Community Awareness: Nutritional Patterns

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Learning Objectives

1. The learner will be able to identify risk factors for fatty liver disease in a client’s diet.

2. The learner will be able to discuss the nutrients of diets of participants in a wellness program.
• The Hispanic population is at higher risk for the development of fatty liver disease. Fatty liver disease has been correlated with visceral obesity, insulin resistance, Type 2 diabetes, metabolic syndrome, and lipid deposition.

• In a previously conducted survey of participants in a community wellness center, results identified risk factors such as, obesity, diets high in fat, lack of exercise and poor lifestyle choices as prevalent in this group.
Aim of Study

The purpose of this study was to analyze the reported diets of clients in a community wellness center.
Methods

- Clients were enrolled in a wellness walking program in a community setting.
  - They were encouraged to walk daily and offered twice weekly walking sessions at the community wellness center.
- Patients recorded a 3 day diet.
- Demographic, diet and risk factors for diabetes and cardiovascular disease, height, weight, and calculated BMI were collected.
- The diets were evaluated for the major food groups individually and then in a group setting the major themes of the diets were discussed.
  - Suggestions to improve diet, incorporating the client’s food preferences and income were given.
Results

- Fifty clients participated in the diet summary analysis.

Demographics:

- 96% Hispanic
- Average age: 50 years 3 months (range 23-72)
- Average weight 169 pounds. (SD±33.57)
  - Obese: 45.5%
  - Overweight 36.7%
  - Normal weight 17.8%
Results Continued

- Gross diet analysis revealed an increase in carbohydrates and sugars in the self reported 3 day diet.

- There was a lack of dietary fruits and vegetables.

- Diabetic risk factors 8 out of 18.

- Cardiovascular risk factors 2 out of 6.

- 33% of clients self-reported high cholesterol levels.
Average Calorie and Macronutrient Intakes

![Bar graph showing average calorie and macronutrient intakes with comparison to recommendations. The x-axis represents different nutrients including calories, total fat in grams, saturated fat in grams, protein in grams, carbohydrates in grams, and dietary fiber in grams. The y-axis represents the number of grams or calories. The graph uses different colors to distinguish between recommendation (blue) and actual intake (light blue).](image-url)
## Average Micronutrient Intakes (B vitamins and Vitamin C)

<table>
<thead>
<tr>
<th></th>
<th>Thiamin</th>
<th>Riboflavin</th>
<th>Niacin</th>
<th>Vitamin B6</th>
<th>Vitamin B12</th>
<th>Folate</th>
<th>Vitamin C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>1.07 mg</td>
<td>1.428 mg</td>
<td>18.285 mg</td>
<td>1.61 mg</td>
<td>3.7 mcg</td>
<td>287.75 mcg</td>
<td>69.77 mg</td>
</tr>
<tr>
<td>(%)</td>
<td>93%</td>
<td>119%</td>
<td>122%</td>
<td>100.6%</td>
<td>154%</td>
<td>72%</td>
<td>84.56%</td>
</tr>
</tbody>
</table>
### Average Micronutrient Intakes (Fat Soluble Vitamins)

<table>
<thead>
<tr>
<th>Vitamin D</th>
<th>Vitamin A (RAE) mcg</th>
<th>Vitamin E (alpha-tocopherol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.42 mcg</td>
<td>491.49 mcg</td>
<td>3.38 mg</td>
</tr>
<tr>
<td>9.47%</td>
<td>61%</td>
<td>22.5%</td>
</tr>
</tbody>
</table>
## Average Micronutrients Intakes (Minerals)

<table>
<thead>
<tr>
<th></th>
<th>Calcium</th>
<th>Iron</th>
<th>Magnesium</th>
<th>Potassium</th>
<th>Zinc</th>
<th>Sodium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>706.62 mg</td>
<td>13.597 mg</td>
<td>245.67 mg</td>
<td>2,357.95 mg</td>
<td>10.47 mg</td>
<td>2,270.25 mg</td>
</tr>
<tr>
<td>Percent</td>
<td>59%</td>
<td>104.6%</td>
<td>66%</td>
<td>50%</td>
<td>110%</td>
<td>151%</td>
</tr>
</tbody>
</table>
Average Food Group Intakes

- Grains
- Vegetables
- Fruit
- Milk
- Meat/Beans
- Discretionary Empty...

- Recommendation
- Actual
- Percent of recommendation
Findings

- Average BMI-overweight
- Food Groups-high intake of protein from meat group
- Micronutrients-low intakes of vitamin D rich foods, vitamin A, and Vitamin E
- Low intakes of calcium and potassium
- Sodium exceeds recommendations
Findings Continued

- Low vegetables and low fat dairy products
- Intake of empty calorie foods mainly from sodas, cereals, Mexican breads, and waters with added fruit juices.
Implications

- Imbalance of food group intakes with macro and micronutrient intakes may contribute to overweight, pre-diabetes, diabetes, hypertension, suboptimal bone health, reduced immunity, and non-alcoholic fatty liver disease.
- Dental caries are also a concern.
All of these combined components may have an effect on long-term health.
Conclusions

- Though clients are aware of the high risk factors contributing to fatty liver disease, diabetes, and cardiovascular disease, the diet does not reflect this knowledge.

- Education and heightened awareness of the benefits of balanced nutrition and regular physical activity continues to be an area to focus on.