Eating a well-balanced diet is an important part of keeping your child healthy and controlling your child’s blood sugars. A healthy diet contains foods from the following food groups:

— Starches and Grains

— Vegetables

— Fruit

— Dairy

— Meats, Chicken, Fish, Eggs, Beans, Nuts and Seeds

— Fats
For a Healthy Diet:

Make half your plate fruits and vegetables.
- Eat red, orange and dark-green vegetables, such as tomatoes, carrots, and leafy green vegetables such as spinach and lettuce with meals and for snacks.
- Choose fresh or canned fruit packed in its own juice more often than fruit juice.

Drink skim or 1% milk.
- They have the same amount of calcium as whole milk, but less fat.
- Try calcium-fortified soy milk instead of dairy if you cannot drink milk from cows.

Eat more whole grains.
- Check the ingredients on food packages. Choose 100% whole-grains, flours, cereals, breads, rice, and spaghetti.

Choose healthy sources of protein.
- Twice a week, eat fish or seafood.
- Eat beans, a natural source of protein and fiber.
- Keep meat and chicken low in fat. Trim away any fat on meat and take the skin off chicken.

Choose mostly heart healthy fats.
- Healthy fats are in vegetable oils, nuts, seeds, avocados, and fat from fish and seafood.
- Less healthy fats are fats from fatty meats, fatty dairy products, ghee, butter, and stick margarine.

Choose sweets and sweet drinks less often.
- Drink more water instead of sweet drinks.
- Eat desserts and sweet treats less often.
- Do not add extra sugar to juice and other foods.
Not All Foods Affect Blood Sugar the Same Way

There are six different nutrients in foods: 
*Carbohydrate, protein, fat, vitamins, minerals, and water.*

All of these nutrients are found in healthy foods and give your child the energy he/she needs to grow normally. Of these nutrients, carbohydrates have the greatest effect on blood sugar.

**Carbohydrates in Foods**

The two main types of carbohydrates found in foods are starches and sugars. Both types affect blood sugar equally when eaten in similar amounts.

Foods that contain healthy carbohydrates include all types of grains and grain products (bread, rice, pasta, and cereal-100% whole grains are best), fruits (fresh fruit, canned and dried fruit, and fruit juice), vegetables, but starchy vegetables have the most carbohydrate (white potatoes, sweet potatoes and yams, corn, green peas, and winter squash), milk and yogurt, and beans, peas, and legumes (red beans, cow peas, mung beans, lentils etc).

Foods that contain less healthy carbohydrates are candy, desserts, salty and fatty snack foods, and sweet beverages.
Insulin

The body needs insulin in order to use the energy from carbohydrates in foods, and keep blood sugars in a healthy range. The amount of insulin your child needs depends on the amount of carbohydrate that is in the food or beverage. The more carbohydrate that is consumed, the more insulin will be needed.

If your child receives rapid-acting analog insulin such as Humalog (Lispro), Novolog (Aspart) or Apidra (Glulisine), or if your child receives short-acting insulin (Actrapid, Soluble/Regular), the amount of insulin he or she needs will be based on an “insulin-to-carbohydrate ratio” which will be determined by your child’s doctor. This is usually prescribed as the number of grams of carbohydrate that require 1 unit of insulin.

In some cases, if rapid-acting or short-acting insulin is not available and your child is receiving intermediate-acting insulin (Mixtard; NPH; Novomix), you will not be able to adjust the insulin based on the number of carbohydrates your child takes, and instead you must give your child the number of grams of carbohydrate at each meal that your doctor prescribes. Good diabetes control is possible with both methods.
Calculating Carbohydrates and Reading Food Labels

In order for you to calculate how much insulin to give your child for meals and snacks, you will need to count the amount of carbohydrates in the food your child eats. Reading food labels on packages, cans, and bags is one way to find out how much carbohydrate is in a food item:

**Nutrition Facts**

| Serving Size 1 cup (249g) | Servings Per Container 8 |
|--------------------------|--------------------------|
| **Amount Per Serving**   |                          |
| Calories 170             | Calories from Fat 60     |
| Total Fat 7g             | % Daily Value*           |
| Saturated Fat 1.5g       | 8%                       |
| Trans Fat 0g             |                          |
| Cholesterol 15g          | 5%                       |
| Sodium 360g              | 19%                      |
| Total Carbohydrate 17g   | 6%                       |
| Dietary Fiber 4g         | 16%                      |
| Sugars 9g                |                          |
| Protein 11g              |                          |

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Calories:

- Less than 2,000 (56g)
- Less than 2,500 (80g)

Trans Fat:

- Less than 56g
- Less than 2.400mg

Saturated Fat:

- Less than 20g
- Less than 2,400mg

Cholesterol:

- Less than 300mg
- Less than 2,400mg

Total Carbohydrate:

- 2,400mg
- 2,400mg

Dietary Fiber:

- 25g
- 30g

Calories per gram:

- Fat 9
- Carbohydrate 4
- Protein 4

**First:**

Look at the "Serving Size" for the amount of food that equals one serving. This example says a serving is 1 cup. The weight of the food is 249 grams. You can ignore the weight.

