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A HOLISTIC APPROACH TO WEIGHT MANAGEMENT AS IT RELATES TO THE NUTRITIONAL NEEDS OF OVERWEIGHT AND UNDERWEIGHT INDIVIDUALS

FOR

COMMUNITY NURSES WORKING WITH ADULTS WITH INTELLECTUAL AND OTHER DISABILITIES
BASIC CONCEPTS

Body Composition

- Lean Body Mass
- Body Fat
  - Essential fat
  - Nonessential fat (storage) - 3% of total fat in men, 12% in women

Percent Body Fat -
- Women: ≤8% at risk, Average 23%, ≥32% at risk
- Men: ≤5% at risk, Average 15%, ≥25% at risk

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ENERGY BALANCE

Crucial to keep a healthy ratio of fat and lean body mass

- Energy
- Consumption or expenditure of calories
- Control over intake of calories
EVALUATING BODY WEIGHT AND BODY COMPOSITION

Percent body fat and distribution of body fat = weather a change on body composition would improve health.

Overweight
Obesity
Height-Weight charts
Body Mass Index (BMI)
Body Composition
ASSESSMENT OF BODY WEIGHT

Measurement.

- **Body Mass Index - BMI** = \( \frac{\text{weight (kg)}}{\text{Height (m)}^2} \).

  - lbs. = kg \[\text{lbs./2.2}\]
  - inch = m \[\text{inch / 39.4}\].

Healthy BMI = 18.8 - 24.9
BMI of 25 or above is Overweight
BMI of 30 or above is Obese

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BMI RESULTS

Elevated BMIs risks =

- BMIs between 23 and 25 double risk of High blood pressure in men. 26 triples the risk.
- BMI of 24 increased the development of Type II diabetes by five times above that of a BMI of 21 in women.
CAUSES OF WEIGHT GAIN

• As we age, our metabolism slows down. This can cause weight gain if we eat too much, eat the wrong foods, or do not get enough exercise.

• A medical problem or use of certain medication may also cause weight gain.

• Medications that can cause weight gain include corticosteroids and drugs used to treat bipolar disorder, schizophrenia, and depression.

• Hormone changes can also cause unintentional weight gain. This may be due to:
  ❖ Cushing syndrome
  ❖ Hypothyroidism (underactive thyroid, or low thyroid)
  ❖ Polycystic ovary syndrome
  ❖ Menopause

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CAUSES OF WEIGHT GAIN

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FACTORS CONTRIBUTING TO EXCESS BODY FAT

Genetic Factors

Physiological Factors
- Metabolism (RMR)
- Hormones
- Fat Cells
- Carbohydrate Craving

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UNDERWEIGHT IS ALSO A PROBLEM

15-25% below healthy weight or BMI of <18.5

Associated with:

• increased deaths
• menstrual dysfunction
• pregnancy complications
• slow recovery from illness/surgery

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TRIGGERS FOR UNINTENDED WEIGHT LOSS

Needs help to eat or drink
Eats less than half of meals/snacks
Complains of mouth pain
Has dentures that don’t fit
Has a hard time chewing or swallowing
TRIGGERS UNINTENDED WEIGHT LOSS

- Has trouble using utensils
- Is sad, has crying spells, or withdraws from others
- Is confused, wanders, or paces
- Has diabetes, COPD, cancer, HIV, or other chronic disease
SOME RISK FACTORS FOR WEIGHT LOSS

• Medications
• Emotional problems
• Anorexia
• Swallowing disorders
• Oral Problems
• Nosocomial infections
• Hyperthyroidism
• Enteric problems
• Eating problems
• Low salt, low cholesterol diets
TREATMENT FOR UNDERWEIGHT

• Intake of energy-dense foods (energy input)
• Encourage meals and snacks
• Reduce activity (energy output)
• To gain a pound you need a total excess intake of 2700-3500 kcal
WHY IS WEIGHT LOSS IMPORTANT?

Maintenance of a healthy body weight is important for maintaining both physical and emotional well-being and preventing disease. Excess weight and obesity have been associated with an increased risk for numerous medical conditions.
Why is Weight Loss Important?

Some of these medical conditions include:

• heart disease,
• high blood pressure,
• stroke
• diabetes
• osteoarthritis
• some types of cancers
• sleep apnea
• elevated blood cholesterol levels
It should be noted that reduction in weight for those who are overweight can make a major impact on the disease conditions listed. Many overweight people also report improved mood, increased in self-esteem and motivation, and feeling healthier in general after they have lost weight.
WHAT IT TAKES TO LOSE A POUND

Body fat contains 3500 kcal/lb.
1 Lb. Of Fat Is About 3,500 Calories.
Fat storage (body fat plus supporting lean tissues) contains 2700 kcal/lb.

