

Nutritional Deficiencies in Endurance Runners with Crohn's Disease

Mary Palmer & Laura Knudsen, R.D.

MS Food and Nutritional Sciences, University of Wisconsin–Stout

Statement of Problem

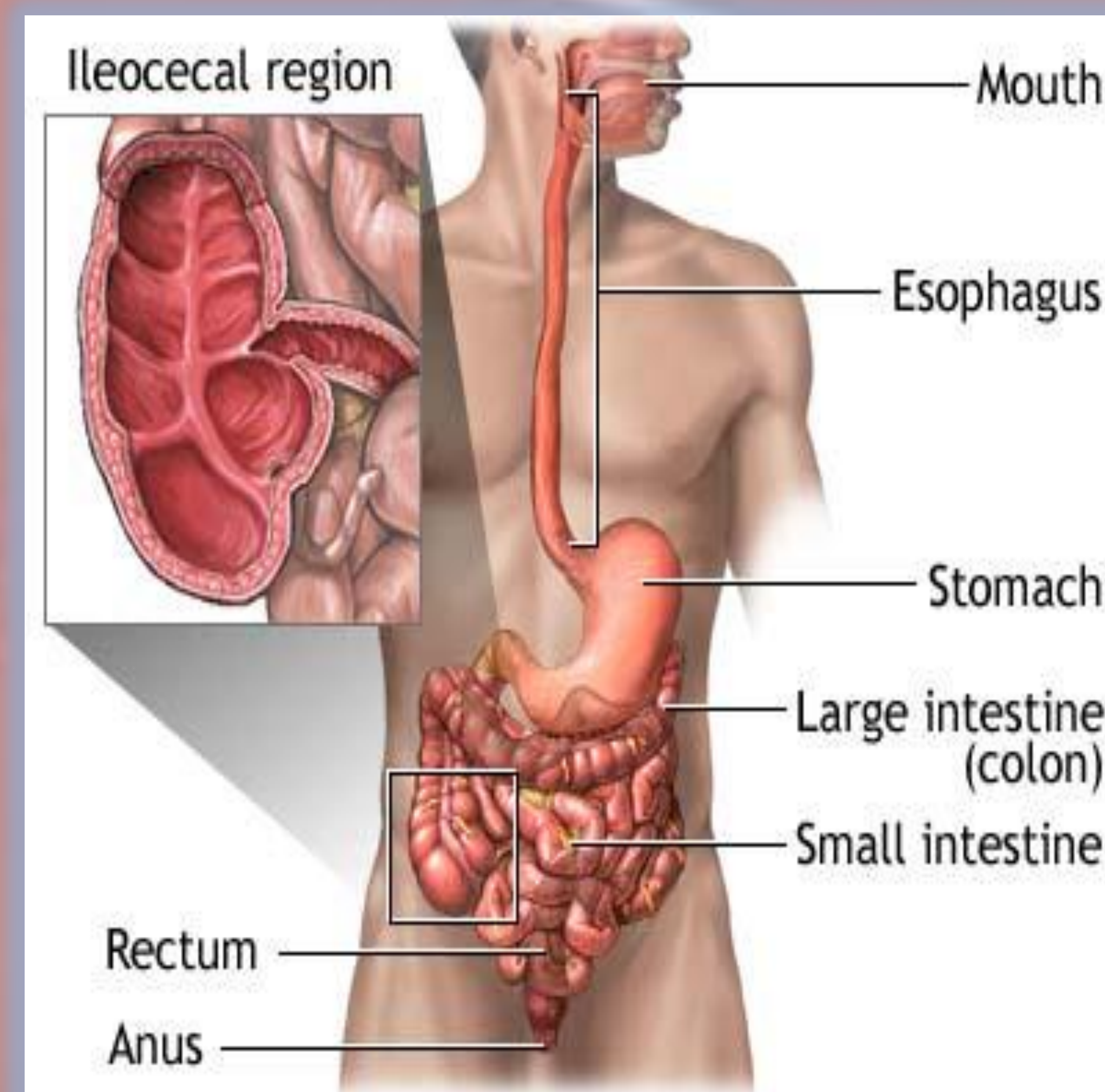
- The purpose of this study was to examine the dietary intake of endurance runners with Crohn's disease so that exact dietary deficiencies may be identified, specifically related to: vitamins A, D, E, K, fiber, iron, and total caloric intake.

Objectives

- To identify specific nutrient deficiencies endurance runners with Crohn's disease may be more susceptible to, with a focus on: vitamins A, D, E, K, fiber, iron and total caloric intake.
- To measure the extent to which nutrients endurance runners with Crohn's disease are deficient in.
- To detect specific considerations that need to be made when endurance running and attempting to manage Crohn's disease.

Background Information

- Crohn's disease is a form of Inflammatory Bowel Disease that can affect any region of the gastrointestinal tract from the mouth to the anus, but most commonly affects one or more parts of the intestine.
- Recognized as a severe condition that plays a significant role in an individual's daily lifestyle and overall health and well-being, most commonly causing: diarrhea, rectal bleeding, abdominal pain, fever, and malnourishment.
- There is currently no prescribed diet for individuals with Crohn's disease, but an individual may be forced to reduce lactose, high-fiber, fatty, and residue-causing foods.



