

# 14-21 days for SIBO

[Dig Dis Sci](#), 2004 Jan;49(1):73-7.

## **A 14-day elemental diet is highly effective in normalizing the lactulose breath test.**

[Pimentel M](#)<sup>1</sup>, [Constantino T](#), [Kong Y](#), [Baiwa M](#), [Rezaei A](#), [Park S](#).

### ⊕ **Author information**

#### **Abstract**

Treatment of small intestinal bacterial overgrowth is frustrated by the low efficacy of antibiotics. Elemental diets have been shown to reduce enteric

On chart review, subjects who successfully normalized their breath test had a 66.4 +/- 36.1% improvement in bowel symptoms, compared to 11.9 +/- 22.0% in those who failed to normalize (P < 0.001).

elemental diet is highly effective in normalizing an abnormal LBT in IBS subjects, with a concomitant improvement in clinical symptoms.

PMID: 14992438 [PubMed - indexed for MEDLINE]

# 14 days for RA (vs steroids)

[Postgrad Med J](#). 2007 Feb;83(976):128-31.

## Is rheumatoid arthritis a disease that starts in the intestine? A pilot study comparing an elemental diet with oral prednisolone.

[Podas T<sup>1</sup>](#), [Nightingale JM](#), [Oldham R](#), [Roy S](#), [Sheehan NJ](#), [Mayberry JF](#).

### [+ Author information](#)

#### Abstract

**OBJECTIVES:** This pilot study aimed to determine if an elemental diet could be used to treat patients with active rheumatoid arthritis and to

An elemental diet for 2 weeks resulted in a clinical improvement in patients with active rheumatoid arthritis, and was as effective as a course of oral prednisolone 15 mg daily in improving subjective clinical parameters.

greater than 20% in EMS, VAS and RAI occurred in 72% of the elemental diet group and 78% of the prednisolone group. ESR, CRP and haemoglobin improved in the steroid group only ( $p < 0.05$ ).

**CONCLUSIONS:** An elemental diet for 2 weeks resulted in a clinical improvement in patients with active rheumatoid arthritis, and was as effective as a course of oral prednisolone 15 mg daily in improving subjective clinical parameters. This study supports the concept that rheumatoid arthritis may be a reaction to a food antigen(s) and that the disease process starts within the intestine.

PMID: 17308216 [PubMed - indexed for MEDLINE] PMCID: PMC2805936 [Free PMC Article](#)

# RA and food reintroduction

[Br J Rheumatol](#). 1995 Mar;34(3):270-3.

## **The effects of elemental diet and subsequent food reintroduction on rheumatoid arthritis.**

[Kavanaghi R](#)<sup>1</sup>, [Workman E](#), [Nash P](#), [Smith M](#), [Hazleman BL](#), [Hunter JO](#).

### **⊕ Author information**

#### **Abstract**

The role of diet in rheumatoid arthritis (RA) remains controversial and there have been no controlled studies on the use of elemental diet in the treatment of RA. Elemental diet is an hypoallergenic protein-free artificial diet consisting of essential amino acids, glucose, trace elements and

This improvement was not present following food reintroduction.

food was suspected of causing symptoms it was removed from the diet. Twenty-three control patients supplemented their usual diet with E028. After the elemental diet there was a statistically significant improvement in the diet group in grip strength ( $P = 0.008$ ) and Ritchie score ( $P = 0.006$ ) but not in ESR, CRP, thermographic joint score or functional score. The diet group lost more weight than the control group and this correlated with the improvement in grip strength. This improvement was not present following food reintroduction. As the improvements took place in more subjective

There was a high default rate, only 38% of those patients originally enrolled completed the study.

PMID: 7728405 [PubMed - indexed for MEDLINE]

# Acute Crohn's

Br Med J (Clin Res Ed). 1984 Jun 23;288(6434):1859-62.

## **Elemental diet as primary treatment of acute Crohn's disease: a controlled trial.**

O'Moráin C, Segal AW, Levi AJ.

Assessment at four and 12 weeks showed that the patients treated with the elemental diet had improved as much as and by some criteria more than the steroid treated group. Elemental diet is a safe and effective treatment for acute Crohn's disease.

