

Clear Liquid Diet

1. Purpose

Nutrition Indicators

The purpose of the clear liquid diet is the fact that it's easier to digest than other foods. It still gives the important fluids, salts, and minerals that you need for energy. Clear liquids usually contain mostly sugar and water (except for broths and bullion, which are salty). A diet of clear liquids maintains vital body fluids, salts, and minerals; and also gives some energy for patients when normal food intake must be interrupted.

Criteria to Assign the Diet

Criteria for this diet include right before a medical test or procedure, or before certain kinds of surgery. It may also be needed for a while after someone has had surgery on the stomach or intestine. This diet may also be needed for individuals with diarrhea, throwing up, or if they are sick to their stomach.

Rational For the Diet

Many infections damage your intestinal cells which absorb food, so you won't absorb solids, proteins, or fats very well. Eating these foods can worsen or prolong your vomiting and diarrhea. But sugar and water (the main components of a clear liquid diet) are still absorbed well in most intestinal illnesses. Sugared liquids provide energy for the individual. Sugared clear liquids and syrups have a soothing effect in vomiting for reasons not completely understood. Some effective anti-vomiting medicines are based on this effect.

2. Population

Overview

The population for the clear liquid diet consists of individuals that are about to have a test, procedure, or surgery and can not have anything by mouth, individuals with diarrhea, vomiting, and digestive problems, and after surgery.

Disease Process

There is no disease process or disease state that requires this diet since you can only administer this diet 3-4 days.

Biochemical and Nutrient Needs

This diet does not provide adequate nutrition. In a clear liquid diet, the individual is receiving mainly carbohydrates and water.

3. General Guidelines

Nutrition Rx

A sugared clear liquid which contains carbohydrates and water provides energy.

Adequacy of Nutrition Rx

A clear liquid diet (sugared or not) is not adequate in calories and nutrients. It should not be used for more than five days unless high-protein gelatin or other low-residue supplements are added.

Goals

It is designed to keep your stomach and intestines clear, limit strain to your digestive system, or keep your body hydrated as you recover from a medical procedure or become ready for your regular diet.

Does it Meet DRI

A clear liquid diet does not meet the DRI. Eating only a clear liquid diet gives you enough nutrition for 3 to 4 days.

4. Education Material

Nutrition Therapy

The clear liquid diet should not be administered for more than four days.

There also needs to be instruction on how to resume the diet to solid foods. When diarrhea and vomiting are under control for at least 24 hours, starchy foods such as crackers, bread, and pasta can be administered in small amounts. If those foods are kept down and digested properly, the individual can resume a nearly normal diet.

Ideas for Compliance

Mix up each meal with a sweet clear liquid, a salty clear liquid, and plain water. For snacks have ice pops made from fruit juices with no pulp. Give clear hard candy.

5. Sample Menu

Foods Recommended

Plain water, fruit juices without pulp, clear sodas or sports drinks, plain gelatin, honey, tea, coffee, beef or chicken broth

Foods to Avoid

Anything with residue or that you can't see through

Example of a meal plan

Breakfast- clear water, 1 cup fruit juice without pulp, 1 cup gelatin, 1 cup coffee

Snack-1 cup sprite, fruit popsicle

Lunch-1 cup chicken broth, 1 cup clear water, 1 cup gelatin, 1 cup hot tea with honey

Snack-sports drink, fruit popsicle

Dinner-1 cup beef broth, 1 cup clear water, 1 cup gelatin, 1 cup hot tea with honey

6. Websites

Organizations with Websites

American Family Physician (AAFP), American Accreditation Healthcare Organization, NIH.org

Government Websites

No government website for clear liquid diet

7. References

Journal articles references

Anne D. Walling, M. D. (2002). Early feeding of solid food following cesarean delivery. *American Family Physician*, 15(4), 681-682.

