Dietary Fiber as a Means of Optimizing Health

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- Rotation 3: August 2025
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Problem Identification

- More than 90% of women & 97% of men do not meet recommended intakes for dietary fiber in the US
- Dietary fiber intake is associated with a reduced risk for cardiovascular disease, obesity, & T2DM
- Regionally, Northeastern VT had significantly higher rates of cardiovascular disease, obesity among youth (grades 9-12), & T2DM when compared to the state average

Public Health Cost

- The total estimated cost of diagnosed diabetes in the US in 2022 is ~$413 billion
- In 2019, the cost of healthcare related to cardiovascular disease was ~$251 billion.
- In 2016, 28% of Vermont adults were obese, 8% had T2DM, & 8% had cardiovascular disease
- In 2019, 80% of Vermont adults consumed less than five fruits or vegetables a day
- Higher consumption of dietary fiber (~30g) is associated with a 23% reduction in cardiovascular disease & a 26% lower incidence of obesity

Community Perspective

Dr. Mohammad U Malik, MD

“There are undoubtedly many benefits to incorporating more fiber in our diets. I’d say many of our patients don’t reach the recommended 25-30 g of dietary fiber, not because of cost or time, but because of unfamiliarity of dietary fiber as a whole.”

Patient at Blue Spruce Health

“I’m not sure of how much fiber I should be consuming daily, from which foods I can get fiber, or even the benefits of fiber”

Intervention & Methodology (I)

- A single page, tri-fold pamphlet describing the sources & benefits of fiber was created
- The pamphlet offers a price-breakdown of the sources of food at the local Shaw's & Walmart grocery stores in Newport, VT
- This pamphlet will be available in primary care office for patients to take home

Intervention & Methodology (II)

Results & Reflection

Evaluation of Effectiveness

Option A:

1.Have patients complete a short survey before their visit:

- How much dietary fiber do you think you get in a day?
- What does a typical lunch/dinner look for you?
- What are some examples of food sources high in fiber?
- What are some benefits of dietary fiber?

2. Collect data from the responses of patients & distribute the pamphlet

3. Have patient's re-take the survey before a f/u visit & compare the data

Option B: Provide 50 % of patients with a pamphlet & perform a longitudinal study comparing the rates of office visits for constipation or diverticulosis for patients who received the pamphlet v. those who did not

Challenges

Cultural differences in food groups

Shelf-life of most fresh fruits & vegetables

It was difficult to assess both provider & patient response due to a 5-week timeline for the completion of the project

Recommendations for Future Interventions

- Assess other barriers that make it difficult to make nutritional changes (ex. time to prepare food, taste of food, culture)
- Create easy-to-make (ex. one pan or 15 min) recipes for patients either via recipe booklets or short videos
- Consider distributing the pamphlet to other health-care clinics, pharmacies, & supermarkets nearby

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