

## **EXCHANGE LISTS FOR INDIANS WITH DIABETES**

### **What are Exchange Lists?**

Exchange lists are foods listed together under different food groups because each serving of a food has about the same amount of carbohydrate, protein, fat, and calories as the other foods on that list. Carbohydrates are found in mainly foods rich in starches and sugars, proteins are found mainly in meats, poultry, seafood, eggs, dairy and legumes and fats and oils are found mainly in butter, hydrogenated fats, margarine and all oils. Carbohydrates, proteins and fats yield calories and a person with diabetes must make sure that there is no overload of any or all of these nutrients in a day's meal. That is why with an Exchange List, any food on the list can be exchanged or traded for any other food on the same list. Exchange lists and a meal plan can help you make healthy choices. There are three main groups - the Carbohydrate group, the Meat and Meat substitute group, and the Fat group. Foods in fat group are divided into monounsaturated, polyunsaturated, and saturated fats.

### **FOOD GROUP**

**1 STARCH EXCHANGE** (15 gms Carbohydrate, 3 gms protein, 0-1 gm fat, and 80 calories)

<b>FOOD</b>	<b>PORTION</b>	<b>FOOD</b>	<b>PORTION</b>
Aviyal	½ cup	Bran cereal	½ cup
Bagel	½ (1 oz)	Bulgur	½ cup
Bread	1 slice (1 oz)	Cereals	½ cup
Bread sticks (4" long)	2 (2/3 oz)	Cornmeal	3 Tbsp
English muffin	½	Couscous	1/3 cup
Hot dog or hamburger bun	½ (1 oz)	Flour	3 Tbsp
Idli, plain	3" round	Granola, low fat	¼ cup
Naan	¼ of 8"x2"	Grape-Nuts	¼ cup
Pita (6")	½	Grits	½ cup
Phulka/sookhi roti/ chapati	1 (6")	Mumra (puffed rice)	1 ½ cup
Plain Dosa	1	Kasha	½ cup
Plantain, green	1/3 cup	Millet	¼ cup
Raisin bread	1 slice (1 oz)	Muesli	¼ cup
Rice, plain, cooked, wh/br	1/3 cup	Oats	½ cup
Roll, plain, small	1 (1oz)	Pasta	½ cup
Roti (bajra, corn, juwar)	½ (6")	Puffed cereal	1 ½ cup
Sambar	½ cup	Rice milk	½ cup
Tortilla, corn/flour (6-8")	1	Rice vermicelli	½ cup
Waffle (4 ½" low fat)	1	Wheat germ	3 Tbsp
Starchy Vegetables:		Crackers and Snacks:	
Baked beans	1/3 cup	Animal crackers	8
Corn	½ cup	Graham crackers	3
Corn on cob	1 (5 oz)	Matzoh	¾ oz
Mixed vege (corn, peas)	1 cup	Melba toast	4 slices
Peas, green	½ cup	Oyster crackers	24
Plantain	½ cup	Popcorn (no fat)	3 cups
Potato, baked or boiled	1 small	Pretzels	¾ oz
Potato, mashed	½ cup	Rice cakes (4")	2

Potato subji ( low fat)	½ cup	Whole wheat crackers	¾ oz
Squash, winter	1 cup	Saltine crackers	6
Yam, sweet potato, plain	½ cup	Chips (fat free)	¾ oz

### 1 STARCH + 1 FAT

### 1 STARCH+ 1 VERY LEAN MEAT

(15 gms carbohydrate, 3 gms protein, 0-1 gm fat, and 80 calories.)

