



**Alameda County Diabetes Prevention and Nutrition
Education Program for People with Developmental
Disabilities (ACDPNEP)**

Diabetes & You: Part 2

- **Basic Nutrition**
- **Signs and Symptoms**
- **Meal Planning**
- **Physical Activity**
- **Medication Issues**
- **Stress Management**
- **Your Guide to Eating Out**



Sponsored by the National Association of City and County Health Officials (NACCHO),
Alameda County Public Health Department—Diabetes Program,
Developmental Disabilities Council and Regional Center of the East Bay



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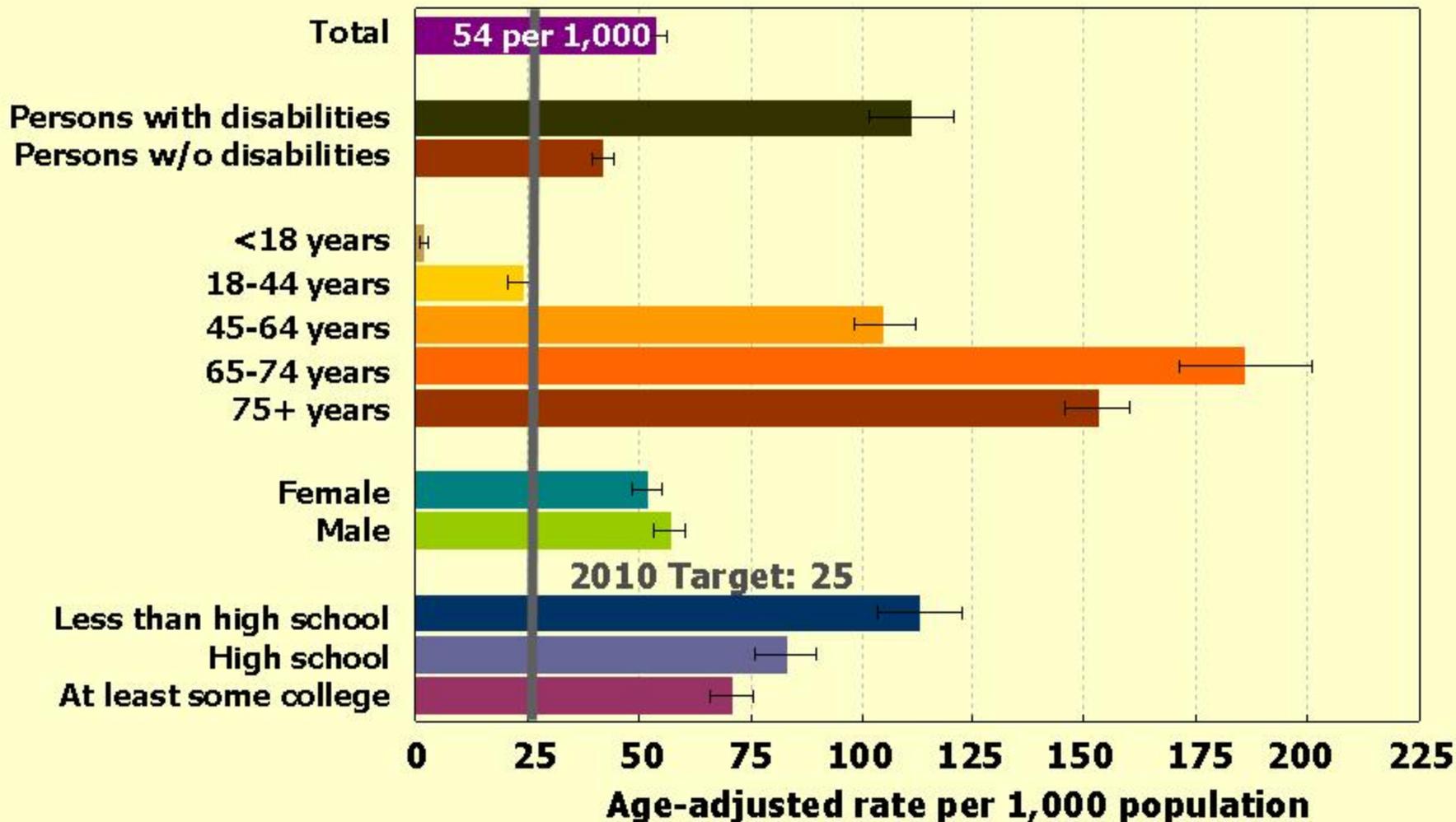
Objectives for Diabetes and You (Part 2): - Care Providers Classes

