

Weight Management and Diabetes Control

Purpose

This section is intended to provide information on the role of weight management as a part of diabetes management, the basic principles of weight management, tools to assess current food practices, and tips on weight management.

Objectives

At the end of this section, you will be able to:

- State two benefits of attaining and maintaining desirable body weight as a part of your diabetes self-management.
- Identify a desirable, reasonable weight goal.
- Keep a food intake record and analyze for practices promoting weight control.
- State three high calorie foods you commonly eat and identify alternative lower calorie choices.
- State one behavior change and develop an implementation plan to promote weight loss.

Outline

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*The American Diabetes Association Recognizes this education service as meeting the National Standards for Diabetes Self-Management Education and Support.

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Benefits of weight management

Maintaining a reasonable weight has many benefits. For those with type 2 diabetes, weight loss along with increased physical activity is often the first diabetes treatment.

Benefits for people with diabetes

A loss of 5 to 10% of current weight can:

- Lower blood glucose levels
- Decrease insulin resistance
- Reduce the risk of heart and blood vessel disease
- Lower blood pressure
- Lower total cholesterol, LDL cholesterol, and triglyceride levels
- Raise HDL cholesterol levels

Other general benefits of weight loss

- Increased endurance
- Reduced wear on joints
- Decreased risk of developing certain cancers
- Improved emotional health
- Decreased surgical risk



Assessing weight status

- Various methods are used to determine desirable body weight
 - All methods are estimates
 - All methods will give you a reasonable target goal weight

You may feel the desirable body weight goal is unrealistic for you, but remember any weight loss is beneficial to your long term health.

- Common methods
 - Visual review
 - Wearing minimal clothing, take a look at yourself in a full length mirror
 - Are there areas of extra fat?
 - Do you look like a pear, an apple, or an hourglass?
 - Are you being honest, but not too critical of how you look?
 - Waist circumference
 - Measure your natural waist
 - Compare your waist measurement to these standards
 - Men - 40 inches or less
 - Women - 35 inches or less
 - Waist measurements the same or greater than this indicate too much fat around your waist, indicating increased risk for heart disease
 - Body Mass Index (BMI)
 - Based on height and weight
 - Allows easy comparison of current weight status and a reasonable goal weight
 - Gives an easy way to track improvement in weight status

Using the BMI Formula	Example
1. Multiply your weight in pounds by 703.	160 pounds x 703 = 112480
2. Divide the answer by your height in inches.	112480 ÷ 63 inches = 1785
3. Divide this number by your height in inches again. This is your BMI.	1785 ÷ 63 inches = BMI of 28

BMI (body mass index) chart

BMI	Normal								Overweight								Obese								Extreme Obesity											
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49					
Height (Inches)	Body Weight (Pounds)																																			
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234					
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242					
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250					
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259					
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267					
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278					
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285					
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294					
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303					
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312					
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322					
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331					
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341					
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351					
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361					
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371					
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381					
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391					
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402					

Basics of weight control

- Your body weight depends on:
 - Food choices; both the type and amounts of food
 - Physical activity level related to work and leisure
 - Heredity and genetics
- A stable weight indicates a balance between the amount of calories you eat and the amount of calories you use
- Excess calories are stored as body fat (calorie imbalance)
- To achieve weight loss, stored calories must be used
- To lose weight
 - Eat fewer calories
 - Move more
 - Do both for a quicker weight loss

Calorie needs

- There are several ways to estimate calorie needs.
- Your dietitian can help you estimate your daily needs.
- Calorie requirements vary from person to person depending on age, gender, muscle mass, activity level, and total body weight.
- Fad diets and quick weight loss programs are unhealthy and can interfere with your blood glucose control.
- The **minimum** daily calorie intake to achieve adequate nutrition is:
 - Men = 1,500 calories
 - Women = 1,200 calories

Calorie basics and food selection

- Knowing the calories in foods can help you select the types and amounts of foods you eat
- Food can be classified as
 - Calorie dense = many calories in a small serving; calorie dense foods are usually high in fat
 - High volume = large servings with a small amount of calories, these foods are high in water and fiber

