet), the brand, size and quantity of the foods so that you can reorder with ease. Total repeating items such as milk, bread and juice so that you can order enough to sustain you until the next order. Have the kitchen staff inventory what is left in stock (see column on right) so that when you reorder, you can make adjustments.

For instance:

Breakfast		Carb	100 Campers	Brand/Case Quantity	Order #1	In Stock
English Muffin	2 halves	26g	100 full/200 halves	Bays - #6, 12 per case	2	½
Cheese Slice	each	0g	100 slices or oz	Kraft – 3 lb, 6 per case	1	3 lbs
Cold Cereal	½ - 1 cup	15 – 20 g	100 servings	Kelloggs single serve 96 pack	2	72 packs
Asst'd Fresh Fruit	varies	15 – 20 g	100 pieces	Apples, oranges, bananas (case each)	1 (each)	½ case assorted
Juice	1/2 cup	15g	400 oz	Juicy Juice, 8-pack – (12)	2	24 boxes
Milk	1 cup	12g	6.25 gals	6.25 gals	7	1 gallon

Depending on the length of your camp session, you may order once or more than once. Generally, camps order 1-2 times per week and use a national food service provider when they have more than 50 campers for one week or longer. Camps that operate for less than 50 campers and for one week or less, may opt to purchase at local wholesale food clubs.

The pricing is similar to national food suppliers such as US Foods or Sysco. However, doing this takes a great deal of staff time and effort. It is much easier to have food delivered directly to camp.

CAMPS THAT OPERATE FOR LESS THAN 50 CAMPERS AND FOR ONE WEEK OR LESS, MAY OPT TO PURCHASE AT LOCAL WHOLESALE FOOD CLUBS.

OPENING DAY PROCEDURES

Each camp will vary in terms of Opening Day procedures and the nutrition staff's role and responsibilities. The following is an example of what Opening Day procedures may look like for a diabetes camp dietitian.

☒ Before campers arrive

- » Assist as needed with food service for staff
- » Distribute Daily Menu with Carb Counts to Counselors, Cabins, Health Lodge, and Staff (the closer to the meal the better as last minute changes make carb counting a challenge!)
- » Have plan for communicating last minute changes
- » Check adequacy of supplies of foods for special dietary needs
- » Arrange for food needs of the Health Center
 - they need to have food on hand for staff or campers who miss meals, people with hypoglycemia, campers/staff who are staying in the Health Center, night rounds (including special diets)

- » Plan food for day trips, remote locales, overnights, etc.
- » Consider stocking cabins and outdoor activity areas with emergency boxes that include glucose tablets, juice, and gels. Have sports drinks (for low treatment) and water available at all times.
- » Coordinate with any other nutrition staff to cover meals and snack distribution

☒ During camper check-in

- » Have a table, booth, or presence at check-in for parents who want to talk to someone about their camper's dietary needs
- » Have snacks and water available for campers and staff who need them

JOB DESCRIPTIONS

In the next few pages there are job descriptions for dietitian, dietetic student/intern, and food services manager.

Please Note: There are many variations in diabetes camp settings: some camps are free-standing and run all summer long, some use a “host” camp facility/staff for a week or longer, and others fall somewhere in between. As such, these job descriptions are meant to provide guidelines/suggestions for developing nutrition staff job descriptions, and may need to be adapted to best fit your camp’s needs. In addition, the contents of these job descriptions are subject to change depending on requirements of accrediting agencies, state/federal laws, and anything that makes the camp run more smoothly.

REGISTERED DIETITIAN JOB DESCRIPTION

As a member of the Health Care Team, the Registered Dietitian plays a vital role in educating and overseeing nutrition management of diabetes at camp.

Registered Dietitian performs specific roles and responsibilities that may include but are not limited to the following:

☒ Food/Menus

- » Plans, creates, reviews, and revises menus for meals and snacks
- » Plans for food allergies, intolerances, and other special requests or nutrition needs
- » Works with food service manager to identify healthy food options
- » Works with food service manager to shop for/order food

☒ Education

- » Provides nutrition education sessions for staff during pre-camp training
- » Provides ongoing assistance and education related to nutrition and meal planning for staff and Counselors in Training (CIT)
- » Develops, revises, and leads a variety of education sessions/discussion groups for campers throughout the summer/session

» Facilitates/oversees learning experiences for dietetic students/interns

- Meets with dietetic students/interns regularly to review their progress and answer any questions
- Reviews student/intern lesson plans, observes educational sessions, and assists with one on one sessions for serious food related concerns
- Corresponds with academic instructors as necessary

» Is available prior to and during each meal for informal teaching

» Teaches meal planning approaches (including carb counting) and provides tools for carb counting (and other approaches) at meals

