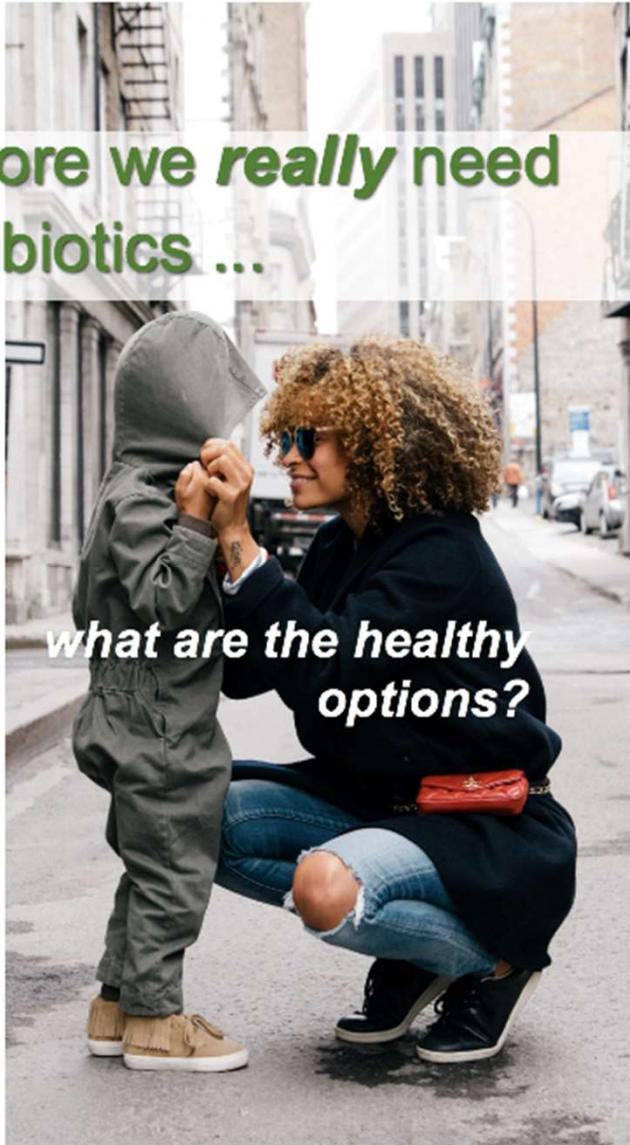


Before we *really* need  
antibiotics ...



*what are the healthy  
options?*

a role for herbal and  
other natural  
home remedies?

Simon Mills

~~2019~~ (BC\*)

2023

\* This presentation builds on a College of Medicine workshop at Chelsea Physic Garden 3<sup>rd</sup> October 2019, before the world and our health priorities changed!

Department of Health

EUROPEAN ANTIBIOTIC AWARENESS DAY



**UNFORTUNATELY,  
NO AMOUNT  
OF ANTIBIOTICS  
WILL GET RID  
OF YOUR COLD.**

The best way to treat most colds, coughs or sore throats is plenty of fluids and rest. For more advice talk to your pharmacist or doctor.  
© 2013-2014. All rights reserved. In the UK: 0800 012 3456

Without effective antibiotics many routine operations like hip replacements, organ transplants, caesarean sections and treatments for sepsis or chemotherapy will become increasingly dangerous or impossible.

- Over-use of antibiotics can lead to the development of drug-resistant bacteria which can cause serious infections.
- Antibiotics can cause side effects such as rashes, thrush, stomach pains, diarrhoea, reactions to sunlight and other symptoms
- Help conserve antibiotics so that they remain effective
- Your actions can protect antibiotics, join us at [AntibioticGuardian.com](http://AntibioticGuardian.com)

ANTIBIOTIC GUARDIAN

*Unfortunately ...*

the campaign now looks run down



< Public health notice in a local pharmacy June 2023 (AC!)

Two aims of the Chelsea meeting were

1. To share a review of the **evidence base** (*systematic reviews and controlled clinical trials only*) for safe and effective home-care options that patients and parents can use instead of antibiotics.
2. To use this review to generate a **free resource** for public and professionals - *now* on the College of Medicine self-care website:  
[ourhealth.directory](http://ourhealth.directory)

Sponsored by

PUKKA

Before we **really** need antibiotics ...



what are the healthy options?