1. Define diabetes and name the diabetes risk factors
2. Name the signs and symptoms of diabetes
3. Recognize the basic body systems and their relationship to diabetes
4. Discuss lab results and implications
5. State the benefits of blood sugar control
6. Identify foods that contain carbohydrates and the difference between complex and simple carbohydrates
7. Discriminate between saturated and unsaturated fat/trans-fat
8. Describe how to monitor carbohydrate intake to maintain healthy blood sugar control
9. Identify stress indicators
10. State the benefits of physical activity in diabetes management & glucose control
11. Identify different types of physical activities especially targeted for people with limited mobility and/or cognitive limitations
12. Choose an activity that fits their lifestyle and medical profile
13. Identify the various types of oral diabetes medication
14. Identify various types of insulin
15. List the risks of uncontrolled blood sugar
16. Describe and discuss the complications from uncontrolled diabetes

For Consumers:

1. Identify the basic food groups
2. Give examples of carbohydrates & sugar
3. Identify examples of a healthy meal combination
4. State the benefits of physical activity
5. Identify what might be a good physical activity program for you
6. Read labels on food products and know what to look for
7. Follow instructions on medication
8. Define Diabetes
9. Identify some signs and symptoms of diabetes (those who are diabetic)
10. Identify signs of low blood glucose (hypoglycemia)

Prevalence of Diabetes, 2005



— = 95% confidence interval. NOTE: Data are age adjusted to the 2000 standard population. Age-specific estimates are not age-adjusted. Education estimates exclude persons <25 years of age.

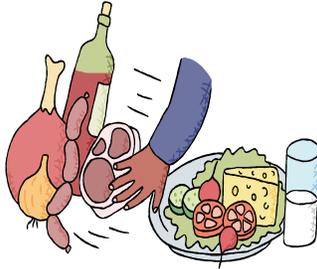
SOURCE: National Health Interview Survey (NHIS), CDC, NCHS.

HEALTHY CHANGES PLAN

To achieve good control of your diabetes and/or to improve your optimum health it is important to have practical goals for yourself.



Exercise



Diet



Take medications



Annual eye exam



Quit smoking



Monitor blood sugar



Keep appointments



Check feet daily



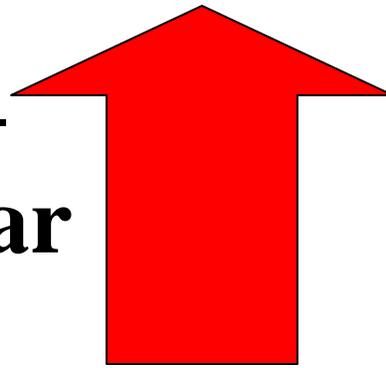
Personal Goal

Selected goals:

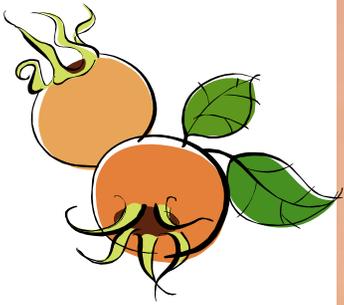
Student Signature _____ Date _____

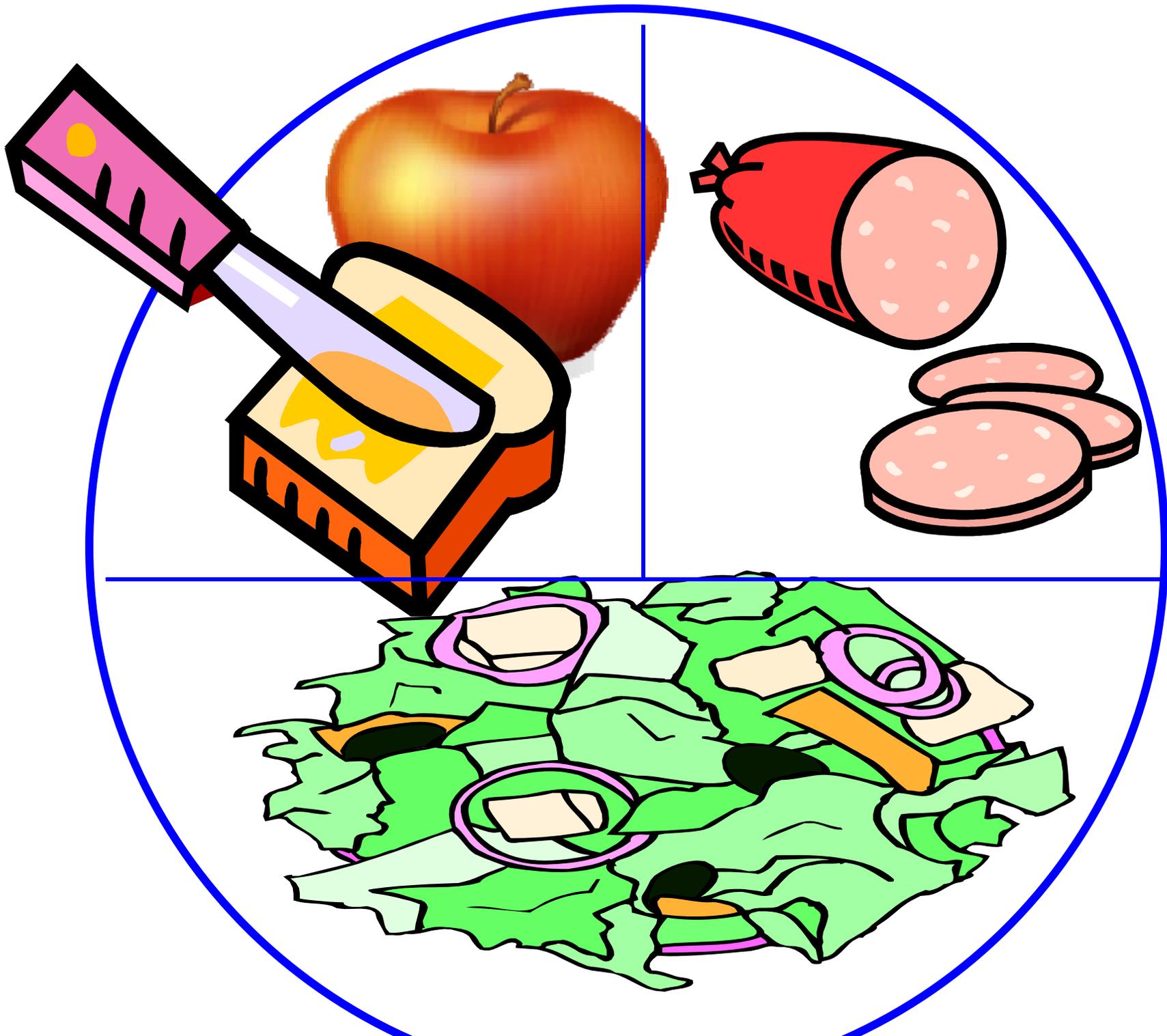
Educator Signature _____ Date _____

Carbohydrates – Raise Blood Sugar



205



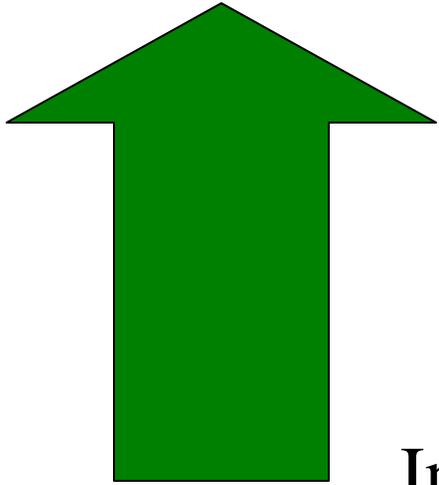




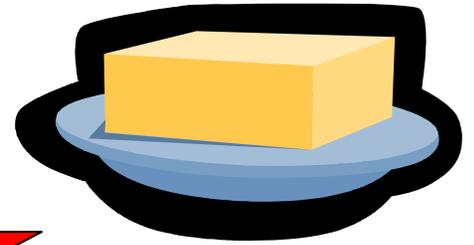
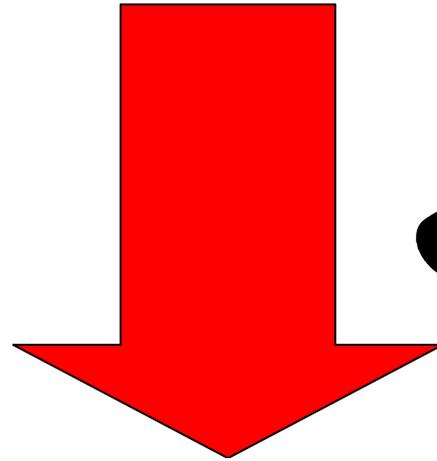
Eating with Diabetes

- Timing – Eat every 3-4 waking hours. Several small meals keep blood sugars more level than 1 or 2 large meals.

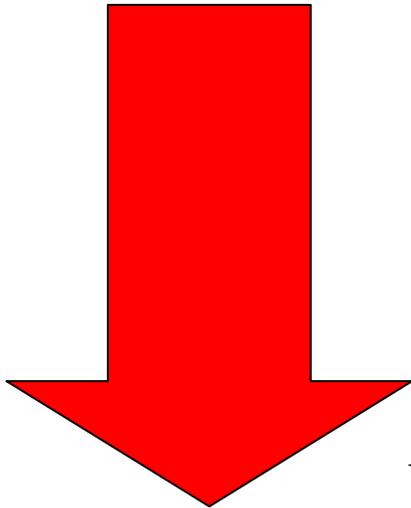




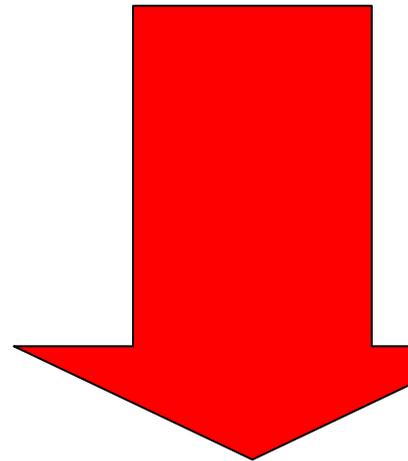
Increase fiber



Decrease fat



Decrease salt



Decrease high fat
sweets

How to Read a Food Label

- What is the serving size?
- How many grams of total carbohydrate per serving?
- Do you need to watch your sodium intake?
- When comparing two foods – which is lower in fat?
Which is higher in fiber?



Sample label for
Macaroni & Cheese

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

* 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:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

1. What's the **serving size**? How many servings in the container?
2. **Fat** – Pick the item with the lowest fat. Aim for less than 55 grams/day.
3. **Sodium** - Aim for less than 2400 mg/day.
4. **Total Carbohydrate** - How much am I going to eat?
1 cup has 31 grams of carbohydrate. 2 cups has 62 grams of carbohydrate.

How much carbohydrate per meal?