PMID: 6428577 [PubMed - indexed for MEDLINE] PMCID: PMC1441790 [Free PMC Article](#)

# Half-elemental diet in Crohn's

*Aliment Pharmacol Ther.* 2006 Nov 1;24(9):1333-40.

## Effectiveness of an 'half elemental diet' as maintenance therapy for Crohn's disease: A randomized-controlled trial.

Takagi S<sup>1</sup>, Utsunomiya K, Kuriyama S, Yokoyama H, Takahashi S, Iwabuchi M, Takahashi H, Takahashi S, Kinouchi Y, Hiwatashi N, Funayama Y, Sasaki I, Tsuji I, Shimosegawa T.

### ⊕ Author information

#### Abstract

**BACKGROUND:** Although thiopurines have a proven role in maintenance therapy for Crohn's disease, an alternative therapy is needed for patients intolerant or resistant to thiopurines.

**AIM:** To evaluate the effectiveness of home enteral nutrition as a maintenance therapy regimen in which half of the daily calorie requirement is

The relapse rate in the half elemental diet group was significantly lower [34.6% vs. 64.0%; multivariate hazard ratio 0.40 (95% CI: 0.16-0.98)] than that in the free diet group after a mean follow-up of 11.9 months.

**CONCLUSION:** This randomized-controlled trial shows the effectiveness of an half elemental diet, which is a promising maintenance therapy for Crohn's disease patients.

PMID: 17059514 [PubMed - indexed for MEDLINE] [Free full text](#)

# Cost-effective

[Dig Liver Dis.](#) 2009 Jun;41(6):390-4. doi: 10.1016/j.dld.2008.09.007. Epub 2008 Oct 21.

## **Quality of life of patients and medical cost of "half elemental diet" as maintenance therapy for Crohn's disease: secondary outcomes of a randomised controlled trial.**

[Takagi S](#)<sup>1</sup>, [Utsunomiya K](#), [Kuriyama S](#), [Yokoyama H](#), [Takahashi S](#), [Umemura K](#), [Iwabuchi M](#), [Takahashi H](#), [Takahashi S](#), [Kinouchi Y](#), [Hiwatashi N](#), [Funayama Y](#), [Sasaki I](#), [Tsuji I](#), [Shimosegawa T](#).

### **⊕ Author information**

#### **Abstract**

**BACKGROUND/AIM:** Quality of life (QOL) of the patients and medical costs are important in current medical treatments, especially those for chronic diseases. We have reported the effectiveness of 'half elemental diet (ED)' as maintenance therapy for patients with Crohn's disease (CD). The aim of this study was to evaluate the QOL of CD patients and medical costs of half-ED.

**METHODS:** Fifty-one CD patients in remission were randomly assigned to a half-ED group (n=26) or a free diet group (n=25). The primary outcome measure was the occurrence of relapse during a 2-year period. This time, we investigated the QOL of the patients and medical costs of half-ED, as

This study has confirmed this half-ED therapy is beneficial for patients with Crohn's disease.

**CONCLUSION:** This study has confirmed this half-ED therapy is beneficial for patients with Crohn's disease.

PMID: 18945653 [PubMed - indexed for MEDLINE]

# Addendum

- The following is a series of notes designed to support the practical use of the elemental diet.

## The Art

- a) 2 weeks elemental-only according to caloric needs
- b) 2-4 weeks of half-elemental diet/ half-well tolerated foods/ GI support supplements
- c) 2-4 months of half-elemental diet/ reintroduction of foods, one at a time/ probiotics/ GI support
- d) Elemental diet-only as needed for 1-3 days during exacerbations
- e) Elemental diet-only as needed for 1-3 days for “gut rest” immediately prior to implementing other supplementation and/or dietary protocols

# Tips and tricks for the Elemental Diet

- Known fungal propensity (candidiasis)
  - 1-2 week run-in with anti-fungal interventions that continues into the first week of elemental diet use
- Patient doesn't tolerate glycemic load
  - SLOW the rate of consumption (45-60 minutes)
  - Reduce the meal load (from 600 down to 300 or 150 calories)
  - Add MCT to elemental diet and reconfigure caloric needs
  - Increase dilution (decreases sweetness)
- Cramping
  - Reduce rate of consumption
  - Increase dilution (decreases osmolality)