## Our ratings

Originally developed for the Department of Health by Dr Karen Pilkington and Prof David Peters for the **Self Care Toolkit** >

- backpain
- depression
- fatigue
- headaches
- IBS
- menopause
- migraines
- osteoarthritis
- period problems
- sleep problems
- sore muscles
- stress and anxiety

Check out:

[selfcaretoolkit.net](http://selfcaretoolkit.net)



Evidence	✓✓✓	Good evidence suggests this is well worth trying
Evidence	✓✓	Some research suggests that this is worth trying
Evidence	✓	A little research suggests this might be worth trying
Evidence	?	Not much research or uncertain results - however safe enough and might still be worth a try.
Costs	£	Costs will be from nothing to £15 per month. This category also includes options that might be available on the NHS
Costs	££	Costs could be up to £30 one off or per month although may be less
Costs	£££	Expect to pay more than £30 per month
Safety	👍	No safety concerns.
Safety	⚠️	Caution if you have certain health problems

# Common Cold (and respiratory viral infections such as flu)

## The guidance

**Guidance on antibiotic use (NICE)**  
*Not appropriate for antibiotics*

**Conventional self-care advice (NHS)**

- Rest and sleep
- Keep warm
- Drink adequate fluids

**Opportunities for antibiotic alternatives**

In almost all cases

**Likely duration if untreated**

3-7 days for common cold; flu and other infections can last longer.

# Common Cold (and respiratory viral infections such as flu)

## Home remedies with evidence of benefit

### **Pelargonium**

Evidence 

Costs 

Safety 

- Systemic reviews of clinical research conclude that there is good quality evidence of the use of pelargonium in common cold.

### **Andrographis**

Evidence 

Costs 

Safety 

- Clinical evidence demonstrates that taking andrographis can shorten the duration of the common cold compared with placebo.

### **Mushroom supplements**

Evidence 

Costs 

Safety 

- There are a number of placebo-controlled clinical trials that demonstrate that mushroom supplements (containing  $\beta$ -glucans and other immunoactive constituents) reduce the incidence and severity of respiratory tract infections.

### **Plant polyphenols**

Evidence 

Costs 

Safety 

- There is quite robust evidence that polyphenol supplements shorten the duration of colds and viral infections.

## Pelargonium

### Summary

Available as a registered traditional herbal medicine (THR) and based on a South African remedy umckaloabo (*Pelargonium sidoides*) traditionally used for colds, coughs and chest infections.

### Safety

No safety problems have been reported in clinical evidence. It is wise to choose the THR (look for the logo on the pack) option for independent assurance of quality.

### Cost

Available for less than £10 for a month supply.



## Southampton HATRIC study

Willcox M, Simpson C, Wilding S, et al. (2021) *Pelargonium sidoides* root extract for the treatment of acute cough due to lower respiratory tract infection in adults: a feasibility double-blind, placebo-controlled randomised trial. BMC Complement Med Ther. 21(1): 48. doi: 10.1186/s12906-021-03206-4.

## Southampton again

Hu XY, Wu RH, Logue M, et al (2017). *Andrographis paniculata* (Chuān Xīn Lián) for symptomatic relief of acute respiratory tract infections in adults and children: A systematic review and meta-analysis. PLoS One. 12(8): e0181780. doi: 10.1371/journal.pone.0181780

## Andrographis

### Summary

Known in India as kalmegh (meaning 'king of bitters'), is grown in hedgerows and gardens where it is highly valued by the local people to promote digestive activity as well as to fend off respiratory and other infections. The whole herb, including the root, has been used, but use of the leaf or aerial parts is more common.

### Safety

No adverse effects from taking *Andrographis* are expected, although high doses may cause upset digestion.

### Cost

Available for less than £10 for a month supply.



# Common Cold (and respiratory viral infections such as flu)

## Home remedies with some evidence of benefit

### Probiotics

Evidence 

Costs 

Safety 

- Although the overall evidence base is inconsistent there is enough clinical trial data that various probiotic supplements can reduce the frequency, duration and intensity of respiratory infections, especially in children.

### Elderberry

Evidence 

Costs 

Safety 

- Flu symptoms were relieved earlier in subjects taking elderberry syrup compared with placebo syrup.