**Second:**

Look at the “Total Carbohydrate”. This example says there is 17 grams of total carbohydrate. You can ignore the dietary fiber and dietary sugar. They are included in the Total Carbohydrate amount of 17 grams.

If your child is going to eat more than one serving, for example 2 cups, then you need to multiply 17 grams x 2 which equals 34 grams of carbohydrate.

**Insulin Calculation Example**

If your child is going to eat 2 cups of this food above, and needs 1 unit of rapid-acting insulin for every 15 grams of carbohydrate, you can round the 34 grams down to 30 grams (it’s close enough), and give your child 2 units of rapid-acting insulin for this food. Remember that the dose of rapid-acting insulin depends on your child’s insulin-to-carbohydrate ratio.
Measuring Cups, Spoons, and Food Scale
Grains, Beans, Sauce, Potato and Bread

Bariis
½ Cup = 22 g carbohydrate

Bariis
1 Cup = 44 g carbohydrate

Baasto
½ Cup = 22 g carbohydrate

Baasto
1 Cup = 44 g carbohydrate

Sooor/ Shuuro
½ Cup = 19 g carbohydrate

Sooor/ Shuuro
1 Cup = 38 g carbohydrate

Qamadi/ Sareen
½ Cup = 22 g carbohydrate

Qamadi/ Sareen
1 Cup = 44 g carbohydrate

Mushaari
½ Cup = 14 g carbohydrate
Grains, Beans, Sauce, Potato and Bread

- **Mushaari**
  - 1 Cup = 27 g carbohydrate

- **Ambuulo Sareen**
  - ½ Cup = 15 g carbohydrate
  - 1 Cup = 30 g carbohydrate

- **Ambuulo Galey**
  - ½ Cup = 15 g carbohydrate
  - 1 Cup = 30 g carbohydrate

- **Ambuulo Bariis**
  - ½ Cup = 15 g carbohydrate
  - 1 Cup = 30 g carbohydrate

- **Maraq Digir**
  - ½ Cup = 15 g carbohydrate
  - 1 Cup = 30 g carbohydrate
Grains, Beans, Sauce, Potato and Bread

- **Digir**
  ½ Cup = 15-20 g carbohydrate

- **Maraq Bilaash**
  ½ Cup = 5 g carbohydrate

- **Spaghetti Sauce (Jar)**
  ½ Cup = 12 g carbohydrate

- **Spaghetti Sauce (Home)**
  ½ Cup = 6 g carbohydrate

- **Baradho**
  1 (5½ oz) = 34 g carbohydrate

- **Anjeero/ Lahooh**
  1 (2 oz.) = 14 g carbohydrate

- **Malawah**
  1 (2 oz.) = 18 g carbohydrate

- **Muufo Baraawe**
  1 (1.8 oz.) = 26 g carbohydrate

- **Muufo**
  1 (3 oz.) = 34 g carbohydrate
Grains, Beans, Sauce, Potato and Bread

**Sabaayadi/ Burkaaki**
1 = 37 g carbohydrate

**Pocket Bread**
½ Pocket = 15 g carbohydrate

**Hambasha**
½ Slice = 28 g carbohydrate

**Rooti Somali**
½ Rooti = 30 g carbohydrate

**Whole Wheat Bread**
1 Slice = 11 g carbohydrate

**Whole Wheat Bread**
1 Slice = 14 g carbohydrate

**Breakfast Cereal**
Carbs will vary. Check label.
Fruit and Fruit Juice

**Sm/ Md/ Lg Banana**
Sm: 23 g / Md: 27 g / Lg: 30g

**Medium Apple**
19 g carbohydrate

**Medium Pear**
25 g carbohydrate

**Medium Orange**
21 g carbohydrate

**Clementine**
9 g carbohydrate

**Medium Peach**
14 g carbohydrate

**Kiwi**
11 g carbohydrate

**Strawberries**
½ Cup = 6 g carbohydrate

**Mango**
½ Cup = 12 g carbohydrate
Fruit and Fruit Juice

- **Watermelon**: ½ Cup = 6 g carbohydrate
- **Papaya**: ½ Cup = 8 g carbohydrate
- **Pineapple**: ½ Cup = 11 g carbohydrate
- **Grapes**: 17 = 15 g carbohydrate
- **Unsweetened Applesauce**: ½ Cup = 14 g carbohydrate
- **Unsweetened Canned Fruit**: 1 Container = 17 g carbohydrate
- **Dates**: 2 = 15 g carbohydrate
- **Apple Juice**: ½ Cup = 14 g carbohydrate
- **Apple Juice**: 1 Cup = 28 g carbohydrate
Fruit and Fruit Juice

