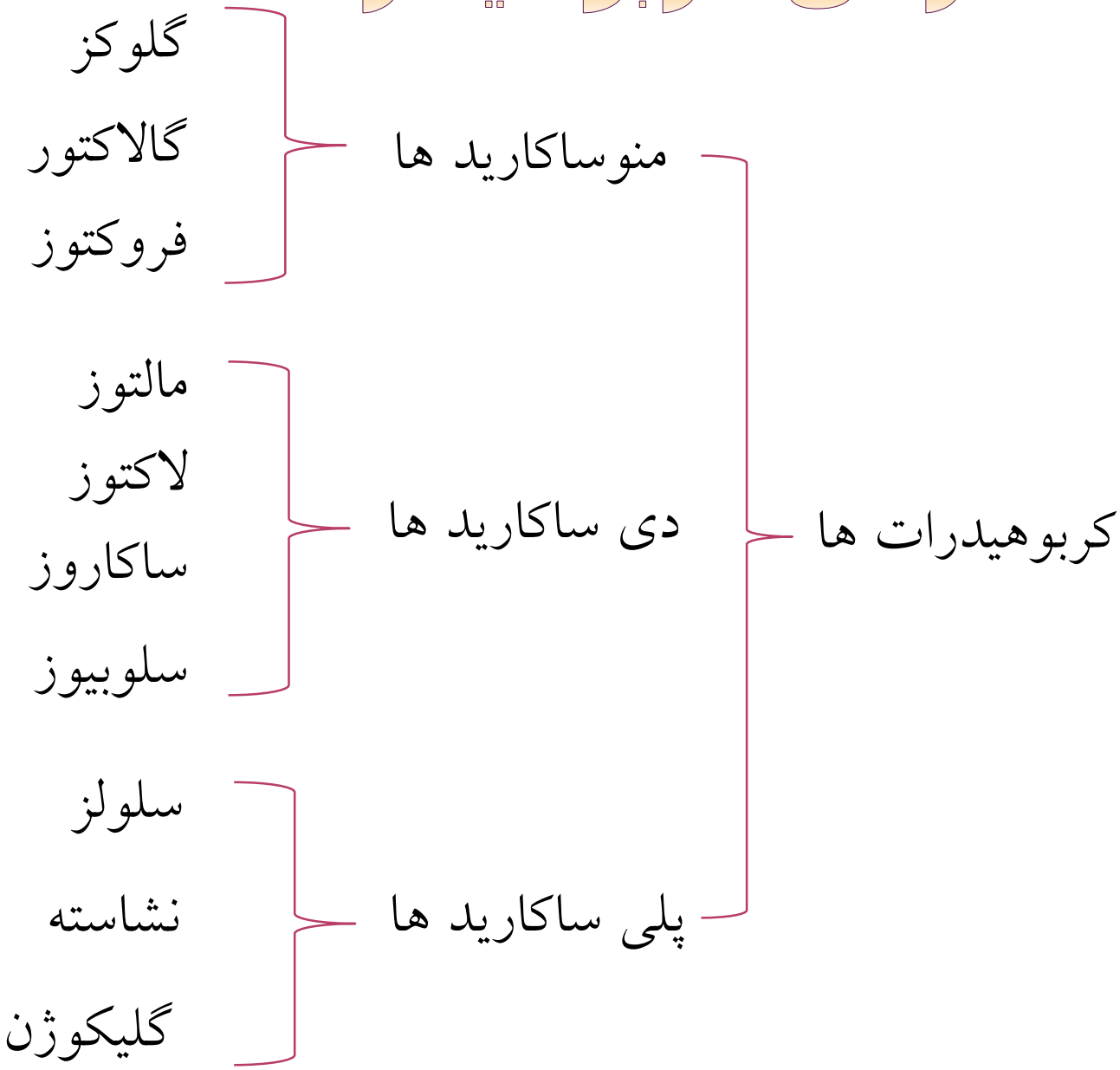
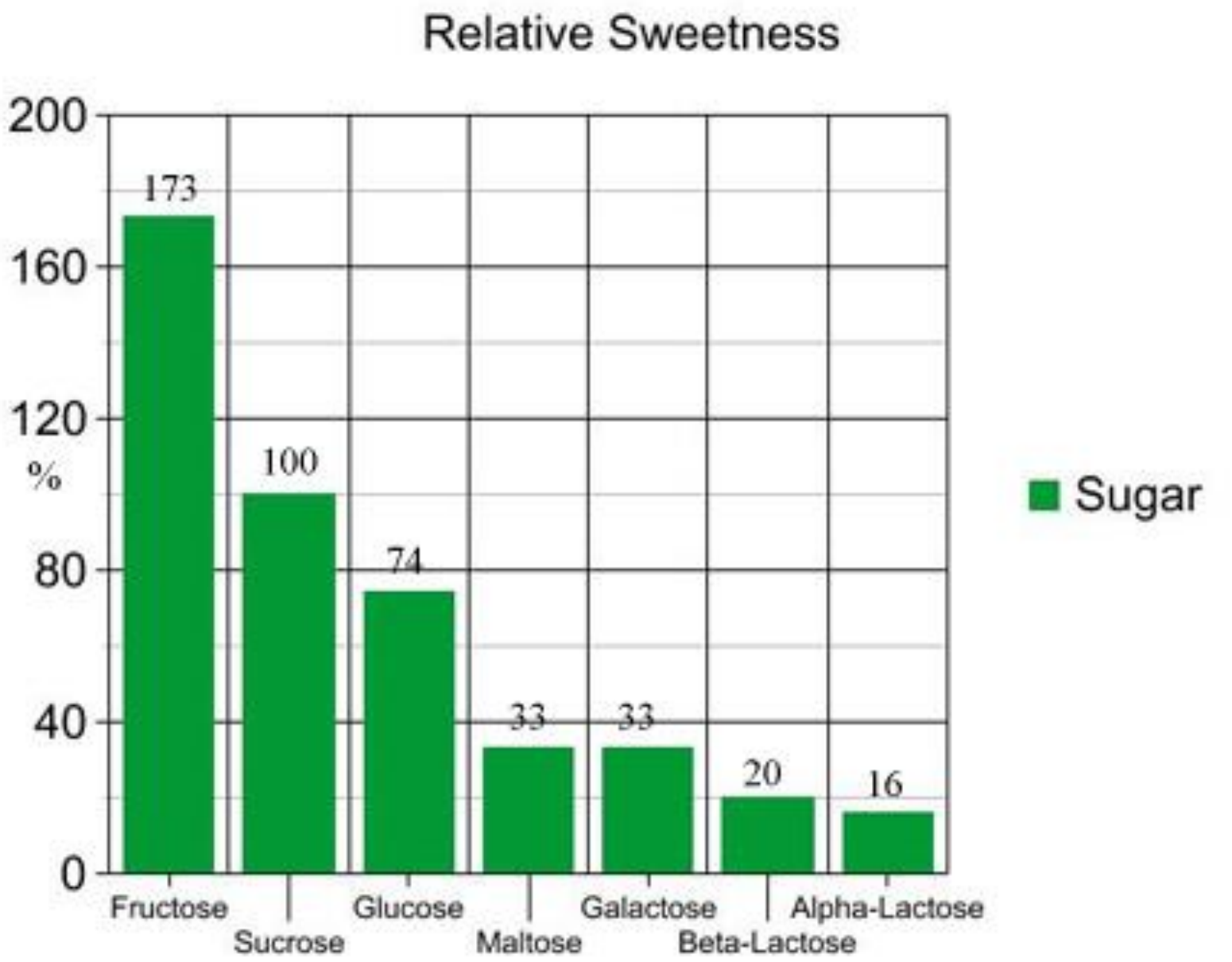