### Echinacea

Evidence 

Costs 

Safety 

- The evidence base is mixed with the best evidence that echinacea may reduce the risk of catching colds. Some preparations may show more promise for actually managing the symptoms of cold.

## Echinacea

Evidence 

Costs 

Safety 

### Summary

One of the most popular native remedies for treating infections in North America, three species of Echinacea have been used with varying levels of evidence for each, and between root and leaf. Given the diversity of activity it may be worth trying different products to find the one that most suits.

### Safety

Echinacea has a very good safety profile.

### Cost

Available for less than £10 for a month supply.



# Common Cold (and respiratory viral infections such as flu)

## Home remedies with some evidence of benefit

### Garlic

Evidence 

Costs 

Safety 

- Systematic reviews have found evidence that some proprietary preparations may both reduce the risk of respiratory infections and the symptoms when they happen. Raw garlic is the traditionally favoured option but there is no substantial research for this; it may temporarily upset the digestion in some people, and also has social consequences!

### Zinc

Evidence 

Costs 

Safety 

- As a supplement there is some evidence that the equivalent of 15-13mg 'elemental' zinc can reduce the duration of colds in children.

### Vitamin C

Evidence 

Costs 

Safety 

- Among a mixed record of clinical trials there are a few which point to doses of vitamin C of greater than 200mg shortening the duration and severity of colds. This benefit was most likely in people exposed to physical hardship of extremes of cold.

# Common Cold (and respiratory viral infections such as flu)

## Traditional home remedy safe enough to try

### Cold remedy - *central heating!*

This tea will help counteract symptoms made worse by cold or improved by heat. It could be an actual cold, or a headache or pain that improves with a hot water bottle or hot bath. The tea triggers a reflex increase in blood flow to the mucous membranes of the mouth, airways and gut, and then elsewhere around the body. It maybe is one of the oldest medicines in the world!

- 1 knob\* fresh ginger - grated**
- 1 heaped teaspoon freshly ground cinnamon**  
*(\*size to taste, start small and build up)*

Put in large mug and add boiling water.

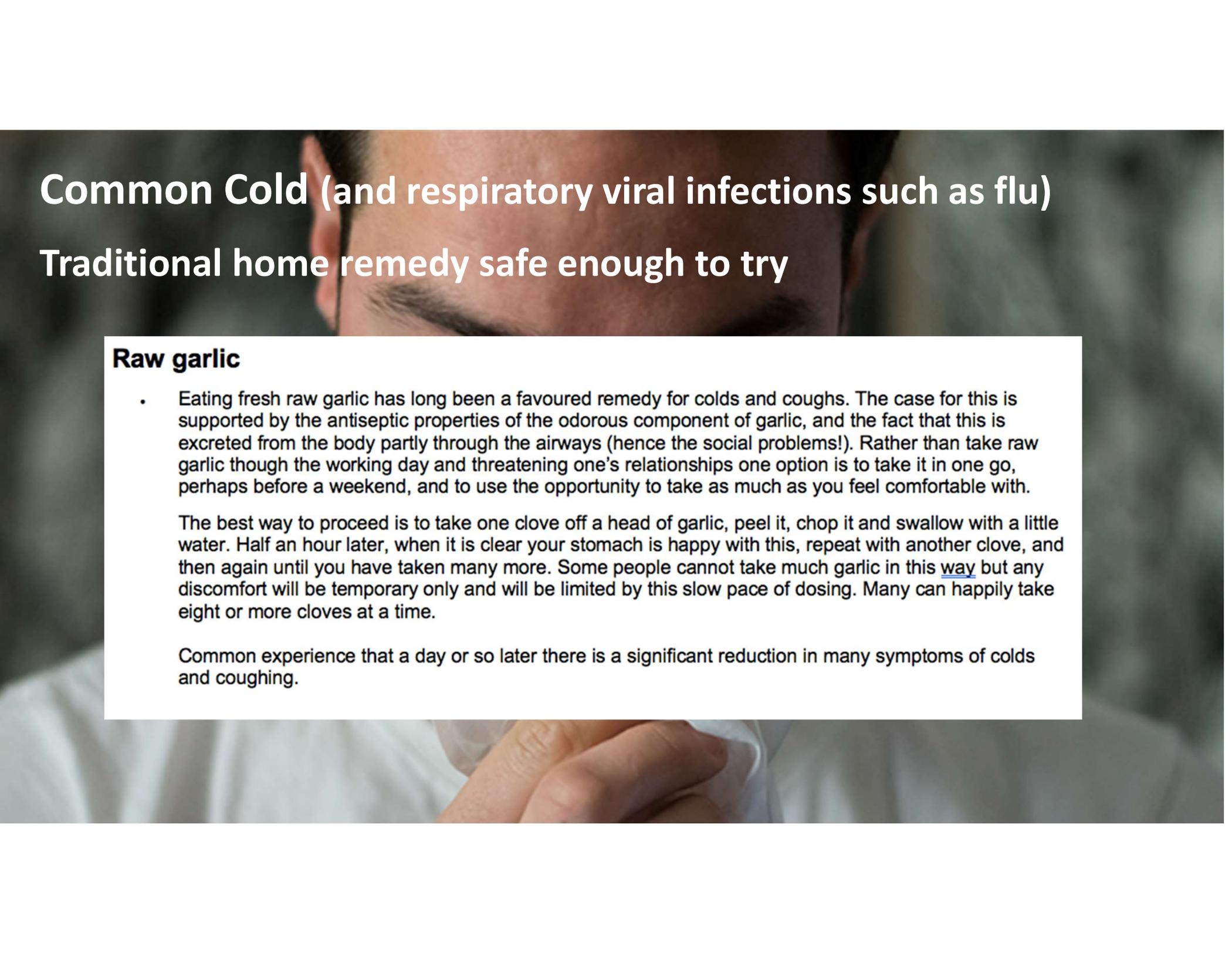
Stir and steep for a 3-5 minutes.