FOOD	PORTION	FOOD	PORTION
Biscuit (2 ½")	1	Beans and peas (garbanzo, pinto, kidney, white, split black-eyed)	½ cup
Chow mein noodles	½ cup	Lima beans	2/3 cup
Corn bread (2")	1 (2 oz)	Lentils	½ cup
Crackers, butter type	6	Miso	3 Tbsp
Croutons	1 cup	Tomato dhal	½ cup
French fried potatoes	16-25 (3 oz)	Toor dhal, ckd	½ cup
Granola	¼ cup	Rasam	1 cup
Muffin, small	1 (1 ½ oz)	Mung dhal, ckd	½ cup
Pancake (4")	2		
Popcorn, microwave	3 cups		
Purries	2 (5")		
Paratha or Thepala	1 (6")		
Dhansak	½ cup		
Dhokla	1 "Square		
Poha	1 cup		
Matki usal	½ cup		
Sandwich crackers (cheese)	3		
Stuffing, bread	1/3 cup		
Taco shell (6")	1		
Waffle (4 ½")	1		

**FRUIT EXCHANGE:** 15 gms carbohydrate and 60 calories.

Apple, small, unpeeled	1 (4 oz)	Peach, medium, fresh	1 (6 oz)
Applesauce, unsweetened	½ cup	Peaches, canned	½ cup
Apples, dried	4 rings	Pear, large, fresh	½
Apricots, fresh	4 whole	Pears, canned	½ cup
Apricots, dried	8 halves	Pineapple, fresh	¾ cup
Apricots, canned	½ cup	Pineapple, canned	½ cup
Banana, small	1 (4 oz)	Plums, small	2
Blackberries	¾ cup	Plums, canned	½ cup
Blueberries	¾ cup	Prunes, dried	3
Cantaloupe, cubes	1 cup	Raisins	2 Tbsp
Cherries, fresh	12 (3 oz)	Rasberries	1 cup
Cherries, canned	½ cup	Sapota (chiku)	1 med
		Seetaphal	1 med
Dates	3	Strawberries, whole	1 ¼ cup
Figs, fresh	2 medium	Tangerines, small	2 (8oz)
Figs, dried	1 ½	Watermelon, 1 slice or	1 ¼ cup
Fruit cocktail	½ cup	Fruit Juice:	

Grapefruit, canned	¾ cup	Apple juice/cider	½ cup
Grapes, small	17 (3 oz)	Cranberry juice	1/3 cup
Guava, medium	1 ½	Cranberry cocktail	1 cup
Honeydew melon, cubes	1 cup	(reduced calories)	
Jambu	6	Guava juice	½ cup
Kiwi, medium	1	Mango juice	1/3 cup
Loquat	4	Grape juice	½ cup
Mandarin oranges, canned	¾ cup	Mixed juices, 100%	1/3 cup
Mango, small	½ or ½ cup	Orange juice	½ cup
Nectarine, small	1 (5 oz)	Pineapple juice	½ cup
Orange, small	1	Prune juice	1/3 cup
Papaya, cubes	1 cup		
Passion fruit	½ med		

**VEGETABLE EXCHANGE:** 5 gms carbohydrate, 2 gms protein, 0 gm fat, and 25 calories per ½ cup cooked (100 gms) or 1 cup raw vegetables.

Artichoke	Okra (lady's fingers)
Artichoke hearts	Onions
Asparagus	Parwar
Bamboo shoots	Pea pods
Beans (green, wax, Italian)	Peppers
Bean sprouts (mung)	Pink beans (valore)
Beets (chukandar)	Radish
Bottle gourd (lauki)	Ridge gourd (torai or turia)
Broad beans (papdi)	Salad greens
Broccoli	Sauerkraut
Brussels sprouts	Spinach (palak)
Cabbage	Summer squash
Carrots	Taro leaves
Cauliflower (gobi)	Taro roots
Celery	Tomatoes, fresh, canned, sauce
Cluster beans (guvar)	Turnip
Cow pea pods	Water chestnuts
Cucumber	Watercress
Dill (suva bhaji)	Zucchini
Drumsticks (surgavo)	
Eggplant (brinjal)	Vegetable Juices:
Fenugreek leaves (methi)	Carrot juice
Green Onions or scallions	Tomato juice
Green Papaya	Vegetable, mixed juice
Greens (collard, kale, mustard, turnip)	
Karela (bittermelon)	
Kankoda (golkandra)	
Kohlrabi	
Leeks	
lettuce	
Mixed vegetables	
Mushrooms	