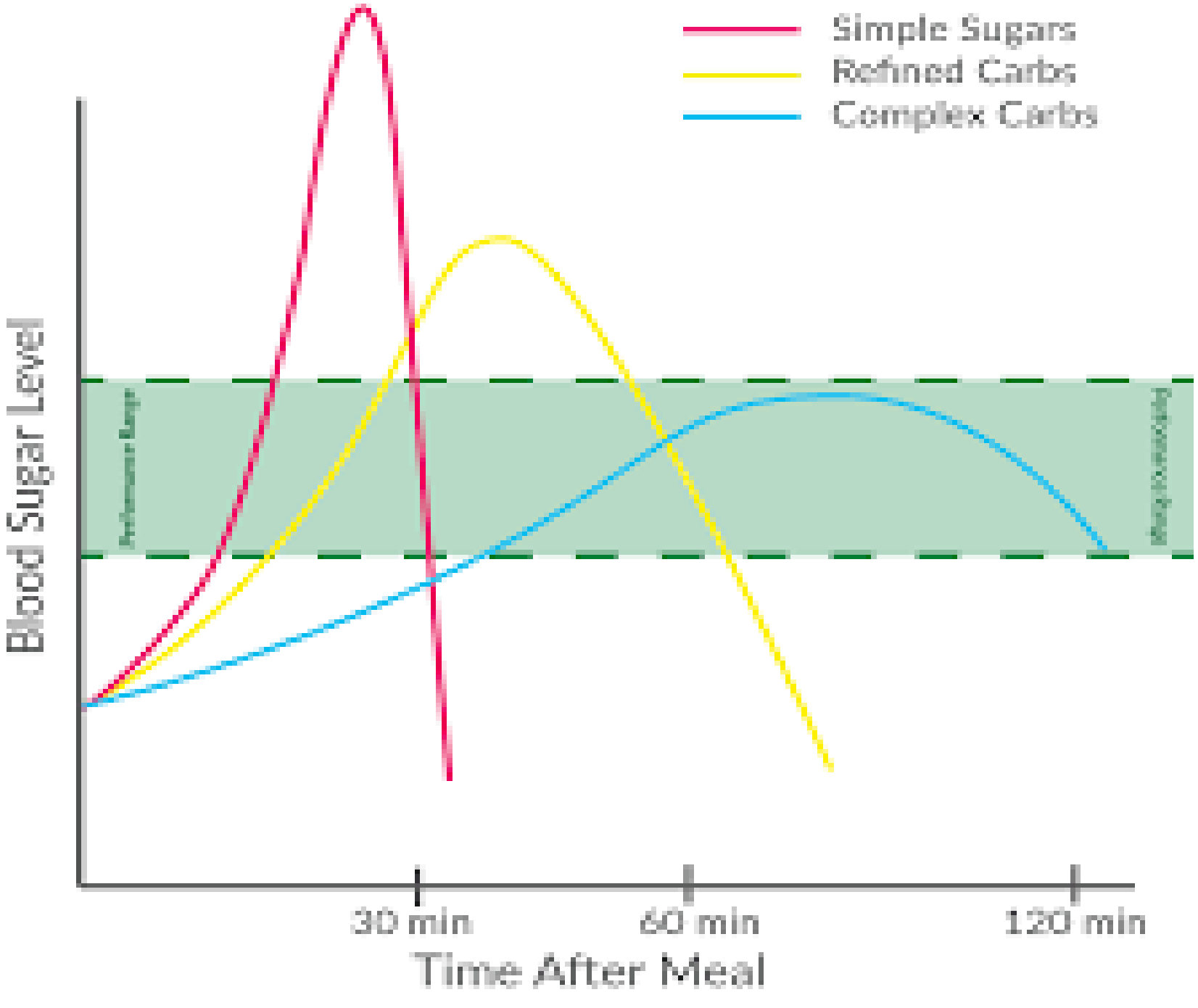
معرفی کربوهیدارت ها