Sieve

Sip as often as you need.



The effects should be immediate. If you find it helpful you could use a thermos flask and sip it through the day.



# Common Cold (and respiratory viral infections such as flu)

## Traditional home remedy safe enough to try

### Raw garlic

- Eating fresh raw garlic has long been a favoured remedy for colds and coughs. The case for this is supported by the antiseptic properties of the odorous component of garlic, and the fact that this is excreted from the body partly through the airways (hence the social problems!). Rather than take raw garlic through the working day and threatening one's relationships one option is to take it in one go, perhaps before a weekend, and to use the opportunity to take as much as you feel comfortable with.

The best way to proceed is to take one clove off a head of garlic, peel it, chop it and swallow with a little water. Half an hour later, when it is clear your stomach is happy with this, repeat with another clove, and then again until you have taken many more. Some people cannot take much garlic in this way but any discomfort will be temporary only and will be limited by this slow pace of dosing. Many can happily take eight or more cloves at a time.

Common experience that a day or so later there is a significant reduction in many symptoms of colds and coughing.

# Sore throat

## The guidance

### **Guidance on antibiotic use (NICE)**

**Only** if more than two of the following

- Fever during previous 24 hours
- Pus on tonsils
- Tender swollen glands on neck
- Absence of cough
- Symptoms severe enough to call out doctor

### **Conventional self-care advice (NICE)**

- Consider paracetamol for pain or fever, or if preferred and suitable, ibuprofen
- Drink adequate fluids
- Some evidence that medicated lozenges can help reduce pain in adults

### **Opportunities for antibiotic alternatives**

If less than two of the NICE criteria above.

### **Likely duration if untreated**

2-8 days.

# Sore throat

## Home remedies with varying evidence of benefit (also consider remedies for the common cold as appropriate)

### **Pelargonium**

Evidence ✓✓✓

Costs ₤

Safety 👍

- Systemic reviews of clinical research conclude that there is good quality evidence of the use of pelargonium in acute pharyngitis.

### **Sage**

Evidence ✓✓

Costs ₤

Safety 👍

- Controlled clinical trials of sage spray and proprietary sage products showed efficacy against viral pharyngitis.