To lose weight

To control weight

For the very active

WOMEN

30-45 grams

2-3 servings

45-60 grams

3-4 servings

60-75 grams

4-5 servings



To lose weight

To control weight

For the very active

MEN

45-60 grams

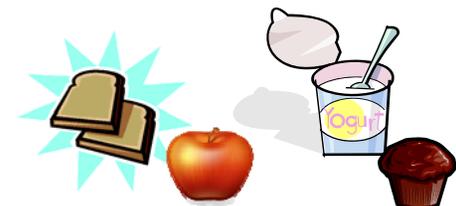
3-4 servings

60-75 grams

4-5 servings

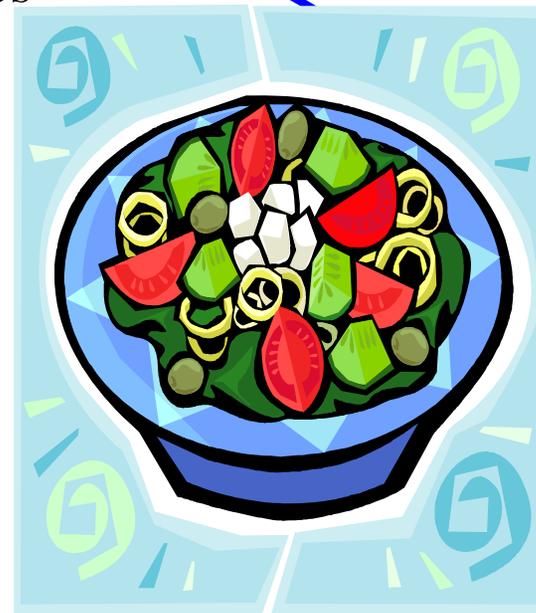
75-90 grams

5-6 servings

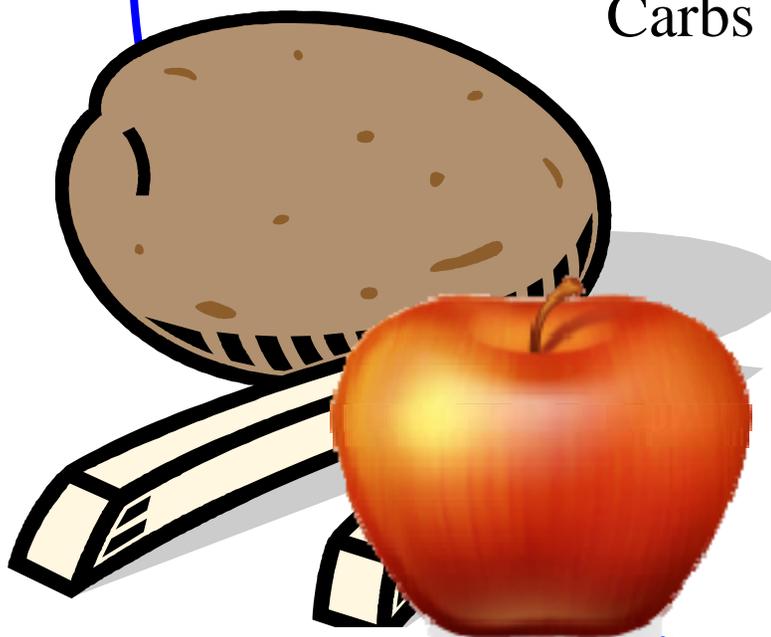


The Plate Method

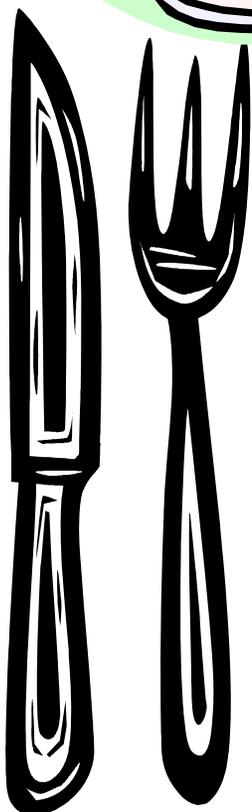
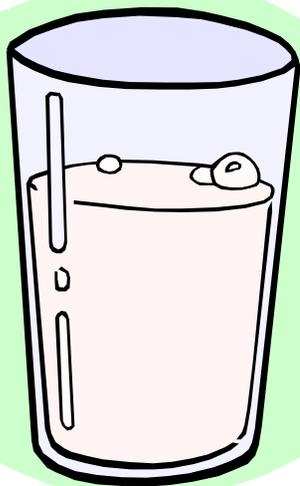
Vegetables



Carbs



Protein



Nutrition and Disability

A disability can often be complicated by additional medical, psychological or environmental problems.

These additional health problems are referred to as secondary conditions

Nutrition is related to secondary conditions in persons with developmental disabilities in four significant ways.