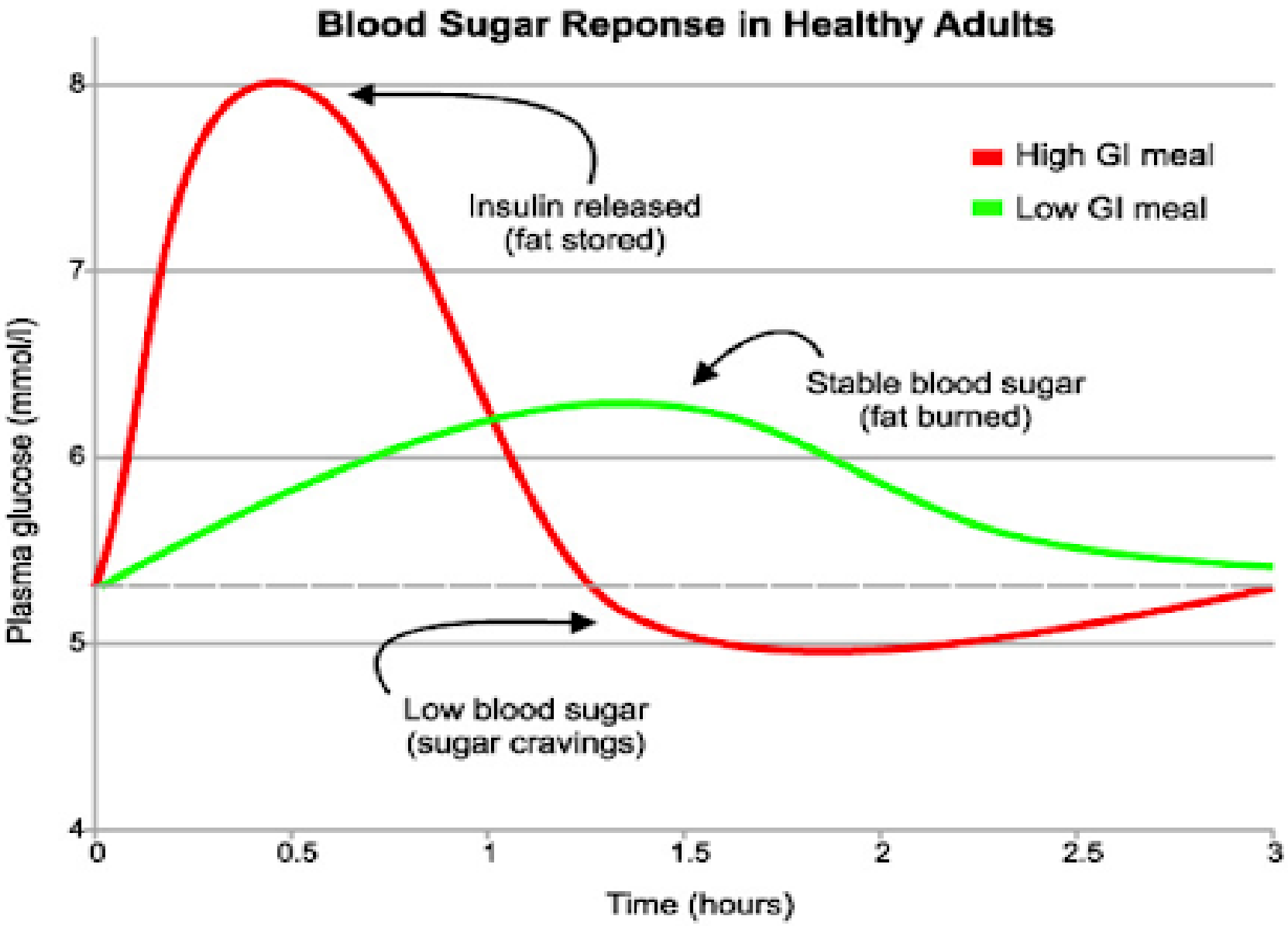

Relative Sweetness
200
160
120
%
80
40
0
173
100
74
33
33
20
16
Fructose
Sucrose
Glucose
Maltose
Galactose
Beta-Lactose
Alpha-Lactose
Sugar