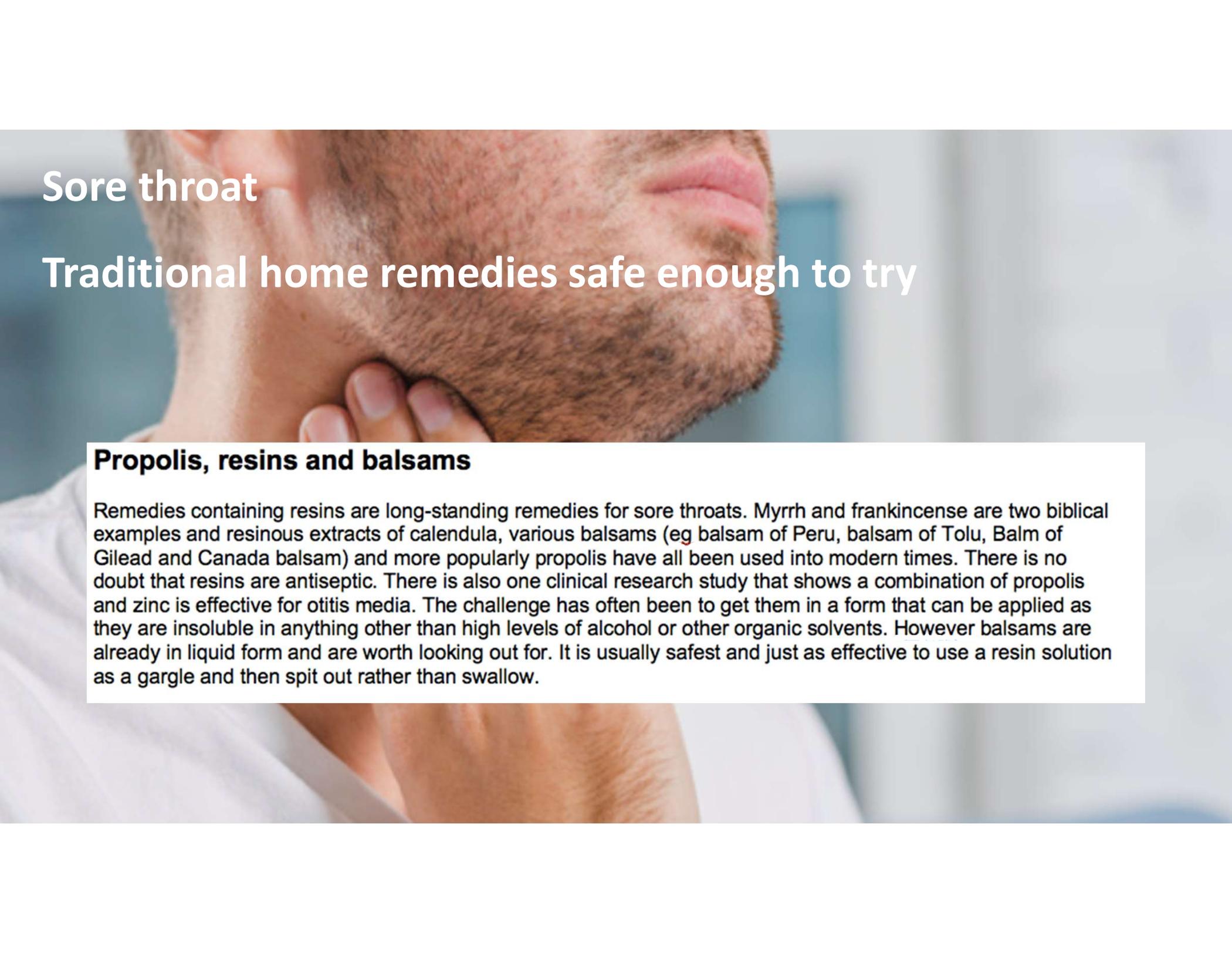
### **Honey**

Evidence ?

Costs ₤

Safety 👍

- Only a little published scientific evidence, though this supports everyday experience of relief of symptoms. See tips for using propolis below.



Sore throat

Traditional home remedies safe enough to try

### **Propolis, resins and balsams**

Remedies containing resins are long-standing remedies for sore throats. Myrrh and frankincense are two biblical examples and resinous extracts of calendula, various balsams (eg balsam of Peru, balsam of Tolu, Balm of Gilead and Canada balsam) and more popularly propolis have all been used into modern times. There is no doubt that resins are antiseptic. There is also one clinical research study that shows a combination of propolis and zinc is effective for otitis media. The challenge has often been to get them in a form that can be applied as they are insoluble in anything other than high levels of alcohol or other organic solvents. However balsams are already in liquid form and are worth looking out for. It is usually safest and just as effective to use a resin solution as a gargle and then spit out rather than swallow.