## Meat and Meat Substitutes

**Very Lean:** 7 gms protein, 0-1 gm fat, 0 gm carbohydrate, and 35 calories.

Chicken or turkey (no skin)	1 oz
Fish	1 oz
Shellfish (crab, lobster, shrimp)	1 oz
Game	1 oz
Goat meat	1 oz
Egg white	2
Egg substitutes	¼ cup
Cheese, fat free	1 oz
Cooked dhal or legumes	½ cup
Paneer, 1% milk	¼ cup

**Lean Meat** 7 gms protein, 3 gms fat, 0 carbohydrate, and 55 calories.

Beef, select or choice grade	1 oz
Baked/Tandoori chicken (no skin)	1 oz
Chicken (skinless)	1 oz
Pork, lean	1 oz
Lamb	1 oz
Veal, lean	1 oz
Turkey (skinless)	1 oz
Fish, fresh or canned	1 oz
Ground meat kabab	1 oz
Oysters	6
Sardines	2
Cottage cheese, 4.5% fat	¼ cup
Parmesan, grated	2 Tbsp

**Medium-Fat Meat:** 7 gms protein, 5 gms fat, 0 carbohydrate, and 75 calories.

Beef, prime grades	1 oz
Pork	1 oz
Veal cutlet	1 oz
Chicken with skin	1 oz
Chicken, fish, lamb Tikka	3x1" pieces
Fish, fried	1 oz
Cheese, Feta, mozzarella, ricotta	1 oz
Egg	1
Soy milk	1 cup
Tempeh	¼ cup
Tofu	2 oz

**High-Fat Meat:** 7 gms protein, 8 gms fat, 0 gm carbohydrate, and 100 calories.

Pork, spareribs, sausage, ground	1 oz
Cheese, all regular cheeses	1 oz
Processed sandwich meats	1 oz
Hot dog	1
Bacon	3 slices
Peanut butter	2 Tbsp
Paneer , regular	¼ cup

**Milk Exchange:** 12 gms carbohydrate, and 8 gms protein.

**Skim and very low fat milk** (0-3 gms fat)

FOOD	PORTION
Skim milk	1 cup
½% milk	1 cup
1% milk	1 cup
Nonfat buttermilk	1 cup
Evaporated skim milk	½ cup
Nonfat dry milk	⅓ cup
Plain nonfat yogurt	¾ cup
Fruit flavored yogurt (non-fat, sugar free)	1 cup
Lassi, non-fat, sugar free	1 cup
Paneer, 1% milk	1 oz
Masala Tea, with 1% milk	1 cup

**Whole milk** (8 gms fat)

FOOD	PORTION
Whole milk	1 cup
Evaporated whole milk	½ cup
Goat's milk	1 cup
Kefir	1 cup
Lassi, regular	1 cup

**Low fat (5 gm fat)**

2% milk	1 cup
Plain low fat yogurt	¾ cup
Sweet acidophilus milk	1 cup

**Fat Exchange :** 5 gms fat and 45 calories.

**Monounsaturated Fats:**

Avocado, medium	1/8 (1 oz)
Oil, canola, olive, peanut	1 tsp
Olives	8 large
Nuts	
Almonds, cashews	6
Mixed	6
Peanuts	10
Pecans	4 halves
Peanut butter	2 tsp
Sesame seeds	1 Tbsp
Tahini paste	2 tsp

**Saturated Fats\*:**

Bacon, cooked	1 slice
Bacon, grease	1 tsp
Butter, stick	2 tsp
whipped	1 Tbsp
reduced fat	2 Tbsp
Ghee, clarified butter	1 tsp
Coconut	2 Tbsp
Half and half cream	2 Tbsp
Cream cheese, regular	1 Tbsp
reduced fat	2 Tbsp
Shortening or lard	1 tsp
Sour cream, regular	2 Tbsp
reduced fat	3 Tbsp