Subjects & Methods

- Individuals with Crohn's disease were selected from the Team Challenge for Crohn's and Colitis training group, and endurance training and fundraising group for Crohn's disease research.
- The control group subjects were selected from the Eastern Minnesota, Western Wisconsin area.
- All athletes were defined as currently endurance running more than 35 miles per week, and at least 18 years of age.
- A 3-day dietary record was assessed for each athlete, which also included a questionnaire addressing the subject's: height, weight, estimated number of minutes/miles run per week, and medication/nutritional supplements consumed.



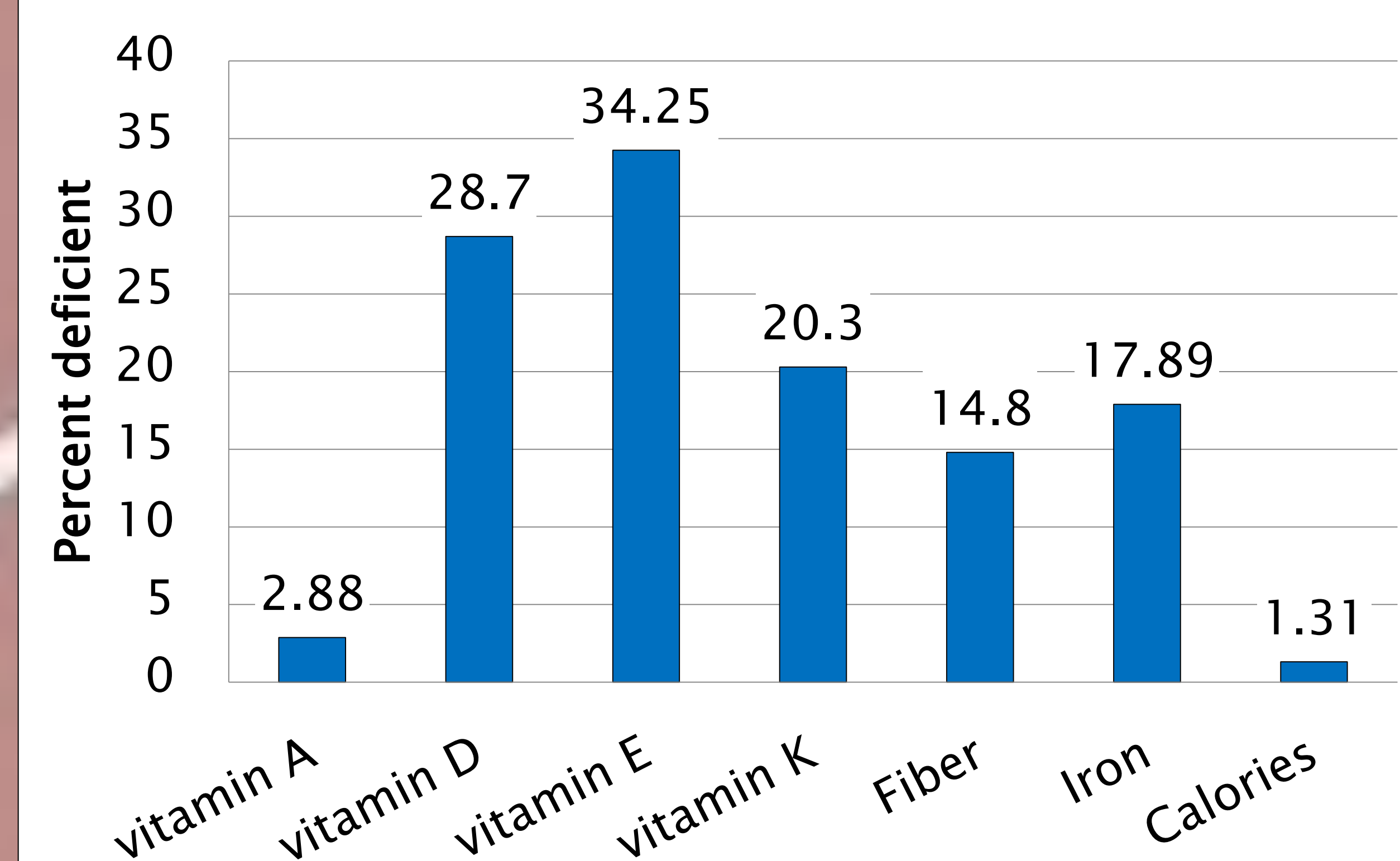
Expected results

- Endurance runners with Crohn's disease may be more likely deficient in: vitamin D, vitamin E, fiber, and total caloric intake.
- The greatest nutrient deficiencies (on average) among endurance runners with Crohn's disease were vitamin E and vitamin D.
- Nutrient supplementation may be encouraged to enhance nutritional status among these individuals.

Nutrient	Control	Runners with Crohn's disease	
vitamin A	6(50.0)	3(37.5)	NS
vitamin D	2(16.7)	6(75.0)	p=.019*
vitamin E	8(100.0)	6(50.0)	p=.042*
vitamin K	4 (50.0)	3(25.0)	NS
Fiber	1(8.3)	5(83.3)	p=.018*
Iron	4(33.3)	6(75.0)	NS
Calories (kcal)	0(0.0)	3(37.5)	p=.049*

Note. NS= Not significant; *= significance, as $p < .05$, two-tailed

Mean % deficiencies in endurance runners with Crohn's disease



References:

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