# Earache (acute otitis media)

## The guidance

### **Guidance on antibiotic use (NICE)**

Not suitable for antibiotics at all unless generally unwell or with complications

### **Conventional self-care advice (NICE)**

- manage symptoms with self-care
- regular paracetamol or ibuprofen for pain (right dose for age or weight at the right time and maximum doses for severe pain)
- evidence suggests that decongestants or anti-histamines do not help symptom

### **Opportunities for antibiotic alternatives**

At any time.

### **Likely duration if untreated**

3-8 days.

# Earache (acute otitis media)

## Home remedies with some evidence of benefit (also consider remedies for the common cold as appropriate)

### Probiotics

Evidence ✓

Costs ⚖️

Safety 👍

- Although the overall evidence base is inconsistent there is enough clinical trial data that various probiotic supplements can reduce the frequency, duration and intensity of respiratory infections, especially in children.

### Steaming

Evidence ?

Costs ⚖️

Safety ⚠️

- Using steam inhalations is one of the oldest and apparently helpful approaches to relieving pain of earache due to otitis media. The independent evidence for effectiveness is limited and there are also many reports of steam burns from unwise applications. It may still be worth trying. Make sure the steam is kept well away from the sufferer and children must be closely supervised. Best technique is to breathe the steam in through the mouth and out through the nose. The middle ear is connected directly to the throat by the Eustachian tubes: these are the tubes that 'go pop' or get sore in airplanes or high altitudes and which get congested and infected in otitis media. So during inhalation also move the jaw from side to side to open up the tubes. Try also dropping mentholated or other volatile oils in the steam. Strewing chamomile flowers on the hot water is also a good traditional tip.



**Earache (acute otitis media)**

**Traditional home remedies safe enough to try**

### **Propolis, resins and balsams**

As indicated above, remedies containing resins are long-standing remedies for sore throats. There is one clinical research study that showed a combination of propolis and zinc is specifically effective for otitis media. The best approach is to use the resin solution as a gargle, spit out rather than swallow and then move the jaw from side to side (as with steaming above) to open up the Eustachian tubes to the effects of the resins.

# Sinusitis

## The guidance

### Guidance on antibiotic use (NICE)

Not generally suitable for antibiotics; consider high-dose nasal corticosteroid (if over 12 years).

### Conventional self-care advice (NICE)

- Consider paracetamol or ibuprofen for pain or fever
- Little evidence that nasal saline or nasal decongestants help, but people may want to try them
- No evidence for oral decongestants, anti-histamines, mucolytics, steam inhalation, or warm face packs

### Opportunities for antibiotic alternatives

**Before prescription.** First 10 days, and later unless deterioration or otherwise generally very unwell.

**With prescription.** Most home remedies are compatible with antibiotic prescription: do however check with your doctor to be sure.

### Likely duration if untreated

Up to several weeks.

# Sinusitis

Home remedy with a little evidence of benefit  
(also consider remedies for the common cold as appropriate)

## Steaming

Evidence ?

Costs 

Safety 

- Using steam inhalations is one of the oldest and apparently helpful approaches to relieving pain and congestion due to sinusitis. However as the NICE advice above states, the independent evidence for effectiveness is actually limited. There are also many reports of steam burns from unwise applications. It may still be worth trying. Make sure the steam is kept well away from the sufferer and children must be closely supervised. People often report that the effect of steam is enhanced by dropping mentholated or other volatile oils in the steam. Strewing chamomile flowers on the hot water is also a good traditional tip.

# Cough

## The guidance

### Guidance on antibiotic use (NICE)

Not generally suitable for antibiotics; consider high-dose nasal corticosteroid (if over 12 years)

Make an exception if diagnoses complications or higher risk of complications (these include people with pre-existing illness; people over 65 with 2 or more of, or over 80 with 1 or more of:

- hospitalisation in previous year
- type 1 or 2 diabetes
- history of congestive heart failure
- current use of oral corticosteroids

### Conventional self-care advice (NICE)

- try honey (in over 1s)
- the herbal medicine **pelargonium** (in over 12s)
- cough medicines containing cough suppressants, except codeine (in over 12s)
- cough medicines containing the expectorant guaifenesin (in over 12s)
- These self-care treatments have limited evidence for the relief of cough symptoms

### Opportunities for antibiotic alternatives

**Before prescription.** At any stage including with more general upper respiratory or bronchial infection unless doctor makes exception

**With prescription.** Most home remedies are compatible with antibiotic prescription: do however check with your doctor to be sure.