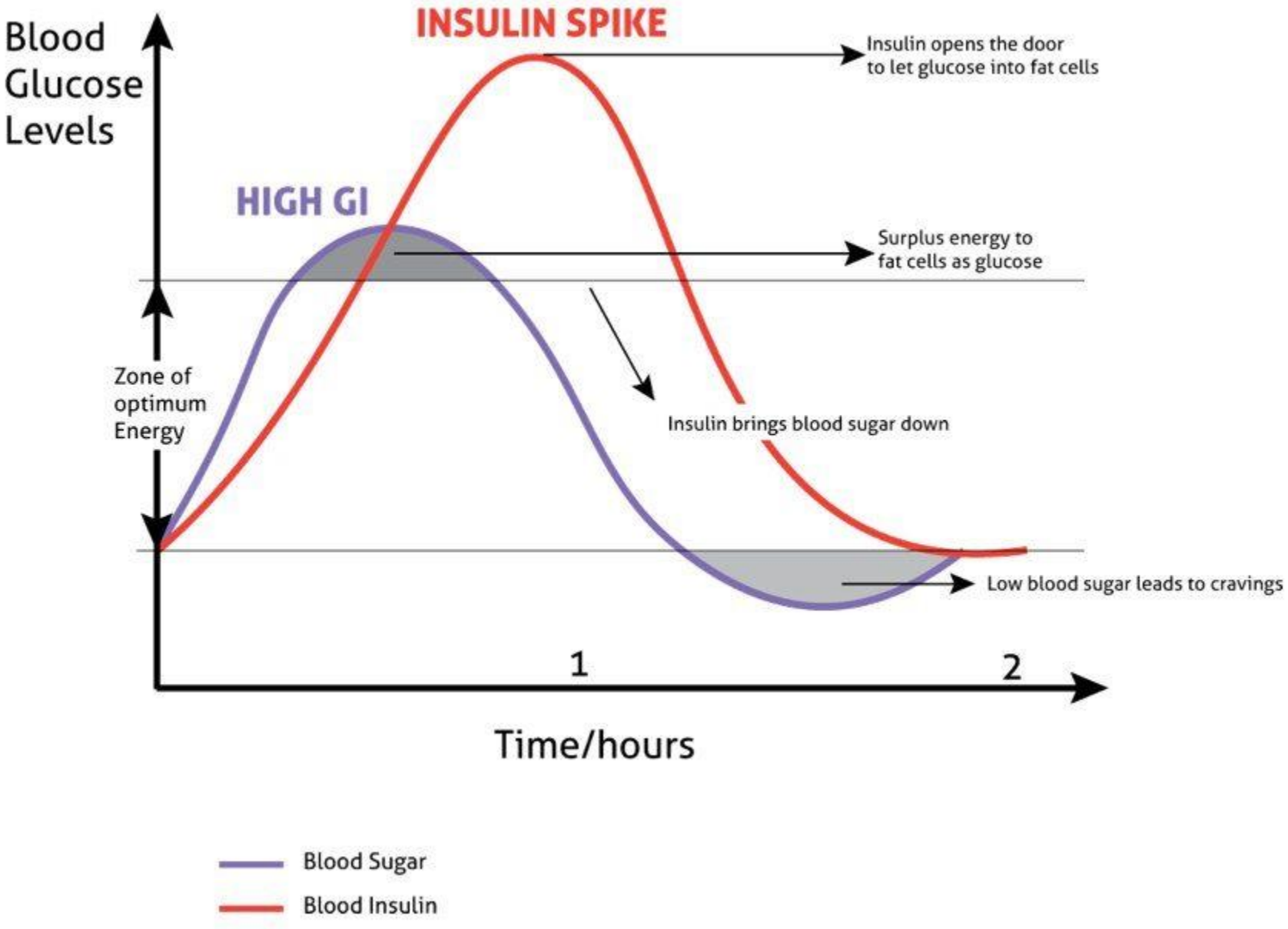
در گذشته

- کربوهیدرات ساده
- کربوهیدرات پیچیده

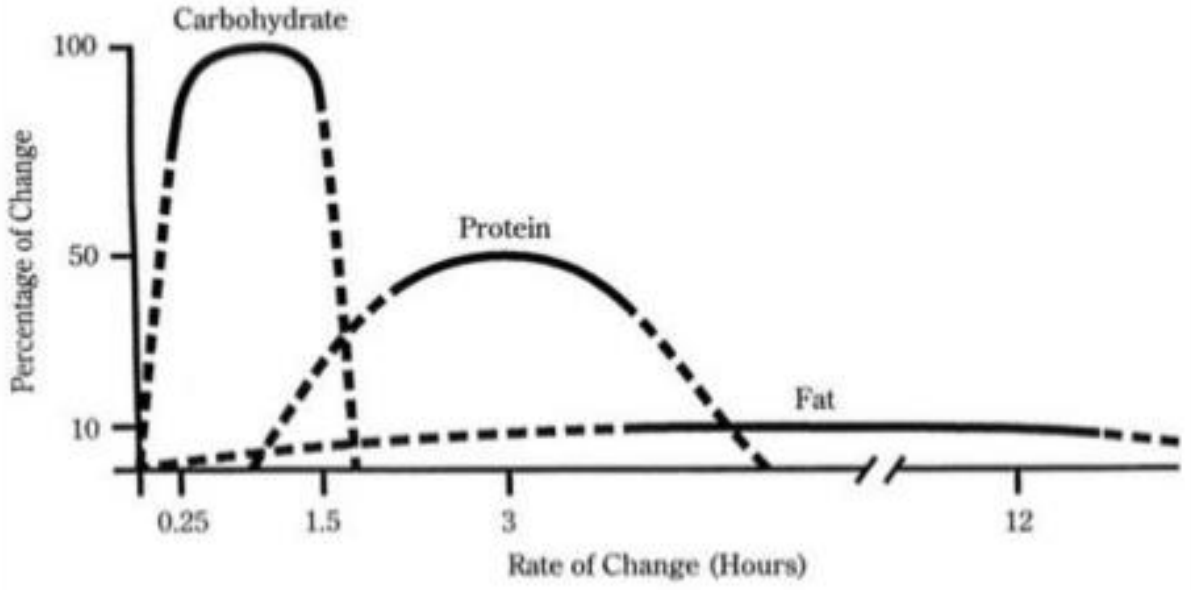

Simple Sugars
Refined Carbs
Complex Carbs
Blood Sugar Level
30 min
60 min
120 min
Time After Meal

GLYCEMIC INDEX (GI)




Blood Glucose Levels
INSULIN SPIKE
HIGH GI
Insulin opens the door to let glucose into fat cells
Surplus energy to fat cells as glucose
Zone of optimum Energy
Insulin brings blood sugar down
Low blood sugar leads to cravings
1
2
Time/hours
Blood Sugar
Blood Insulin

Macronutrient Conversion to Blood Glucose



way of classifying food according to their ability to raise blood glucose

Glycemic Index of commonly consumed foods	
Based on Glucose as a level of 100	
55-100+ is considered high	
Maltose (as used in beer)	105
Glucose	100
White bread	95
Baked potatoes	95
Carrots (cooked)	85
carrots (juiced)	80
Rice cakes	80
Honey	75
Refined sugar	75
Corn (cooked)	75
Puffed Wheat	75
Cornflakes	75
White rice	70
Shredded wheat	70
Millet	70
Raisins (seedless)	65
Pasta	65
Bananas	60
Couscous	60
Basmati Rice	60
Spaghetti, white	60
Rye Sourdough	55
Wild rice	55
Brown rice	55
Popcorn	55
Kiwi, Grape, Mango	50
Whole-grain pasta	45
Plum, Apple, Orange	40
Lentils & Peas	40
Chick Peas	35
Apricot, dried	30
Milk	30
Nuts	15-30
Hempseed	15
Tomatoes	15
Soy beans	15
Green Vegetables	0-15

- The glycemic index is based on how 50 grams (200 calories) of carbohydrate (not counting fiber) in a food will affect blood sugar levels after an overnight fast.

