

# MEDITERRANEAN DIET IS AS GOOD AS DRUGS FOR ACID REFLUX

Friday September 8 2017

## Sections

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1. [Where did the story come from?](#)
2. [What kind of research was this?](#)
3. [What did the research involve?](#)
4. [What were the basic results?](#)
5. [How did the researchers interpret the results?](#)
6. [Conclusion](#)

"Why the Mediterranean diet is the best cure for acid reflux: Study found patients who ate plenty of fish and veg had fewer symptoms and avoided side effects of medication," the Mail Online reports.

Acid reflux, also known as [gastro-oesophageal reflux disease \(GORD\)](#), is a condition where stomach acid leaks back up into the gullet, causing pain. Standard treatment for GORD is a type of medication known as a proton-pump inhibitor (PPI), which reduces the amount of acid produced by the stomach.

This latest study looked at the medical records of people with GORD to compare whether taking PPI treatment or following a Mediterranean-style diet with alkaline water was better at

reducing symptoms. A Mediterranean diet is largely based on vegetables, fruits, nuts, beans, cereal grains, olive oil and fish.

The study found the dietary changes were equally good at reducing symptoms as PPIs. This suggests dietary changes could be a first option to try for reflux symptoms, which may avoid the need for some people to take PPIs. However, drug-free treatment may not be suitable for everyone (for example people whose symptoms are linked with stomach irritation or ulcers). Also, completely changing your diet can be complex and nutritional guidance may be needed.

Nevertheless, switching to a Mediterranean diet brings other health benefits such as reducing your risk of heart disease. Read more about the [benefits of a Mediterranean diet](#).

### **Where did the story come from?**

The study was carried out by researchers from New York Medical College, New York Eye and Ear Infirmary of Mount Sinai and The Institute for Voice and Swallowing Disorders, Phelps Hospital, all in the US.

No sources of funding are reported. One author served on the scientific advisory board of Restech Corporation (a company that specialises in GORD treatment), for which he received no financial compensation. There were no other conflicts of interest reported.

The study was published in the [peer-reviewed](#) medical journal JAMA Otolaryngology – Head & Neck Surgery on an [open-access basis](#), meaning it is freely available to [access online](#).

The Mail Online's reporting is misleading and contradicts itself with the headline suggesting fish was one of the main dietary components in the Mediterranean diet, then going on to describe

how the diet consisted of “barely any dairy or meat including beef, chicken, fish, eggs and pork”. Fish is not actually mentioned in the paper at all, we only know they were minimising intake of meat and dairy.

### **What kind of research was this?**

This was a [retrospective cohort study](#) looking back at medical records of people with acid reflux who had either been prescribed usual medication (proton pump inhibitors or PPIs) or changed their diet to a Mediterranean style and alkaline water (water that is less acidic than tap water). It aimed to compare effects on reflux symptoms.

Gastro-oesophageal reflux (GORD) is when stomach acid rises up into the oesophagus (gullet), which can cause heartburn and indigestion. Standard treatment can involve removing dietary triggers (such as fatty foods) and medication with acid-blocking tablets called proton pump inhibitors (PPIs). PPIs can however have mild side effects such as headaches, diarrhoea or constipation, feeling sick, tummy pain and dizziness.

A cohort can look at associations, but as this study is looking back in time at what people have previously done, it can be hard to assess or control for confounding factors that could have had an influence.

### **What did the research involve?**

Researchers looked back at medical records of people diagnosed with GORD between 2010 and 2015 in the US. They compared two cohorts, one being treated with PPI medication and the

other with a Mediterranean diet and alkaline water to determine differences in the improvement of acid reflux.

The first cohort of 85 participants, on average aged 60, were treated between 2010 and 2012 with one of two PPI drugs (esomeprazole or dexlansoprazole [not used in the UK]) and asked to follow standard advice to cut out coffee, tea, chocolate, fizzy drinks, greasy, fried, fatty and spicy foods, and alcohol from their diet.