### Likely duration if untreated

5-25 days.

# Cough

**Home remedy with independent evidence of benefit**  
(also consider remedies for the common cold as appropriate)

## **Pelargonium**

Evidence 

Costs 

Safety 

- Systemic reviews of clinical research conclude that there is good quality evidence of the use of pelargonium in relieving the coughs of bronchitis.

### Cough syrup – chest tonic and throat remedy

This delicious all-round cough syrup is particularly good for chest colds, especially in winter where a little warming on the chest is indicated. It is most useful if the cough is productive ie. brings something up, although it may help with dry coughs as well. It also soothes a sore dry throat.

#### Collect

- 3 heads fresh elderberries (if these are out of season use half a cup of fresh or frozen blueberries instead)
- 6 chopped fresh or dried cherries (you can leave the stones in)
- Handful finely chopped sage leaves
- 4 tsp fennel seeds
- 2 tsp cinnamon
- 1 tsp cloves
- 1/2 tsp ginger powder



Put these into a saucepan. Add 500 ml of water and bring to boil. Simmer until you have around 100ml of water left. Remove any cherry stones and put through blender until smooth. Then squeeze had through some muslin till you get around 100ml of thick liquid. Put back into the saucepan.

#### Add

- 100ml clear honey
- Juice of 1 lemon
- 100ml of vegetable glycerine

Bring back to boil and simmer for 2 minutes.

Pour into glass bottles and keep in the fridge. Label with date and consume within a month.

Take a teaspoonful 5-6 times a day as required.



A traditional home  
remedy safe enough  
to try for coughs

# Lower urinary tract infection

## The guidance

### Guidance on antibiotic use (NICE)

Non-pregnant women: immediately or wait 48 hours unless symptoms worsen.

Pregnant women, men, children or young people: immediately depending on severity of symptoms, risk of complications, previous urine culture and susceptibility results,

Prescribers should also take note of previous antibiotic use which may have led to resistant bacteria, and local antimicrobial resistance data.

### Opportunities for antibiotic alternatives

**With prescription.** Most home remedies are compatible with antibiotic prescription: however check with your doctor to be sure.

### Conventional self-care advice (NHS)

- Drink a lot of extra fluids, mainly water
- Urinate as soon as the need arises to reduce build up of infection
- Advise paracetamol or ibuprofen for pain

### Likely duration if untreated

A few days up to many weeks or even longer if established. Between 25-40% of cases will clear up without antibiotics.

# Lower urinary tract infection

## Home remedies with evidence of benefit

### Uva ursi

Evidence ✓✓

Costs ₤

Safety ⚠

- Established by the European Medicines Agency for treatment of symptoms of mild recurrent lower urinary tract infections such as burning sensation during urination and/or frequent urination in women. Daily doses should be no more than 15g of the dried leaf in hot water (or 8mg of herb as capsule or tablet) to avoid the irritating effects of high tannin levels.

### Cranberry

Evidence ✓

Costs ₤

Safety 👍

- This is a very popular remedy to relieve the pain of urinary infections such as cystitis, most often in the form of juice, and also as various supplement forms. The reviewed evidence however is mixed, with one possible confusing factor the high sugar levels in cranberry juice. It seems better to use dried fruits or cranberry supplements.

### Southampton ATAFUTI study

Moore M, Trill J, Simpson C et al. (2019) Uva-ursi extract and ibuprofen as alternative treatments for uncomplicated urinary tract infection in women (ATAFUTI): a factorial randomized trial. Clin Microbiol Infect. 25(8): 973-980. doi: 10.1016/j.cmi.2019.01.011.

# Lower urinary tract infection

## Home remedies with evidence of benefit

### Probiotics

Evidence ✓

Costs Ⓣ

Safety 👍

- There is some evidence that taking probiotics can help reduce the severity and frequency of urinary infections.