MEASURING THE GLYCEMIC INDEX OF FOODS

To determine the glycemic index of a food, volunteers are typically given a test food that provides 50 grams of carbohydrate and a control food (white bread or pure glucose) that provides the same amount of carbohydrate on different days (2). Blood samples for the determination of glucose are taken prior to eating and at regular intervals after eating over the next several hours. The changes in blood glucose over time are plotted as a curve. The glycemic index is calculated as the area under the glucose curve after the test food is eaten, divided by the corresponding area after the control food is eaten. The value is multiplied by 100 to represent a percentage of the control food. For example, a baked potato has a glycemic index of 76 relative to glucose and 108 relative to white bread, which means that the blood glucose response to the carbohydrate in a baked potato is 76% of the blood glucose response to the same amount of carbohydrate in pure glucose and 108% of the blood glucose response to the same amount of carbohydrate in white bread (3). In contrast, cooked brown rice has a glycemic index of 55 relative to glucose and 79 relative to white bread (4). In the traditional system of classifying carbohydrates, both brown rice and potato would be classified as complex carbohydrates despite the difference in their effects on blood glucose levels.

GL

Glycemic Load gives a relative indication of how much that serving of food is likely to increase your blood-sugar levels.

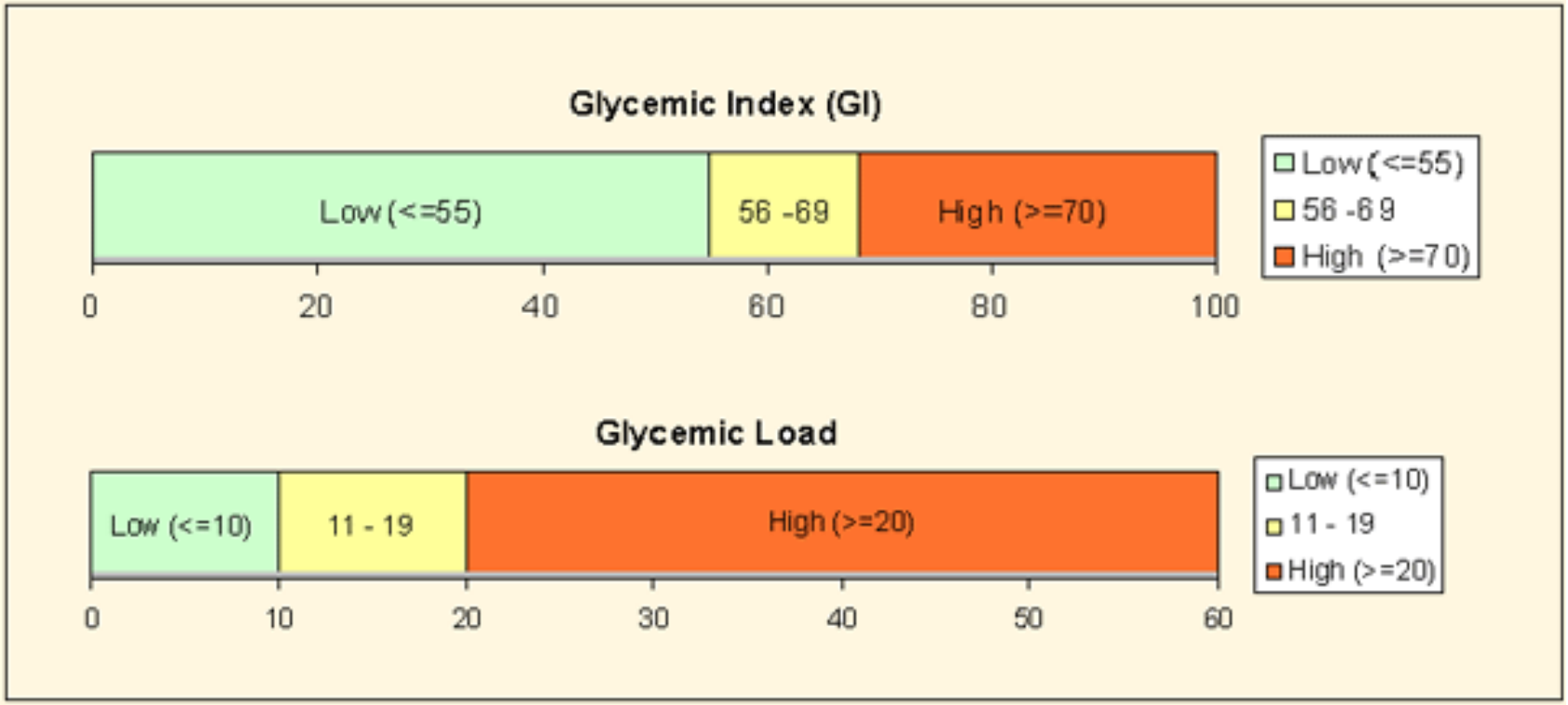
GL = GI/100 x Net Carbs

(Net Carbs are equal to the Total Carbohydrates minus Dietary Fiber)

Glycemic Index / Glycemic Load Chart

Glycemic Index is a measure of how fast a food increases the blood sugar.
Glycemic Load is the measure of the blood sugar raising power per serving of food.