The second cohort of 99 participants, on average aged 57, were treated with alkaline water (pH >8.0) and a plant-based, Mediterranean-style diet, and also cut out the same things from their diet as the first group (2013 and 2015).

Participants of the second cohort were asked to replace all drinks with alkaline water and eat 90-95% of their diet as a plant-based diet with vegetables, fruits, wholegrains and nuts with less than 5 to 10% from animal-based products for six weeks. To meet this, participants had to limit animal products to only 2 or 3 meals a week containing 3 to 4 ounces of meat, with minimal intake of dairy.

Compliance with medication or diet was assessed by a questionnaire and verbal discussion and those not complying were excluded.

The outcome researchers were measuring was the change in reflux symptoms using the Reflux Symptom Index (RSI) after six weeks of treatment. The RSI is a scoring system based on how many symptoms of GORD a person has, and how troublesome those symptoms are.

A clinically meaningful change in RSI score was a reduction of at least 6 points.

## What were the basic results?

A meaningful 6-point reduction was achieved by 54% of the medication group compared with 62.6% in the alkaline water and Mediterranean diet group. This was not a [statistically significant](#) difference, but the changes in overall scores were:

- In the PPI group, RSI scores reduced by 27.2% (95% [confidence interval](#) [CI] 18.5% to 35.9%) from an average of 20.2 (95% CI 18.4 to 22) to 14.3 (95% CI 12.4 to 16.2).
- In the Mediterranean diet and alkaline water group, scores reduced by 39.3% (95% CI 33.1% to 45.5%) from an average of 19.1 (95% CI 17.6-20.6) to 12.1 (95% CI 10.4-13.7).
- The mean reduction was greater in the Mediterranean diet and alkaline water group (mean difference 12.1%, 95% CI 1.53 to 22.68).

## How did the researchers interpret the results?

The researchers conclude that their “data suggest that the effect of PPI on RSI scores among patients with [GORD] is not significantly better than that of alkaline water and a plant-based, Mediterranean-style diet. In fact, our data suggest that the plant based approach is at least as good, if not better, than PPI therapy. Thus, we recommend that a patient with suspected [GORD] at least attempt a dietary approach prior to any pharmacological intervention”.

## Conclusion

The results of this relatively small cohort study seem to show that a plant-based Mediterranean diet with alkaline water is equally good as PPI medication at treating acid reflux symptoms when people also follow standard advice to cut out certain things from their diet.

This might suggest that the first port of call for people with gastro-oesophageal reflux could be to try a Mediterranean diet before going on PPI medication, to avoid potential side effects.

There are, however, some limitations to this research:

- Cohort studies can only show links and cannot prove definite cause and effect, and retrospective cohorts such as this are even more limited than prospective cohorts. Prospective cohorts that follow people up over time have the advantage that they can at least assess and collect data on other factors that could be having an influence. When you have to rely on previously collected data, you cannot be sure that all relevant information has been collected.
- We do not know exactly what people in each group were eating and we cannot tell what it was about the plant-based Mediterranean diet or alkaline water that might have provided a benefit. Food diaries or food frequency questionnaires might be one way to determine this in the future.
- Follow up was only six weeks, which is not much time to see longer-term outcomes. It might be that either PPIs or the Mediterranean diet have a different effect in the longer term.
- We don't know for sure that the Mediterranean diet had no adverse effects – for example, it could have a detrimental effect on other health measures (such as vitamin and mineral levels). Therefore we can't say with confidence that it has no side effects compared with drug treatment.
- For this reason there may be a need for guidance from dietitians. Changes to the diet often require self-control and it can be complex and difficult to achieve and maintain nutrition merely by doctor recommendation.

- There will always be some people with reflux symptoms who need drug treatment, such as those with stomach irritation or ulcers.

Making changes to the diet and adopting a more Mediterranean-style diet might be one simple first option that people or practitioners could consider as a way of managing reflux.