Calorie sources in the diet

Nutrient	Calories/gram
Carbohydrate	4
Protein	4
Alcohol	7
Fat	9

- Dietary fats are the nutrient most easily changed to body fat

Food selection focus points

- Portion control
 - Be aware of portion sizes.
 - Control of portions helps to manage both the amount of calories eaten and blood glucose levels.
 - Check your meal planning guide for specific portion sizes recommended.
 - Practice weighing and measuring foods and beverages.
 - Americans often take a portion of food far in excess of what is considered to a single serving.
 - Work with your dietitian to develop a clear plan which indicates the types and portions of food.
 - Accuracy in portions of calorie dense foods is especially important.
- Focused food choices - Refer to book - "Choose Your Foods: Exchange Lists for Diabetes", 2008 by American Diabetes Association and American Dietetic Association
 - Select high fiber foods which require more chewing, take longer to eat, and give you a sense of fullness; use whole grain products (Section G-12).
 - Select fresh, frozen or canned fruits and vegetables, these are high volume food choices.
 - Beware of the fat content of meat, fish, and poultry; focus on selecting low fat versions of meat, fish, and poultry.
 - Select low fat dairy products.
 - Desserts are usually high in both fats and sugars and will need to be eaten sparingly.
 - Limit use of added table fats such as mayonnaise, gravy, sour cream, salad dressings, or cream cheese.
 - **Limit calorie containing beverage intake.**
- Food preferences
 - Select foods common to your household; you may need to limit portion size eaten.
 - Explore new food choices or preparation methods to lower total fat or calorie intake.
- Nutritious food choices
 - Feeling good and staying healthy requires a nutritionally balanced food intake.
 - The nutritional quality of each food is very important when limiting total food intake.
 - Use MyPlate as a guide to both the types and amounts of food to maintain adequate nutrition.

Things to consider when losing weight and having diabetes

- Maintain blood glucose in target range.
 - Focus on meal plan consistency, especially carbohydrates and calorie content of meals.
 - Consistent physical activity, (the same amount of activity at the same time) will help promote consistent blood glucose levels.
 - Varying the amount of food, (especially carbohydrates) and the amount of exercise can cause erratic blood glucose levels, increasing the risk of hypoglycemia.
- Weight loss affects insulin resistance.
 - Research has shown that a modest weight loss (5 to 10% of actual body weight) can reduce insulin resistance.
 - Decreased insulin resistance may lead to hypoglycemia if medicines are not adjusted.
- When lowering your carbohydrate intake and increasing your physical activity, resulting in weight loss, certain diabetes medicines will need to be adjusted to prevent hypoglycemia.
 - Increased blood glucose monitoring may be needed
- Do not eat to prevent hypoglycemia.
 - **If you are having frequent episodes of hypoglycemia, talk with your diabetes educator or health care provider about adjusting medicines.**
 - Some people fear hypoglycemia and will eat unplanned snacks or larger meals to prevent it.
 - Some people have snacks as part of their meal plan to prevent hypoglycemia, but they eat more than is recommended.
 - Over-treating hypoglycemia can increase your calorie intake; review the treatment guidelines for hypoglycemia in Acute Complications, Chapter J.

Tips to control weight

- Establish a meal plan.
- It is not the amount of food you eat, but the amount of calories in the food you eat that controls weight.
- Successful weight management requires behavior change. Changing Behaviors, Chapter L provides detailed information on this subject.
- Weight management is not a passive activity. Action is required to manage body weight levels. You make the decision on how aggressively you will work.
- Do not rely on willpower to achieve your weight goal. Willpower is a fragile, short-term tool in weight management.
- Develop the practice of mindful eating.

Mindful eating is...

- Learning your unique signals of physical hunger and fullness
- Using these signals to guide your decision of when to begin eating and when to stop eating
- Using all your senses to explore, savor and taste your food
- Choosing food that is both pleasing to you and nourishing to your body
- Having awareness of the food you are eating and your own unique response to the food
- Recognizing your response to a food (like, neutral, dislike) without judgment
- Knowing that there is no right or wrong way to eat, but varying degrees of awareness around the experience of eating food
- Recognizing the positive and nurturing opportunities that are available through preparing and eating food
- Having insight about how you should live to achieve specific health goals

Weight maintenance

Weight management is more than “just eat less”. Like diabetes management, weight control requires monitoring and evaluation. As your life changes, new weight control problems will develop and new solutions found.

The National Weight Control Registry reported on the behaviors of almost 800 people who have maintained a weight loss of 30 or more pounds for more than 5 years. Their summary of behaviors for successful weight maintenance shows:

- 98% modified their food intake in some way to lose weight
- 94% increased their physical activity
- 90% exercised on average about 1 hour a day
- 78% ate breakfast every day
- 75% weighed themselves at least once a week
- 62% watched less than 10 hours of TV per week

If weight is beginning to trend upward, it is time to reevaluate your eating patterns, activity levels, and other factors that can affect your weight control and make necessary changes.