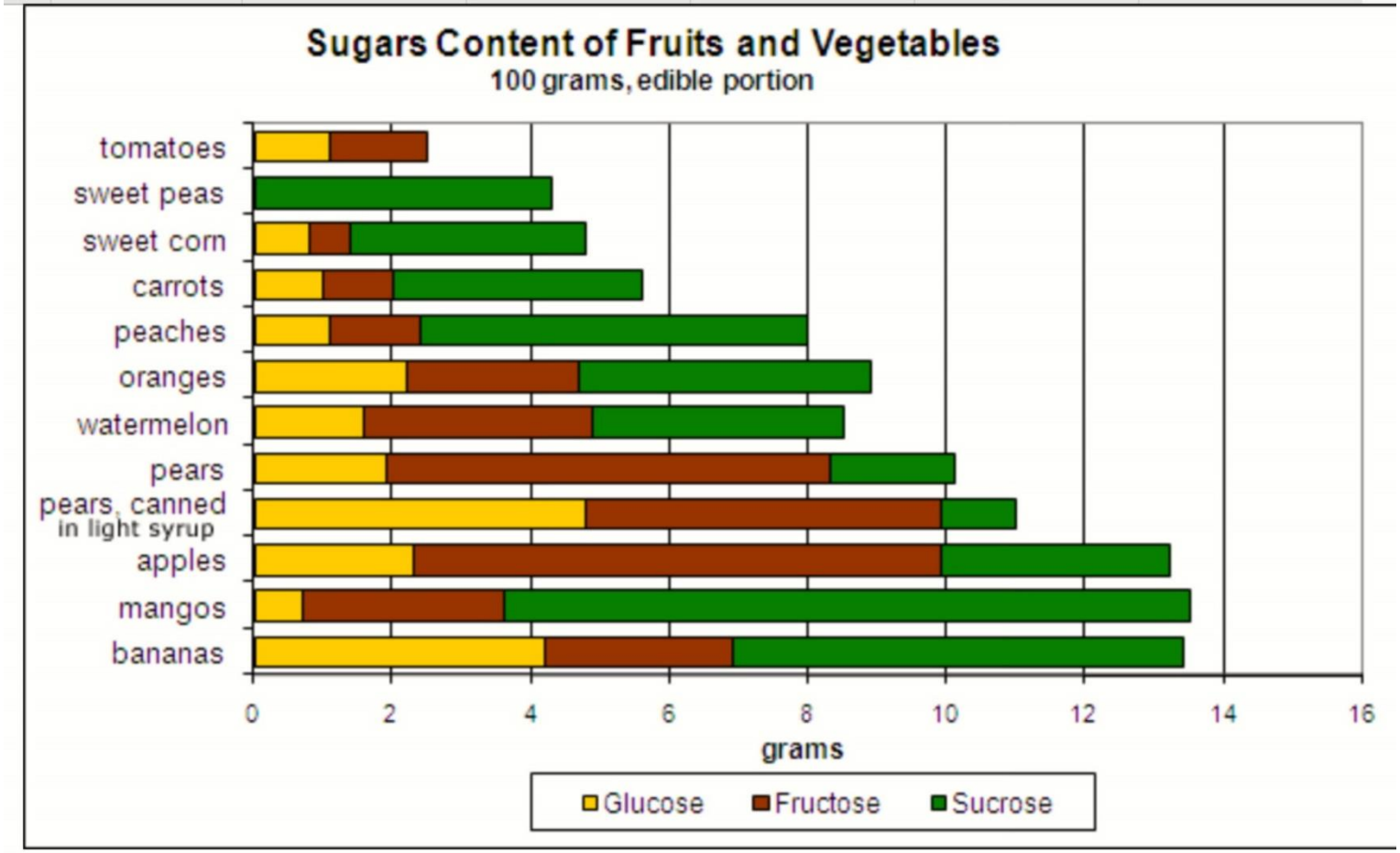
	Glycemic Index (glucose =100)	Carbs (grams per serving)	Glycemic Load Per serving
High	70 or more		20
Medium	56 to 69		11 to 19
Low	55 or less		10 or less
Fruits			
Apple, 1 average	38	21.0	8
Apple pie	44	29.5	13
Banana, 1 whole	51	26.5	14
Banana cake	47	37.5	18
Cantaloupe	63	13.5	9
Orange	42	16.0	7
Pineapple	65	19.0	12
Raisins, 1/2 cup	64	44.0	28
Watermelon	72	6.0	4
Vegetables			
Asparagus (6 spears)	8	4.0	1
Broccoli, 1/2 cup steamed	6	2.0	1
Cabbage, 1 cup raw	6	7.5	1
Carrots, 1 cup raw	47	6.0	3
Corn on the cob, 1 ear	53	29.0	15
French Fries, 1/2 cup	75	29.0	22
Green Beans, 1/2 cup boiled	28	5.0	1
Green Peas, 1/2 cup boiled	48	6.0	3
Baked Potato, white	85	30.5	26
Spinach, 1/2 cup steamed	6	3.5	1
Sweet Potato	61	28.0	17
Tomatoes, 1 cup raw	6	5.0	1
Grains			
Bagel, white, 2 oz.	72	32.0	23
Corn tortilla	52	23.0	12
Hamburger bun	61	15.0	9
Macaroni and Cheese	64	50.0	32
Pumpernickel bread, 1 slice	50	15.0	8
Rice, brown, 1 cup cooked	55	33.0	18
Rice, white, 1 cup cooked	64	40.0	26
Spaghetti, boiled, 1 cup	61	45.0	27
Waffles, one 7" round	76	27.0	21
White bread, 1 slice	73	14.0	10
Whole Grain bread, 1 slice	51	14.0	7


Glycemic Index (GI)
Low (<=55)
56 -69
High (>=70)
0
20
40
60
80
100
Low (<=55)
56 -69
High (>=70)
Glycemic Load
Low (<=10)
11 - 19
High (>=20)
0
10
20
30
40
50
60
Low (<=10)
11 - 19
High (>=20)