1. Nutrition may be viewed as a risk factor for a secondary condition. (poor nutrition, nutritional status or eating habits make the secondary condition worse)
2. Nutrition can be a protective factor. (Good nutrition, nutritional status or eating habits can improve the secondary condition)
3. Poor nutrition in the form of deficiencies can be a secondary condition in itself.
4. Many secondary conditions can further modify one's diet and create subsequent nutritional problems.

Under-nourishment precipitates nutrient deficiencies leading to such conditions as anemia, osteoporosis or wasting in adult.

Over-nourishment includes consumption of nutrients in a pattern that leads to development of such diseases as cardiovascular disease, cancer or diabetes.

Difficulties in sucking, chewing and swallowing due to partial paralysis of facial, tongue and pharyngeal muscles can be addressed through special diets.

Long term use of prescribed medication can cause:

Changes in sense of taste

Decrease in appetite

Dry mouth

Nausea

Obesity – a high prevalence of obesity in adults with developmental disabilities has been recorded in both institutional and community settings.

United Cerebral Palsy

Sports and Leisure - General Principles:

- A physician or other health care provider should be consulted before initiating an exercise program, particularly if you have health problems or are taking medication for a chronic health problem.
- The assistance of a professional knowledgeable in exercise principles and techniques is often useful to help devise a program to meet your specific needs.
- An exercise program should be individualized to meet the goals and potential of each person.
- An exercise program can be carried out at home, in a general facility, or in a specialized facility. Special arrangements for accessibility, equipment, or assistance may be necessary.
- Realistic performance goals need to be set at the beginning; the goals should be assessed at least every six months.
- Exercise should be engaged in regularly; at least 3-5 times a week.
- The duration of each exercise session needs to be adjusted periodically. In general, 20-30 minutes per session is the minimum goal. However, during the first few weeks, several short sessions (e.g.: 5-10 minutes) per day can be better than a longer period.
- Exercise should aim at strengthening weak muscles and stretching tight muscles.
- It is particularly important to increase the duration, intensity, and frequency of the exercise activity gradually. If you are at a beginning level, duration should be increased progressively before increasing intensity.
- Physical activity and exercise need not be overly strenuous to achieve health benefits. A moderate level will accomplish the same purpose. Muscle soreness may accompany early progress.
- Exercise with a partner for both social and safety benefits. For people with severe contractures or weakness, extra caution is advised to minimize muscle strain.
- Light headedness, chest pain, difficulty breathing, excessive fatigue, nausea, moderate to severe joint or muscle pain are all important danger signals. Stop exercising! Discontinue the exercise program and seek a physician or other health care provider's advice before starting again.

United Cerebral Palsy - Suggested Exercises:

Key for Effects of Exercise:	
<p>B - bone structure and strength FR - flexibility and range HL - heart and lung efficiency M - strength and endurance</p>	
<p>Arm Cycling: HL; M; FR</p>	<p>An activity that simulates bicycling but is done with the arms instead of the legs. Participants may use stationary indoor equipment called "ergometers" or specially designed arm-driven cycles for outdoor cycling. When cycling outdoors, wearing a helmet is recommended.</p>
<p>Chair Aerobics: HL; M; FR</p>	<p>A combination of upper body movements and stretches designed to increase flexibility and cardiovascular endurance. These are performed in a seated position; usually done with music.</p>
<p>Dancing: HL; B; FR</p>	<p>An exercise done to music so the tempo of the music determines the speed of movement and the intensity. A specific heart rate zone should be predetermined. Correct body alignment, breathing intensity and range of motion must be carefully considered. Caution: Can be harmful to persons having significant contractures or bone density loss.</p>
<p>Exercise Bands: M; B</p>	<p>The use of wide elastic bands for resistance training and stretching. Bands are often made of latex and come in several different styles, lengths and resistance levels. One end is usually attached to a stationary object. The other end is grasped and then stretched to exercise the desired body part. All stretching should be slow. Precaution should be taken not to release the band when it is in a stretched position.</p>
<p>Jogging: HL; B; M</p>	<p>The act of fast walking or running at a steady pace. Jogging can be done inside: in place, on a treadmill, or on a track; it can also be done outdoors. Use of properly fitted exercise shoes is recommended. Mild muscle soreness may result at the start of the program. If joint discomfort develops, consider a lower type of impact exercise such as vigorous walking or swimming. Caution: Can be harmful to persons having significant contractures, bone density loss or degenerative joint disease.</p>
<p>Leg Cycling: HL; M; FR</p>	<p>An activity on a mobile vehicle (2 or 3 wheel) or on stationary equipment. Outdoor equipment often has gears to assist on hills; indoor equipment often has mechanical or electronic programs for controlling resistance. When leg cycling outdoors, wearing a helmet is recommended.</p>
<p>Rowing: HL; M; FR</p>	<p>A total body exercise in a seated position using stationary equipment. It involves repetitive pulling by both arms against a resistance, coordinated with straightening and bending of both legs.</p>