☒ Kitchen

- » Works with food service manager to maintain cleanliness, organization and safety in the kitchen
- » Ensures that all local/state/federal laws for kitchen safety/cleanliness are being followed



Leadership

- » Attends staff meetings and is an integral part of the camp staff
 - » Works with campers and staff to meet any clinical nutrition needs (or refers to another professional, as needed)
 - Consults on special situations that may come up such as eating disorders, malnutrition, and behavior issues related to nutrition
 - Meets with campers/parents on Opening Day to discuss any specific nutrition issues/concerns
 - Documents clinical interactions with campers or staff members in the camp health record
 - » Attends Health Care Team meetings as appropriate
 - » Has knowledge of and gives input toward the food budget
- ☒ Performs other duties as requested

Qualifications:

Graduate of an accredited program in nutrition or dietetics. RD/RDN certified (or eligible). Licensed in the state where camp is held, if applicable. Familiarity with diabetes and the meal planning approaches that are followed for diabetes management (CDE preferred). Nutrition education experience and/or training. Certification in insulin pumps and continuous glucose monitoring systems (CGMS) are encouraged. Experience with various nutrition software programs.

Reports to: Health Manager and/or Camp Director

DIETETIC STUDENT/INTERN JOB DESCRIPTION

The dietetic student/intern can be an integral part of the staff at diabetes camp – he or she can gain a valuable learning experience, while making a valuable contribution to camp. In resident camps it is preferable that the dietetic student/intern lives on camp and works full-time for the entire summer season (or session).

Typically, the more involved in camp life the dietetic student/intern is, the more positive their experience is and the more beneficial their role is to campers and staff.

It is important for students/interns to have as broad a learning experience as possible while at camp. For this reason it is best to give them as much responsibility as possible, without overwhelming them, and keeping in mind that they are not yet licensed.

Under the supervision of a Registered Dietitian, a Dietetic Student/Intern performs specific roles and responsibilities that may include but are not limited to the following:

☒ Food/Menus

- » Assists with planning, creating, reviewing and revising menus for meals and snacks
- » Assists with planning for food allergies, intolerances, and other special requests or nutrition needs
- » Works with food service manager to identify healthy food options
- » Works with food service manager to shop for/order food

☒ Education

- » Provides nutrition education sessions for staff during pre-camp training

- » Provides ongoing assistance and education related to nutrition and meal planning for staff and Counselors in Training (CIT)
- » Develops, revises, and leads a variety of education sessions/discussion groups for campers throughout the summer/session
- » Is available prior to and during each meal for informal teaching
- » Teaches meal planning approaches for diabetes management (including carb counting) and provides tools for carb counting (and/or other approaches) at meals

☒ Kitchen

- » Works with food service manager to maintain cleanliness, organization and safety in the kitchen
- » Ensures that all local/state/federal laws for kitchen safety/cleanliness are being followed

☒ Clinical Nutrition

- » Works with campers and staff members who have clinical nutrition concerns
 - Documents clinical interactions with campers or staff members in the camp health record with co-signature from supervising Registered Dietitian

☒ Performs other duties as requested

Reports to: Registered Dietitian* or another designated camp staff member

*Certain competencies and responsibilities may be defined by the academic facility. Each student is expected to meet and/or exceed expectations of their nutrition program.

FOOD SERVICE MANAGER JOB DESCRIPTION

This job description is geared toward diabetes camps who hire their own food service manager (host camps may provide their own). These are the typical responsibilities for a food service manager.

The food service manager and/or lead cook is responsible for working with both the Camp Director and Registered Dietitian to ensure that every effort is made to accommodate meal planning for campers with type 1 diabetes as well as common food allergies, nutrition-related conditions such as celiac disease, and other eating patterns such as vegetarian or Kosher. This position requires flexibility and the ability/willingness to adapt meals as needed and be responsive to changes in camper and staff meal plans.

The Food Service Manager performs responsibilities that may include but are not limited to the following:

- ☒ Works with dietitian to plan and develop menu
- ☒ Works with dietitian or dietetic student/intern to learn about healthy options for food served at camp

- ☒ Works with dietitian or dietetic student/intern to order/shop for food for camp meals, special meals/snacks, and food-related activities
- ☒ Works within food and kitchen budget to meet all necessary dietary needs of the camp and individual campers/staff members as necessary
- ☒ Reviews and revises menus and grocery lists as needed
- ☒ Oversees food prep and kitchen clean-up and delegates various duties to kitchen staff
- ☒ Assigns and supervises kitchen staff
- ☒ Practices safe food handling procedures at all times and ensures that all kitchen staff members do the same

Qualifications:

Meets required state-specific food and kitchen safety certifications. Familiarity with Microsoft Excel and the ability to work with foodservice and nutrition software programs preferred.