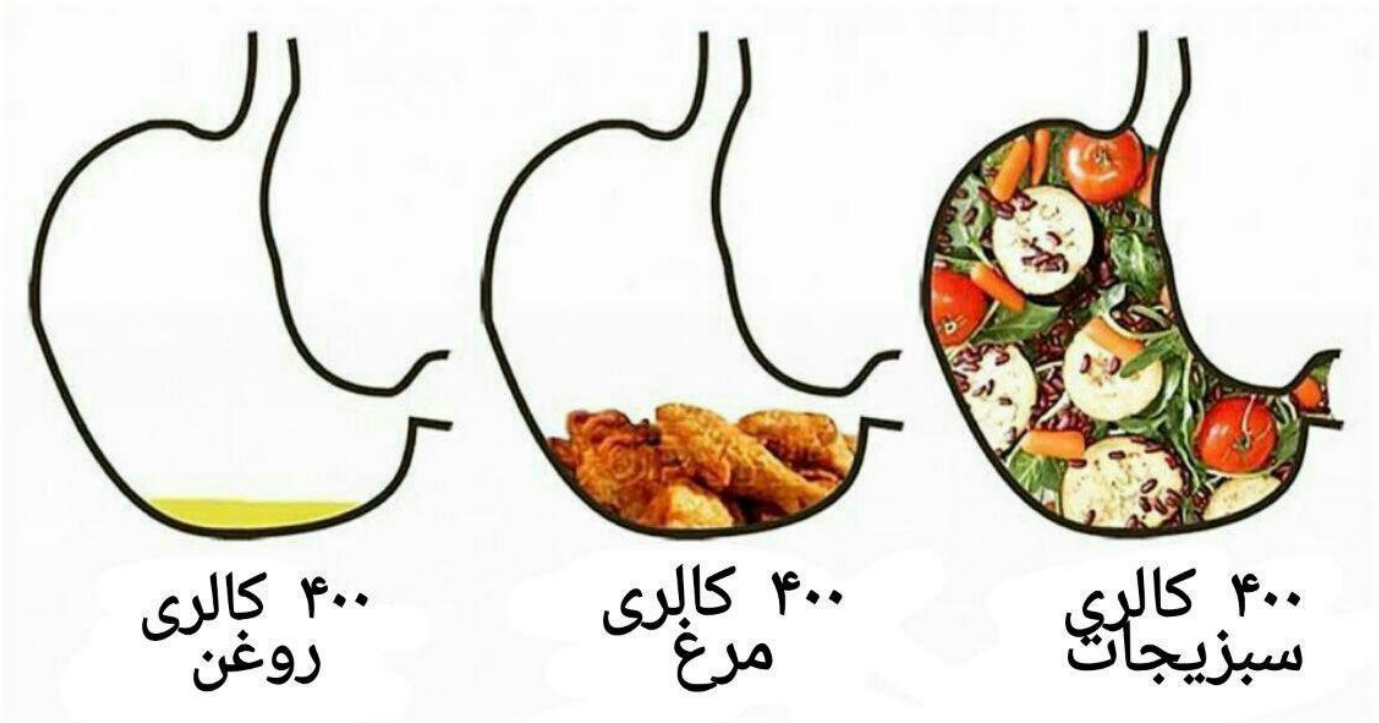
توصیه های تغذیه ای در مورد کربوهیدرات

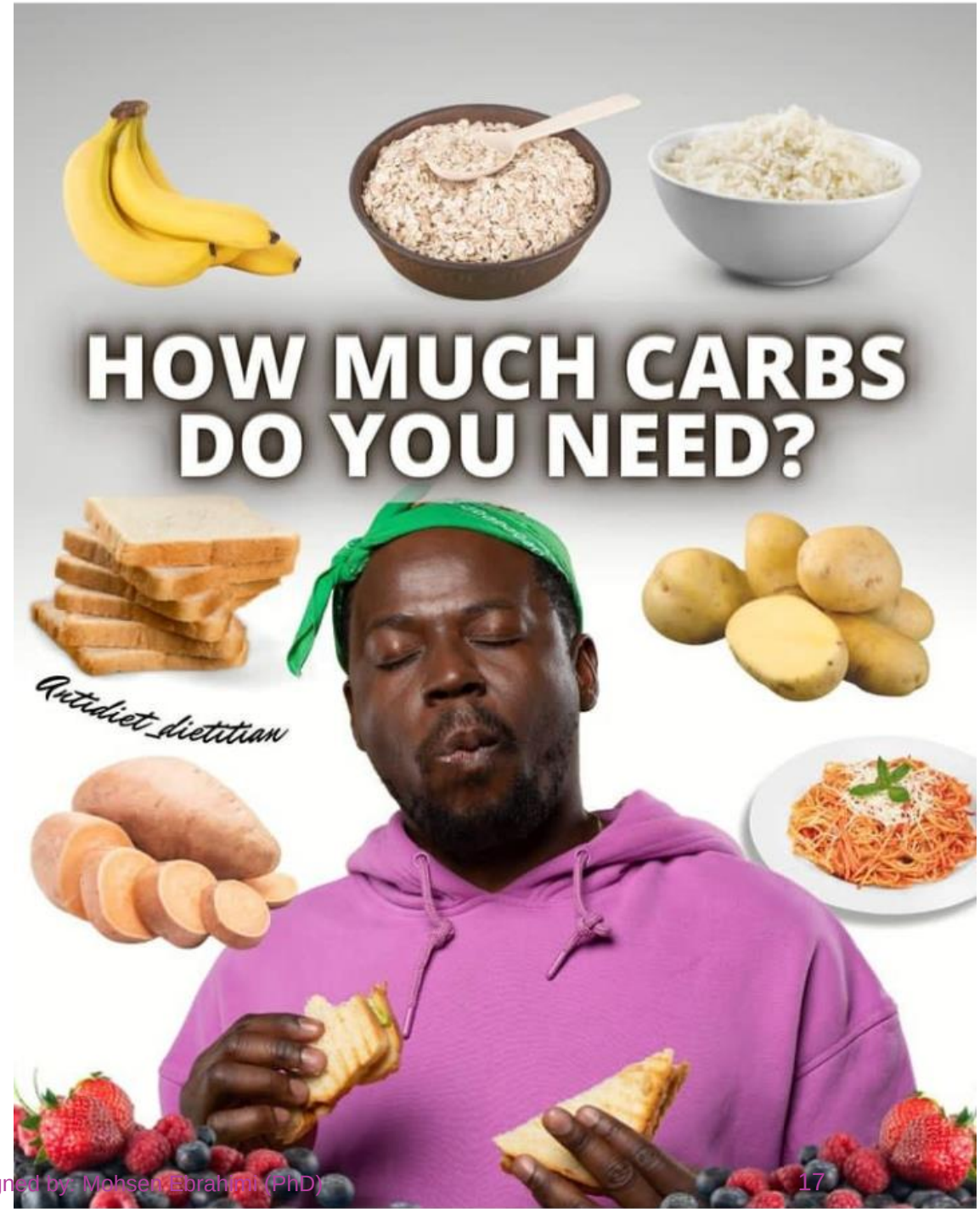
- کربوهیدرات سبک ترین غذا برای دستگاه گوارش است.
- جذب کربوهیدرات از سایر مواد غذایی سریع تر است.
- کربوهیدرات با شاخص گلیسمی بالا چاق کننده اند.
- شام سنگین، دیر هنگام و پر کربوهیدرات چاق کننده است.
- مصرف فیبر موجب کاهش جذب چربی می شود.
- مصرف کم غذا در دفعات زیاد بهتر است.

