Diet and Colorectal Cancer

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Background

Colorectal cancer is currently the third most common malignancy and is ranked second in cancer-related mortality worldwide for both sexes.[1] Beginning in the 1990's, the rate of colorectal cancers has been steadily rising in younger adults below the age of 50, and more younger individuals are dying from the disease than ever before.[2]

Purpose

This research aims to bring light to potential dietary factors that may be contributing to the rise in colorectal cancer rates. Also, this research offers guidance in what measures must be taken to reduce the risk.

PICOT

Does a specific diet influence the rate of colorectal cancer compared to no specific diet at all?

Design & Methods

Keywords:
Colorectal cancer, colon cancer, prevention, diet, food.

Inclusion:
English language, full text available online, publication within past five years, adults 18+, both men and women included

Exclusion:
Studies focusing on one particular gender, participants in studies are under the age of 18, participants with a history of cancer.

Table 1. Summary of Evidence Search

Database	Yielded	Reviewed	Included in Analysis
PubMed	1,235	9	3
Valpo Summon	3,468	4	1
Science Direct	9,948	6	2
Total:	14,651	19	6

Table 2. Synthesis of Evidence

Types	Systematic Review	Prospective Cohort	Case Control
Total	3	2	1

Results:

While many foods researched had a negative or beneficial effect on colorectal cancer incidence, there were certain food groups that are important to mention that had little to no association including refined grains, nuts, legumes, and sugar-sweetened beverages.[3]

Table 3. Diet with Decreased Risk [3]

Food	Quantity in grams daily	Decreased Risk %
Whole Grains	~120g	20%
Vegetables	~200g	7%
Fruits	~200g	8%
Dairy	~400g	17%

Table 4. Diet with Increased Risk

Food	Quantity in grams daily	Increased Risk %
Red Meats[3]	~150g	20%
Processed Meats[3]	~60g	20%
Alcohol (liquor)[4]	~25g	50%
Alcohol (beer)[4]	~25g	21%

Discussion

Based on the literature, the best practice to avoid the risk of developing colorectal cancer comes down to limiting harmful foods such as red meats, processed meats, and alcohol while increasing daily values of protective foods such as whole grains, vegetables, fruits, and dairy. Creating a well-balanced diet, while staying within the correct daily quantities can significantly improve the risk of developing colorectal cancers.

Limitations/Further Study

Some limitations of this research include that certain food groups were analyzed with smaller sample sizes, many diets were self-reported leading to recall bias, and lastly, many systematic reviews pull from older, outdated articles.

Knowing the limitations this research has, larger, newer studies are needed to further evaluate the causes of rising colorectal cancer rates.

Conclusion

Colorectal cancer is a rising concern within society today and diet is one of the most analyzed mediators for the disease process. With many foods having either a negative effect or positive effect on the incidence of colorectal cancer, there is potential room for decreasing rates by maintaining a specific diet with adding more whole grains, veggies, fruits, and dairy, while watching out for daily intake of red/processed meats and alcohol. It is no surprise that many of our unhealthy foods have such a negative effect on colorectal cancer, so more action needs to be taken to educate.

References

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