Reports to: Camp Director

CONCLUDING THOUGHTS AND ACKNOWLEDGMENTS

Camp is a wonderful place for children, adolescents and staff to learn, have fun, and meet others with diabetes. Please visit www.diabetescamps.org to learn more about the Diabetes Education and Camping Association (DECA) and to utilize the many resources DECA offers. Please contact DECA if you have questions about anything in this manual, or if you would like to share some of your own diabetes camp and nutrition experiences.

DECA and the Nutrition Best Practices Committee would like to thank Lilly for their generous funding of this project.

APPENDIX A

Type 2 Diabetes

In addition to camps for children and adolescents with type 1 diabetes, some diabetes camps serve campers with both type 1 and type 2 diabetes, and some camps have programs specifically for children with type 2 diabetes. Although this Nutrition Manual has focused solely on type 1 diabetes, the following is some information on type 2 diabetes that may be helpful in the camp setting.

Health professionals are now saying that children are getting adult diseases, and this is the first generation that may not outlive their parents. Although historically type 2 diabetes was thought of as an adult disease, more and more children and adolescents are being diagnosed with type 2 diabetes. Because type 2 goes hand in hand with high cholesterol and high blood pressure, these young people are now at increased risk for heart disease and stroke earlier in life. Physical inactivity and eating habits leading to overweight and obesity play a large role in the development of type 2 diabetes. In addition, children and adolescents who develop type 2 diabetes likely have a family history of the disease.

Whereas the major underlying factor in type 1 diabetes is insulin shortage, in type 2 diabetes it is insulin resistance. Insulin resistance occurs when the body makes insulin, but the receptors on the body's cells don't recognize or utilize it properly. This means that glucose cannot be transported from the blood into the cells, where it would ordinarily be stored or used to make energy. People with type 2 diabetes typically make and use enough insulin so they are not


at high risk for diabetes-related keto-acidosis (DKA), but if blood glucose levels get high enough, they can still show type 1-like symptoms (frequent urination and "unquenchable thirst").

Changing eating habits/patterns and increasing activity level can lead to weight loss, which can reduce blood glucose levels and make diabetes easier to manage. Some children and adolescents with type 2 diabetes will need to take medication. These may include pills, injectables and or insulin.

Type 2 Diabetes atCamp

At camp, in addition to having fun in a safe environment, and meeting others with diabetes, children and adolescents with type 2 (and their parents and health care providers) may have a goal of becoming more active, eating healthier foods, limiting portion sizes and losing weight.

At camp the focus is on teaching campers how to identify healthy foods, eat healthy portions, and engage in regular physical activity. Making these topics and activities fun is what captures and holds campers' attention. Being realistic about the home environment and difficult choices makes it more likely they will take these messages home with them and keep working toward healthy outcomes.



It makes sense to check glucose levels regularly at camp. This is a wonderful teaching tool. In reality, campers may not continue to check glucose levels at home due to choice or lack of availability. Discuss barriers and provide helpful ideas/suggestions. You may want to contact and even invite local or nearby diabetes care professionals to lead teaching sessions and provide information about how these campers and their families can access resources (this may be something for parents to hear as well – maybe on Opening or Closing Day).

Instead of insulin, campers may take pills or non-insulin injectable medications for their diabetes management. Hypoglycemia may not be as much of an issue in campers with type 2 (depending on medications being taken) – make sure all campers understand what low blood glucose is, who is at risk, and how it is detected and treated.

Just as with campers who have type 1 diabetes, choose menu items carefully and focus on healthy, whole foods. The basic principles of healthy eating for everyone include fruits and vegetables, whole grains, high fiber, low fat. Avoid trans and limit saturated fats; eat whole foods and limit processed foods. If snacks are included, be sure they are healthy and appropriately portioned. Snack time is a perfect time for teaching!

Campers may not be accustomed to engaging in any physical activity and may need to start slowly to:

- ☒ physically participate,
- ☒ avoid injury and
- ☒ feel good about themselves and their ability to perform.

Plan activities that take these into consideration – perhaps a stroll at the beginning of the week could progress to a brisk walk by the end of the week. Teach campers about opportunities such as Couch Potato to 5K in their area or a diabetes fundraiser walk/bike ride.

It is important to note that the success of camp rests largely on the peer aspect of being with others who share similar experience in a fun, safe, motivating environment. Camps that have invited youth with both type 1 and type 2 diabetes to the same program have not experienced as much success (this is anecdotal) as those who have offered exclusively type 1 or type 2 programs (there are very few type 2 diabetes camps operating). Presumably, this is because the shared peer experience and the needs of each group, can be very different. We urge you to take this anecdotal information into account when planning your camp programs.

APPENDIX B

Acknowledgements

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