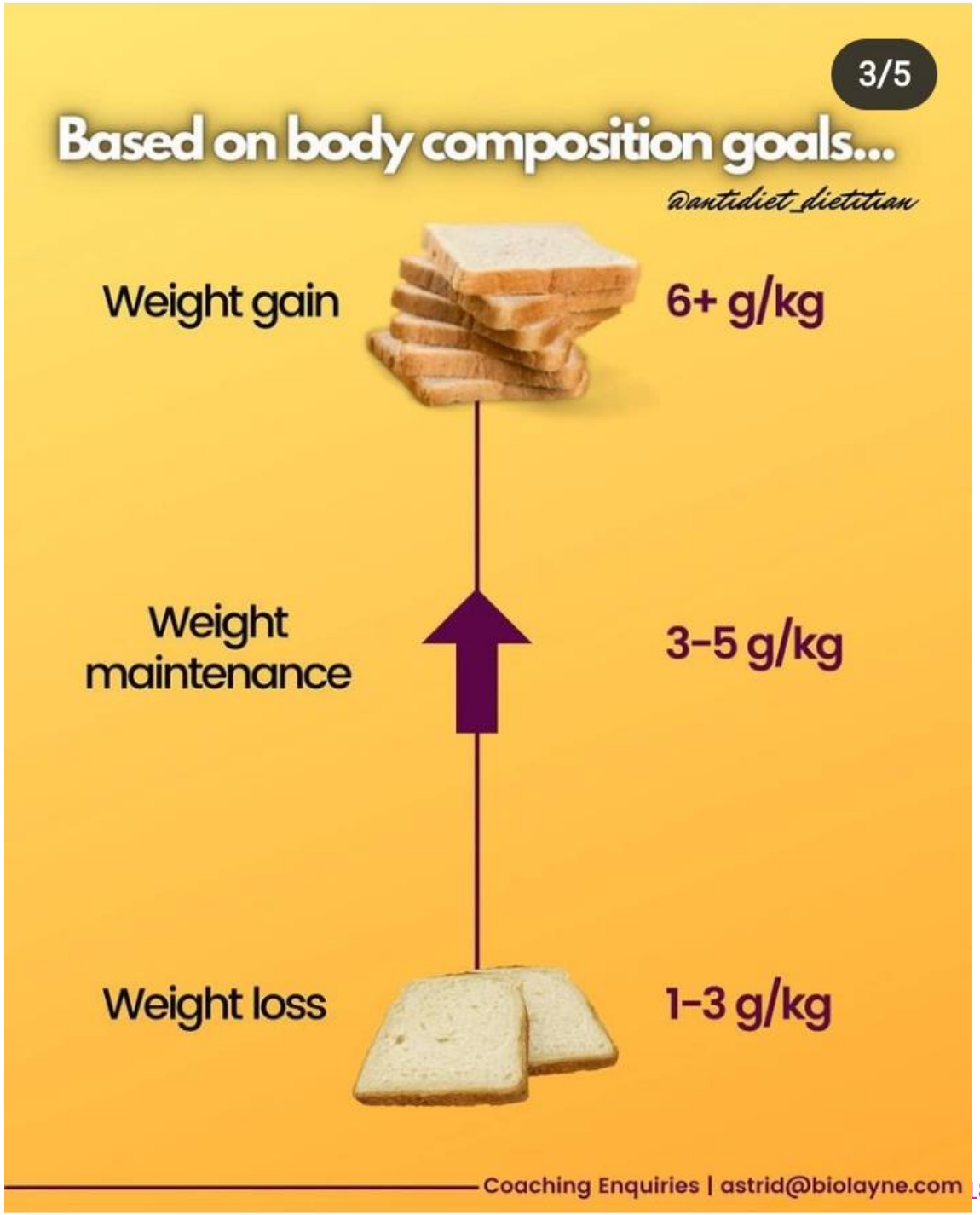
چرا میوه ها توصیه می شوند؟



اثر مصرف سبزیجات بر کنترل وزن




HOW MUCH CARBS
DO YOU NEED?
Antidiet dietitian


3/5
Based on body composition goals...
@antidiet_dietitian
Weight gain
6+ g/kg
Weight maintenance
3-5 g/kg
Weight loss
1-3 g/kg
Coaching Enquiries | astrid@biolayne.com


Based on energy expenditure...
Thinking on performance demands...
2/5
@antidiet_dietitian
Endurance athletes
6-10 g/kg
Strength & power athletes
3-6 g/kg
Sedentary individuals
1-2 g/kg
Coaching Enquiries | astrid@biolayne.com