Orange Juice
½ Cup = 13 g carbohydrate

Orange Juice
1 Cup = 26 g carbohydrate

Mango Juice
½ Cup = 16 g carbohydrate

Juice Boxes
1 = 24 g carbohydrate
Milk, Yogurt and Cheese

**Lowfat Milk**
1 Cup = 13 g carbohydrates

**Buttermilk**
1 Cup = 13 g carbohydrate

**Plain Yogurt**
1 Cup = 19 g carbohydrate

**Flavored Yogurts**
Carbs will vary. Check label.

**Yogurt Drink**
1 bottle = 36 g carbohydrate

**Cheese**
0 g carbohydrate
Vegetables

- **Isbinaasha**
  
  $\frac{1}{2}$ Cup = 4 g carbohydrate

- **Cabbage**
  
  $\frac{1}{2}$ Cup = 4 g carbohydrate

- **Ansalaato/ Saladh**
  
  $\frac{1}{2}$ Cup = 1 g carbohydrate

- **Ansalaato/ Saladh**
  
  $\frac{1}{2}$ Cup = 1 g carbohydrate

- **Vegetables**
  
  $\frac{1}{2}$ Cup = 2-6 g carbohydrate

- **Frozen Vegetables**
  
  Carbs will vary. Check label.
Meat, Chicken, Fish, Eggs

- Beef: 0 grams carbohydrate
- Goat: 0 grams carbohydrate
- Goat Liver: 0 grams carbohydrate
- Goat Kidney: 0 grams carbohydrate
- Lamb: 0 grams carbohydrate
- Camel: 0 grams carbohydrate
- Fish/Seafood: 0 grams carbohydrate
- Chicken: 0 grams carbohydrate
- Eggs: 0 grams carbohydrate
Fats and Oils

- **Ghee**: 0 g carbohydrate
- **Oil**: 0 g carbohydrate
- **Butter**: 0 g carbohydrate
- **Tub Margarine**: 0 g carbohydrate
- **Salad Dressing**: 2 Tablespoons = 0-8 g carbohydrate
- **Mayonnaise**: 0 g carbohydrate
Meat, Chicken, Fish, with Sauces

- **Oodkac**
  - 0 g carbohydrate

- **Suqaar**
  - ½ Cup = 5 g carbohydrate
  - 1 Cup = 10 g carbohydrate

- **Mallaay/Kalluun Yuumbi**
  - 1 serving = 2 g carbohydrate

- **Hilib Digaag**
  - ½ Cup Sauce = 8 g carbohydrate

- **Maraq/ Fahfah**
  - 1 Cup = 18 g carbohydrate
Appetizers and Snacks

Bajiya
1 = 9 grams carbohydrate

Sambuusi
1 = 15 grams carbohydrate

Nafago
1 = 15 grams carbohydrate

Bur Mandhasi
1 = 28 grams carbohydrate

Bur Katuunboow
1 = 11 grams carbohydrate

Bur Macsharo
1 = 86 grams carbohydrate

Bur Macsharo
¼ = 22 g carbohydrate
Spreads, Condiments and Spices

- **Peanut Butter**: 1 Tablespoon = 3 g carbohydrate
- **Nutella**: 1 Tablespoon = 12 g carbohydrate
- **Jam**: 1 Teaspoon = 4 g carbohydrate
- **Sugar-Free Jam**: 1 Tablespoon = 5 g carbohydrate
- **Honey**: 1 Tablespoon = 6 g carbohydrate
- **Regular Maple Syrup**: 1 Tablespoon = 15 g carbohydrate
- **Light Maple Syrup**: 1 Tablespoon = 8 g carbohydrate
Spreads, Condiments and Spices

Sugar-Free Maple Syrup
1 Tablespoon = 3 g carbohydrate

White Sugar
1 Teaspoon = 4 g carbohydrate
1 Tablespoon = 12 g carbohydrate

Brown Sugar
1 Teaspoon = 4 g carbohydrate
1 Tablespoon = 12 g carbohydrate

Artificial Sweetener
0 g carbohydrate

Spices
0 g carbohydrate
Desserts and Sweets

- **Doolsho Subuq**: $\frac{1}{16} = 24$ g carbohydrate
- **Doolsho Soomaali**: $\frac{1}{12} = 25$ g carbohydrate
- **Halwa**: 1 (1 oz.) = 24 g carbohydrate
- **Buskut Eid**: 1 (0.4 oz.) = 6 g carbohydrate
- **Qumbe Macaan**: 1 (1 oz.) = 18 g carbohydrate
- **Sisin**: 1 (1 oz.) = 18 g carbohydrate
- **Sisin Laduubay**: 2 (0.6 oz.) = 5 g carbohydrate
- **Shuushuumoow**: 1 (0.8 oz.) = 12 g carbohydrate
- **Loos Malabis**: 1 (1 oz.) = 16 g carbohydrate
Beverages

**Shaah Soomaali**
- with 1 teaspoon sugar = 4 g carbohydrate
- with 1 tablespoon sugar = 12 g carbohydrate
- with artificial sweetener = 0 g carbohydrate

**Vimto**
- 1 Can = 46 g carbohydrate

**Diet Soda**
- 0 g carbohydrate

**Regular Soda**
- Carbs will vary. Check label.

References:
1. US Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA National Nutrient Database for Standard Reference, Release 28. Version Current: September 2015. http://www.ars.usda.gov/nea/bhnrc/ndl
2. Barlin Ali. Somali Cuisine. AuthorHouse, Bloomington, IN 2007