## Tips and tricks

- Teach the client to consume first “meal” during a 60 minute television show (with commercials)
  - Consume 1-2 “gulps” during commercial break
  - Allow to digest during show
  - Finish meal during this one hour duration
- Constipation (may be normal)
  - Prokinetic agents

## Tips and tricks

- Constipation may be normal
  - The macronutrients are easily absorbable so there isn't a lot of excess to create bowel movements.
  - Contains no fiber to stimulate goblet cell production of mucous resulting in BM.
  - The mass of stool contains a fair amount of bacterial materials. The formula reduces the feeding of the commensal bacterial overgrowth. In this hypometabolic state, there is less division and reproduction so less microbes, less fecal mass.

# Prokinetic agents

- Ginger (standardized extracts)
  - 100-300 mg TID
- 5-HTP
  - 50-150 mg TID
- Artichoke extract
  - 320 mg TID
- Low dose naltrexone
  - 1.5-2.5 mg daily
- 5-HT<sub>2A</sub> agonists

# Food re-introduction

- Start with KNOWN tolerated foods for 2-4 weeks
  - Keep inflammation low
  - Provides gut rest
  - Prevents major shifts in microbiota
- Reintroduce foods one at a time for 2-4 months
  - Just like elimination diet (every 3 days)
  - Expands diet choices (yeah!)
  - Reduces dependence on supplementation (yeah!)

## Tips and tricks for the Elemental Diet

- Patient doesn't tolerate glycemic load
  - SLOW the rate of consumption (45-60 minutes)
  - Reduce the meal load (from 600 down to 300 or 150 calories)
  - Add MCT oil to elemental diet and reconfigure caloric needs
  - Increase dilution (decreases sweetness); use 6-8 ounces of water per scoop.

## What to do?

- Known fungal propensity (candidiasis)
  - 1-2 week run-in with anti-fungal interventions that continues into the first week of elemental diet use

## Tips and tricks

- Teach the client to consume first “meal” during a 60 minute television show (with commercials)
  - Consume 1-2 “gulps” during commercial break
  - Allow to digest during show
  - Finish meal during this one hour duration

# Tips and tricks for the Elemental Diet

## Cramping

- Reduce rate of consumption to further end of instructions
- Increase dilution (decreases osmolality)

# Food re-introduction

- Start with KNOWN tolerated foods for 2-4 weeks
  - Keep inflammation low
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## 2 weeks elemental-only according to caloric needs

- This is the evidence-based approach commonly used in the clinical trials. It can be extended out an additional week or two per clinical need.
- The origin of this length of time (for SIBO) was to put the commensal bacterial overgrowth in to a hypometabolic state by essentially starving them. Some of the colonies would die and overgrowth would decrease. Some people need shorter or longer periods of time.
- Elemental diet research into Crohn's and rheumatoid arthritis typically have been two weeks in duration as well.

## 2-4 weeks of half-elemental diet

- Half-elemental diets are used when patients can't or won't do full elemental diets OR when the practitioner is not as comfortable with full elemental diet.
- Also used when practitioner wants to continue to use GI supportive supplements (i.e. digestive enzymes, glutamine)
- Can be used following 2 weeks of full elemental diet or by itself

## 2-4 months of half-elemental diet

- Used to reintroduce foods, one at a time
- This can follow full elemental diet or short-term elemental diet OR it can be used right away
- Probably the least common approach
- Is akin to other lifestyle change programs

## Elemental diet-only as needed for 1-3 days during exacerbations

- May be an interesting “off label” use for remote conditions of GI origin
- May be used for patients who have already done a different protocol of elemental diet (i.e. 2 weeks full, 2 weeks partial, long term partial)
- Good way to “start” or “follow-up”

## Elemental diet-only as needed for 1-3 days for “gut rest”

- Designed for massive protocol shifts.
- New to practice from other integrative practitioners
- New to practice from conventional practitioners