Must have an energy deficit of 2700-3500 kcal to lose a pound per week

Most Experts Recommend a Gradual Weight Loss of ½ to 2 Pounds Per Week!!

How? Reduce Diet by 250 Calories/day and Expend 250 Additional Calories/day

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ADOPTING A HEALTHY LIFESTYLE FOR SUCCESSFUL WEIGHT MANAGEMENT

- Portion Sizes
- Energy (calorie) Density
- Fat Calories
- Complex Carbohydrates
- Simple Sugars and Refined Carbohydrates
- Protein
- Eating Habits
WHAT RESTRICTIVE DIETS DO

• Limit familiar foods
• Eliminate or modify seasonings in food
• Contribute to:
  ▪ Poor appetite
  ▪ Decreased food intake
  ▪ Risk of illness and weight loss

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LOSS OF APPETITE

Medications also play a role in taste perception.

Some medications may leave a bad taste in the mouth causing a loss of appetite.

Some medications can cause constipation leaving the individual to feel full and bloated causing a loss of appetite.
LIBERALIZATION OF DIETS

"It is the position of the American Dietetic Association (ADA) that the quality of life and nutritional status of older residents in long-term care facilities may be enhanced by a liberalized diet." The American Dietetic Association
LIBERALIZATION OF DIETS

Some of the leading causes of illness in the older individual are malnutrition and dehydration.

Because of very strict dietary regimens, elderly individual tend to eat less. If an elderly resident is not eating well (less than 80%) then an 1800 Kcal ADA diet would be inappropriate for this individual.
LIBERALIZATION OF DIETS

The goal of calorie restricted diets is to prevent over eating...giving the healthy individual a place to start and end.

A calorie restricted diet may end up actually be more harmful. Liberalizing the diet to one that does not contain any concentrated sugars may be more appropriate.
If the quality of life is affected because of a restricted diet, then maybe the restriction should be liberalized. Unless it poses a serious effect to the health and well being, such as regular food given to someone on a modified consistency diet or bananas given to someone with kidney disease.
THE 10 MOST IMPORTANT RISK FACTORS FOR MALNUTRITION IN THE OLDER INDIVIDUAL

Less than 8 main meals per week
Very little milk consumption
Negligible fruit and vegetable consumption
Spoilage of food
Long periods during the day without food or beverages
Unintended weight changes
Depression and loneliness
Difficulties in shopping
Poverty
Physical and mental impairment (incl. alcoholism)

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COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

Celiac Disease

People with Down syndrome are more likely to develop Celiac Disease than the general population in the United States.

This is an inability to tolerate the protein, gluten, which is found in foods and seasonings that contain wheat, barley, oats, and rye.

People with untreated Celiac Disease do not absorb the nutrients from the foods they eat and are often at nutritional risk as a result.

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COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

Constipation
People with Down syndrome and other individuals are at an increased risk of constipation due to low muscle tone and sedentary lifestyle.

Suggestions
Adequate fluid intake, preferably water: 6-8 eight-ounce glasses per day.
Raw fruits and vegetables: Leave skin on, as it is a great source of fiber.
Dried fruits such as raisins, prunes, and figs.
High fiber grains/cereal products: bran, whole-wheat flour, whole cornmeal, wheat bran cereals (All Bran, Bran Buds, Bran Chex), bran flakes (Raisin Bran), Grape-Nuts, Shredded Wheat, Fiber One.
Regular meals during the day.

High-fiber supplements

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COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

Diabetes

Research suggests people with Down syndrome are at a greater risk for developing diabetes.

Nutrition therapy for people with diabetes is highly individualized and should be worked out with a registered dietitian or certified diabetic educator. People with Down syndrome, and their primary support team.

Nutrition therapy is usually combined with different types of medication along with blood sugar testing, all of which require the active participation of the individual.
COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

Dentition

This is more of a concern for middle-aged adults with DS than it is for the younger crowd.

However, texture changes are probably more common for people who have low oral motor tone and never really developed good jaw strength rather than their dentition.

People with DS usually develop fewer dental caries than the general population because their teeth have stronger enamel.

The greatest dental issue is gum disease that promotes tooth loss.
COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

Hyper and hypothyroidism

While there is no direct nutrition therapy, these are nutrition-related concerns for obvious reasons. With one, you have weight loss that is unaccounted for; with the other, you have extreme constipation, weight gain, lethargy, and other symptoms. It is so common for people with DS that the health care guidelines suggest testing thyroid levels yearly in all people with Down syndrome beginning at birth.
COMMON CONCERNS WITH NUTRITION IN THE POPULATION WE SERVE

GERD

GERD is not getting enough attention. It has been on the rise as a concern for children and adults with Down syndrome. Symptoms include heartburn, sore throat, difficulty in swallowing, regurgitation, and chest pain.