**Polyunsaturated Fats:**

Margarine, stick, tub	1 tsp
Mayonnaise, regular	1 tsp
Mayonnaise, reduced fat	1 Tbsp
Nuts, walnuts	4 halves
Oils, corn, safflower, soy	1 tsp
Salad dressing, regular	1 Tbsp
Salad dressing, low fat	2 Tbsp
Miracle whip, regular	2 tsp
Miracle whip, low fat	1 Tbsp
Seeds, pumkin, sunflower	1 Tbsp

\*Saturated fats can raise blood cholesterol levels.

## Other Carbohydrate List: Sweets and Snacks

Many of these foods are concentrated source of carbohydrate and fat. Always check Nutrition Facts on the food label. It will be most accurate source of information.

1 carbohydrate or starch exchange = 15 gms of carbohydrate = 60 calories:

1 protein exchange = 7 gms protein = 28 calories; 1 fat exchange = 5 gms fat = 45 calories.

(1 gm carbohydrate = 4 calories; 1 gm protien = 4 calories; 1 gm fat = 9 calories)

Food	Portion	Exchange per serving
Angel food cake, unfrosted	1/12 the cake	2 carbohydrates
Banana chips	1 oz	1 carbohydrate, 2 fats
Bhel puri	1 oz	1 carbohydrate, 1 fat
Bhujjia	1 oz	1 carbohydrate, 1 fat
Brownie, small	2" square	1 carbohydrate, 1 fat
Cake, unfrosted	2" square	1 carbohydrate, 1 fat
Cookies, fat-free	2 small	1 carbohydrate
Sandwich cookie with cream	2 small	1 carbohydrate, 1 fat
Cauliflower Bhajia	2 pieces	1 carbohydrate, 1 fat
Chevda mix	1 oz	1 carbohydrate, 1 fat
Chhunda (mango pickle)	2 Tbsp	1 carbohydrate
Chutney, tamarind	2 Tbsp	1 carbohydrate
Cranberry sauce, jellied	¼ cup	1 ½ carbohydrates
Cupcake, frosted	1 small	2 carbohydrates, 1 fat
Dahi vadai, non fat yogurt	2 pieces	1 carbohydrate, 1 fat
Doughnut, plain cake	1 medium	1 ½ carbohydrate, 2 fats
Doughnut, glazed	2 oz	2 carbohydrates, 2 fats
Fruit juice bars, 100%, frozen	1 bar (3 oz)	1 carbohydrate
Fruit snack, chewy	1 roll	1 carbohydrate
Fruit spread, 100%	1 Tbsp	1 carbohydrate
Gelatin, regular	½ cup	1 carbohydrate
Ghari, no ghee topping	1	1 carbohydrate, 2 fats
Gingersnaps	3	1 carbohydrate
Granola bar	1 bar	1 carbohydrate, 1 fat
Granola bar, fat-free	1 bar	2 carbohydrates
Gulabjammun	2 med	2 carbohydrate, 2 fats, ½prot
Halwa, carrot and milk	1 piece	1 carbohydrate, 1 fat, 1 prot
Halwa, sooji and milk	¼ cup	1 carbohydrate, 1 fat, ½prot
Handava	1 small piece	1 carbohydrate, 1 fat
Hummus	⅓ cup	1 carbohydrate, 1 fat
Ice cream	½ cup	1 carbohydrate, 2 fats
Ice cream, light	½ cup	1 carbohydrate, 1 fat
Ice cream, fat-free, no sugar	½ cup	1 carbohydrate
Jam or jelly, regular	1 Tbsp	1 carbohydrate
Kachories, vegetable	2	2 carbohydrate, 2 fats
Kachories, mungdhal	2	2 carbohydrate, 2 fats
Kadhi	1 cup	1 carbohydrate, 1fat, 1 prot
Khandavi	6 pieces	1 carbohydrate, 1 fat, ½ prot
Khichadi, no ghee	½ cup	1 carbohydrate, ½ prot