Stair Climbing: HL; M; B	The action of walking up stairs. This can be done on specific exercise equipment which simulates stair climbing or on actual stairs. Mild upper leg muscle soreness or joint soreness may result at the beginning of the program.
Swimming: HL; M; FR	The act of moving progressively in water by means of purposeful use of the arms/hands and of the legs/feet. Accommodate yourself to the water temperature slowly; 75° F to 85° F are ideal water temperatures. If the pool is chlorinated, wear goggles. Never swim alone. Use a proper fitting flotation device if necessary.
Walking: HL; B	The act of moving or advancing by foot with one foot on the ground at all times. Vigorous walking is a convenient exercise that can be done anywhere with or without an assistance device (cane, crutches, walker). Caution: Can be harmful to persons with significant contractures or advanced bone density loss. Joint pain is a warning sign of too much impact.
Water Exercise: HL; B; FR	This includes many features similar to swimming. Water should be 80° F to 85° F. Focus exercise on one area at a time with repeated motions, gradually increasing speed and duration. Devices also should be used such as an aquavest, weights, styrofoam dumbbells/exercise equipment, special gloves, etc. Water resistance is less intense and can produce the same cardiovascular effect as exercise on land.
Weights Training: M; B	The use of free weights or exercise machines that provide resistance; done at home or in an exercise facility. Weak muscles can be made stronger by placing resistance against the target muscles for short durations. Load increases strength; repetition increases endurance. The level of resistance and the number of repetitions of each exercise can be varied to produce the desired results. Don't lift free weights alone.
Wheeling: HL; M	Propulsion of a wheelchair by the arms or legs over an extended distance. Vigorous wheeling can be done inside or outside. It can be done using a conventional wheelchair or a specialized sport wheelchair, with or without a wheelchair roller. If wheeling outside, precautions should be taken for street traffic.
Yoga and Tai Chi: FR; B	A physical form of Yoga involving breathing and stretching exercises, and maintaining various positions for a short period of time. Tai Chi is a series of individual dance-like movements linked together in a slow, continuous, smooth flowing sequence. For these activities, no additional equipment is needed. Non-binding comfortable clothing should be worn.

IDENTIFICATION CARD

**I am Diabetic.
See reverse.**



Name



Phone Number



Care Provider

**I am Diabetic. If I am experiencing
the following call 911:**



seizure



Difficulty
breathing



vomiting



Heavy
sweating



shaking



confusion

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Heavy
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shaking



confusion

Alameda County Adaptive Diabetes Program

Resources used:

Super Size Me movie

Simple Start Diabetes & Food by One touch

Brochures (Most of these were from other nutritional service agencies)

Be Active Your Way

Eat 5 a day the California way

Secret of Healthy Living

Eat Smart with Fruits and Vegetables

Healthy Weight - Obesity prevention for you and your family

Following Novo Nordisk Products:

Keeping well with Diabetes, Healthy eating with Diabetes

Carbohydrate counting and exchange list

*The Diabetes Care Guide published by Euro RSCG 4D Impact,
Chicago, IL*

*Diabetes Vital (Information on people with diabetes) published
by SLACK, Inc., New Jersey*

American Diabetic Association

American Diabetes Association

National Center on Physical Activities and Disabilities

United Cerebral Palsy – Sports and Leisure Guide