Suggestions:

Eat small, frequent meals.
Wait at least an hour after a meal to exercise.
Drink before or after meals, not during.
Talk to your health provider about medication.

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SOME SPECIFIC CAUSES OF MALNUTRITION IN THE OLDER INDIVIDUAL

• Polypharmacy often contributes to mal-compliance and iatrogenic anorexia
• Zinc deficiency impairs wound healing and recovery
• Vitamin D deficiency
• Inadequate folate and B12 levels
TO SUPPLEMENT OR NOT?

Facts

- Energy requirements and intake diminish
- Less endogenous Vitamin D
- Hyperhomocysteinemia
- Inadequate diet
- Chronic infections
- Consuming illnesses
- Access to adequate nutrition often not given
Fact:
In older adults we need to pay attention to quality of foods - specifically nutrient density

Functional Disabilities, such as chewing and swallowing problems

Impaired Absorption

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TO SUPPLEMENT OR NOT?

Fact:

• Calorie Needs Decrease About 5% Per Decade After Age 50
  ▪ Decrease in Physical Activity
  ▪ Decrease in Muscle Mass
  ▪ Decrease in Metabolism

• Need Careful Meal Planning to Provide Adequate Nutrients In Fewer Calories
MEAL REPLACEMENTS

• Substitute a Meal

Examples: Ensure, Boost, Glucerna, Carnation Instant Breakfast

• When to Use
  ▪ Trouble maintaining weight
  ▪ Lack of appetite
  ▪ Skipping meals

• Food First
MISTAKES THAT RESULT IN MALNUTRITION

• Ignorance
• Inattention
• Diet inappropriate or not accepted by patient
• Time for eating too short and ill chosen
• No or inadequate assistance (e.g. cutting meat)
• Circumstances of meal (body position)
• Overlooking of deficiencies

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Despite talk about obese Americans and their need to lose weight, some people with disabilities require an increased caloric intake to stay healthy.

This can be the case for

- Individuals with cerebral palsy whose involuntary movements can lead to greater energy expenditure
- Individuals with cystic fibrosis who may require a greater nutrient intake to maintain weight because of impaired lung function and digestion.

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Persons with cerebral palsy also may need foods pureed and thickened to assist with chewing and swallowing.

Common food thickeners that may be used to change food texture and provide additional calories include: yogurt and pudding to thicken milk, applesauce and pureed fruits to thicken fruit juices, pureed vegetables to thicken soup broths, and plain gelatin to thicken any liquid.

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Suggestions

Determine if there are any texture modifications needed due to dental and/or oral motor concerns.

Do not promote sweet chew foods such as caramel, soft candy foods that will easily stick to teeth. When this is not possible, encourage timely tooth brushing or offer water, carrot sticks, or other crunchy foods to help clean the sticky foods from the teeth.

Incorporate soft foods such as bananas, puddings, applesauce, cottage cheese, yogurt, mashed potatoes, and oatmeal in the diet.
LIBERALIZATION OF DIETS

• Balancing food enjoyment and satisfaction with nourishment and safety concerns takes the entire healthcare team, including nursing, therapy, and physicians.

• It also takes creativity, resourcefulness and teamwork.
LIBERALIZATION OF DIETS

• The more restrictions and details, the more room there is for error.
• When liberalized diets are introduced, production for the culinary team becomes more efficient and mistakes in providing detailed diet orders often decrease.
SUPPLEMENTATION

- Supplements are useful to optimize the diet and to compensate for deficiencies
PHYSICAL ACTIVITY AND EXERCISE

Muscles need energy.

- Anaerobic only burns simple sugars.
- Aerobic burns more of the fat.
  - Must last 15-30 minutes.
  - Use all major muscle groups.
  - Gradually increase time of endurance activities.
PHYSICAL ACTIVITY AND EXERCISE

Increasing physical activity:

Park farther away from the store.
Play 'tag' for a few minutes in the park.
Walk to the corner store or activities that are in the neighborhood.
Dance - 10 minutes of dancing burns 55 calories.
Sign up for an exercise class together or go for a swim.
Use a push mower to mow a lawn - 10 minutes of pushing burns 45 calories.
Rake a lawn - 10 minutes of raking burns 40 calories.
Take stairs instead of an elevator.