Kulfi	½ cup	1 carbohydrate, 1 fat
Kheer	½ cup	2 carbohydrate, 3 fat, 1/2 prot
Laddoo, wheat	1 small	2 carbohydrate, 2 fats
Magas	1 ½" x 1 ½"	1 carbohydrate, 1 fat, 1 prot
Mathia	2 thin	1 carbohydrate, 2 fats
Milk, chocolate, whole	1 cup	2 carbohydrates, fat
Mohanthal	1 ½" x 1 ½"	1 carbohydrate, 1 fat, 1 prot
Muthia, dudhi + wheat flour	4 pieces	2 carbohydrate, 1 fat
Namkeen (snack mix)	½ cup	1 carbohydrate, 2 fats
Nankhatai	2 small	1 carbohydrate, 1 fat
Pakoda, spinach	3 piece	1 carbohydrate, 1 fat
Pani puri	6	1 carbohydrate, 1 fat
Papad	2	1 carbohydrate
Pav bhaji, small	3 oz	1 carbohydrate, 1 fat
Petha, pumkin	2" piece	2 carbohydrates
Pie, fruit, 2 crust	⅙ pie	3 carbohydrates, 2 fats
Pie, pumpkin or custard	⅛ pie	1 carbohydrate, 2 fats
Pizza, cheese, thin crust	¼ of 10"	2 carbohydrates, 2 med fat Meats, 1 fat
Potato chips	12-18 (1oz)	1 carbohydrate, 2 fats
Potato Paratha	1 (6")	1 carbohydrate, 2 fats
Pudding, regular low fat milk	½ cup	2 carbohydrates
Pudding, sugar-free, low fat milk	½ cup	1 carbohydrate
Rasagolla	2 med	2 carbohydrate, 1 fat, 1 prot
Rasmalai, in reg milk	2 small	2 carbohydrate, 2 fats, 2 prot
Salad dressing, fat free	¼ cup	1 carbohydrate
Samosa, vegetable	1	1 ½ carbohydrate, 1 fat
Sherbet, sorbet	½ cup	2 carbohydrates
Shrikhand	¼ cup	1 carbohydrate, 1-2fat, 1 prot
Spaghetti, pasta sauce, canned	½ cup	1 carbohydrate, 1 fat
Sweet Roll or Danish	1 (2 ½ oz)	2 1/2 carbohydrates, 2 fat
Syrup, light	2 Tbsp	1 carbohydrate
Syrup, regular	1 Tbsp	1 carbohydrate
Syrup, regular	¼ cup	4 carbohydrates
Tortilla chips	6-12 (1 oz)	1 carbohydrate, 2 fats
Undhiyu, with 1 tsp oil	½ cup	1 carbohydrate, 1 fat
Uppuma, with 1 tsp oil	⅓ cup	1 carbohydrate, 1 fat
Uttapam, vege	1 small	2 carbohydrate, 1 fat
Vanilla wafers	5	1 carbohydrate, 1 fat
Vegetable cutlet	1 med	1 carbohydrate, 1/2 fat
Yogurt, frozen, low-fat, fat free	⅓ cup	1 carbohydrate, 0-1 fat
Yogurt, frozen, fat free, no sugar	½ cup	1 carbohydrate
Yogurt, low-fat, with fruit	1 cup	3 carbohydrates, 0-1 fat
Free Foods:		
Coriander chutney	1 tsp	100 mg sodium (Nirav)
Salsa	2 Tbsp	450 mg sodium (Taco bell)
Marinated chillies	1	

Follow American Dietetic Association Inc and The American Diabetes Association's Exchange lists for Meal Planning for the following lists:

Free foods list

Drinks

Condiments

Seasonings

Combination foods list

Fast foods list

Sodium content of some of the foods on this exchange lists

Avoid canned, cured, ready to eat and processed foods for sodium/salt restricted diets.

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