NUTRIENT

1. What is the nutrient?

Choline

2. What is the RDA/DRI for the nutrient?

There is no established RDA/DRI for this nutrient. The AI is for Choline is

Infants 0-0.5	125 mg/day
Infants 0.5-1	150 mg/day
Children 1-3	200 mg/day
Children 4-8	250 mg/day
Males 9-13	375 mg/day
Males 14-18	550 mg/day
Males 19-30	550 mg/day
Males 31-50	550 mg/day
Males 51-70	550 mg/day
Males >70	550 mg/day
Females 9-13	375 mg/day
Females 14-18	400 mg/day
Females 19-30	425 mg/day
Females 31-50	425 mg/day
Females 51-70	425 mg/day
Females >70	425 mg/day
Pregnant <18	450 mg/day
Pregnant 19-30	450 mg/day
Pregnant 31-50	450 mg/day
Lactating <18	550 mg/day
Lactating 19-30	550 mg/day
Lactating 31-50	550 mg/day

3. How is the nutrient metabolized?

In the human body, choline can be manufactured in the liver. Humans synthesize choline in small amounts by conversion of phosphatidylethanolamine (a phospholipid) to phosphatidylcholine, involved in three methylation reactions, each using the compound SAM as a methyl group donor.

4. What are food sources of the nutrient?

Some significant sources of choline include milk, liver, eggs, and peanuts. Other sources include cooked beef, chicken, veal, and turkey livers.

5. What disease states alter the nutrients metabolism?

When choline is metabolized by the body, it may form trimethylamine. Some persons are not able to break down trimethylamine due to a genetic disorder. Persons suffering from this disorder, called trimethylaminuria, may suffer

from a strong fishy or otherwise unpleasant body odor due to the body's release of odorous trimethylamine.

6. What are the tests or procedures to assess the nutrient level in the body?
Ion Chromatography test, Trimethylamine-HCl (TMA) ASSAY

7. What is the drug-nutrient interactions?

Medications that increase the risk of choline deficiency:

-Methotrexate, used in the treatment of cancer, rheumatoid arthritis and psoriasis

-Anticonvulsant drugs

8. How is the nutrient measured?

Choline is measured in milligrams.

9. What is the Upper Tolerable Limits?

3500 mg/day

10. What are the physical signs of deficiency?

A choline deficiency can prevent the liver from being able to package fats correctly, resulting in disruption of normal lipid balance that manifests as decreased levels of VLDLs and increased levels of blood triglyceride levels.

Mild choline deficiency has also been associated with neurological manifestations such as memory problems, nerve-muscle imbalances and insomnia, as well as fatigue and the reduced ability of the kidneys to concentrate urine.

Extreme dietary choline deficiency is associated with a host of negative outcomes including liver dysfunction, impaired growth, abnormalities in bone formation, anemia, lack of red blood cell formation, kidney failure, hypertension, infertility, and both respiratory distress and failure to thrive in newborns.

11. What are physical signs of toxicity?

Supplementation of choline in doses of 5-10 grams per day has been associated with blood pressure reduction, feelings of dizziness and faintness. Higher doses, in the 10-15 gram range, have been linked with vomiting, increased salivation, sweating and unusual body odor, the latter symptom associated with the increased presence of trimethylamine.

References

- Higdon, J., and V. J. Drake. 2008. [Micronutrient Research for Optimum Health: Choline](#). *Linus Pauling Institute* (Oregon State University).
- Anne D. Walling, M. D. (2002). Early feeding of solid food following cesarean delivery. *American Family Physician*, 15(4), 681-682.
- George F Longstreth, MD, Department of Gastroenterology, Kaiser Permanente Medical Care Program San Diego, California. Also reviewed by David Zieve, MD, MHA, Medical Director, A.D.A.M., Inc. (2010). *Diet-clear liquid*. Retrieved 04/2010, 2010, from <http://www.nlm.nih.gov.proxy.lib.muohio.edu/medlineplus/ency/patientinstructions/000205.htm>
- Mayo Clinic Staff. (2010). *Clear liquid diet*. Retrieved 04/17, 2010, from <http://www.mayoclinic.com/health/clear-liquid-diet/MY00742>
- Sharon Rady Rolfes, Kathryn Pinna, Ellie Whitney. (2009). Choline. *Understanding normal and clinical nutrition* (8th ed., pp. 345-346). Belmont, California: Yolanda Cossio.