Connect with neighborhood walking groups.
Join a group that does mall walking.
For 1 hour of TV watching, walk once around the block

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CREATE MANAGEABLE WEIGHT CHANGE PROGRAM ENVIRONMENT FOR INDIVIDUALS

• Promote a nutrient-dense diet by offering choices that are high in nutrients.
• Involve individuals in menu planning.
• Teach about appropriate serving sizes.
• Provide options to fast-food socialization.
• Offer fresh fruits and vegetables, and low-fat snacks such as pretzels and popcorn instead of high-fat desserts.
• Limiting calories may not be the best solution due to the risk of vitamin and mineral deficiencies. The best solution is to maintain a diet high in needed nutrients and limit junk foods.
• Exercising, even helping with the household chores, increases energy expenditure.

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CREATE MANAGEABLE WEIGHT CHANGE PROGRAM ENVIRONMENT FOR INDIVIDUALS

• Assess individual’s motivation and commitment.
• Set a weight loss goal that is healthy and reasonable.
• Create a negative energy balance.
• Increase individual’s level of physical activity.
• Make changes in individual’s diet and eating habits.
• Keep records of individual’s weight and behavior change progress.
CREATE MANAGEABLE WEIGHT CHANGE PROGRAM ENVIRONMENT FOR INDIVIDUALS

- Are the individuals who live in the group home involved in menu planning? Cooking? Shopping?
- Does the menu structure allow for more than one entree and a variety of side dishes for each meal?
- Does the support staff model and encourage healthy choices?
- Is there a variety of healthy foods available for snack choices?
- Are opportunities for physical activity such as low-impact aerobics, walking or biking available? How often?

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CREATE MANAGEABLE WEIGHT CHANGE PROGRAM ENVIRONMENT FOR INDIVIDUALS

• Allow for:
  Treats
  Pick your own menu day
  Birthday cake & Ice cream

• Don’t be so rigid that non-compliance becomes a behavior.
HEALTHY WEIGHT GAIN:

• Choose energy dense foods.
• Eat regular meals.
• Eat large portions.
• Eat extra snacks.
• Drink juice and milk.
• Exercise to build muscles.
REALISTIC WEIGHT LOSS:

1. Eat smaller portions.
2. Focus on complex carbs (fruits, veggies, whole grains).
3. Choose fats wisely.
4. Focus on lower calories.
5. Watch for empty calories.
6. Drink adequate water.
7. Be physically active!!
WEIGHT LOSS BY ANY METHOD WILL:

Reduce blood lipid levels including TC, LDL-C, HDL-C, and Tg

Improve glycemic control

Reduce blood pressure

*Every effort helps in keeping individuals healthy!*
CORRECT WEIGHT

The “right” weight for any individual should be the result of a healthy lifestyle.

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CASE STUDY

• M.B. Is 90 years old lady 60 inches tall and weighs 93 pounds. She has diagnoses of mental retardation, and chronic constipation. She has contractures in both hands, very limited mobility, spends her time when out of bed in a wheelchair and is dependent for all of her ADLS. On a visit with M.B. she was being fed by a staff member. Her table set up included a Dysem mat, a high sided plate, a rubber coated spoon and a sippy cup. Her diet was pureed consistency, 1500 calories low salt and low fat. And consisted of pureed tuna fish, which the staff said M.B. disliked, pureed spaghetti, apple sauce, diet pudding and cranberry juice. M.B. receives cranberry juice at every meal.

• What are some of your thoughts about this regimen for M.B. In your role as the nurse for M.B. what suggestions would you make regarding the nutritional care of M.B.
EXERCISE YOUR KNOWLEDGE

• Select an individual you care for, who might be overweight or underweight
• Begin to develop a plan to assist this individual.
• Utilize some of the information in today’s discussions.
• Jot down some of your thoughts and ideas for your plan to share with the group.
RESOURCES

Active at Any Size. Provides ideas and tips on how people who are overweight or obese can be physically active. Focuses on handling common barriers and setting goals. Available in English online at http://www.win.niddk.nih.gov/publications/active.htm.


Walking...A Step in the Right Direction. Explains how to start a walking program. Also presents a sample walking program and shows stretches for warming up and cooling down. Available in English and Spanish online at http://www.win.niddk.nih.gov/publications/index.htm.

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RESOURCES

References


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RESOURCES


U.S. Department of Agriculture. ChooseMyPlate website. USDA Center for Nutrition Policy and Promotion. Provides many resources on healthy eating, including interactive tools to help you find out how many calories and how much physical activity you need. Available at http://www.choosemyplate.gov.

U.S. Food and Drug Administration Website. Offers several resources and tools for using the Nutrition Facts label. Available at http://www.fda.gov/Food/ResourcesForYou/Consumers/NFLPM/ucm274593.htm

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WHAT’S ON YOUR MIND?

QUESTIONS AND DISCUSSIONS

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