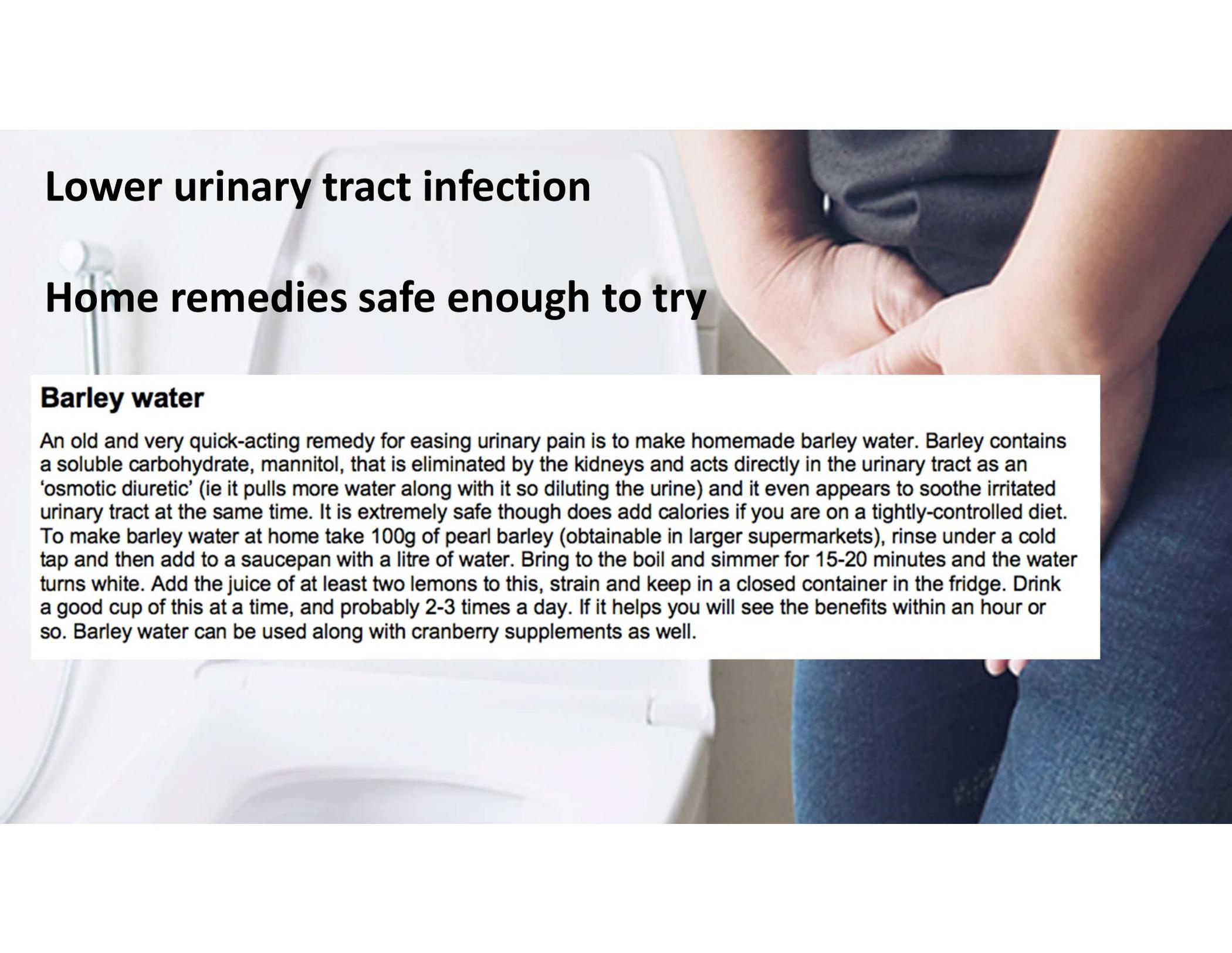
### Vitamin C

Evidence ✓

Costs Ⓣ

Safety 👍

- This reacts with nitrates in urine to form nitrogen oxides that can kill bacteria. It can also lower the pH of urine, making it less likely that bacteria will survive. It is probably best to combine Vitamin C with other remedies listed here.

A photograph of a person sitting on a toilet, holding their lower back with both hands, suggesting discomfort or pain. The person is wearing a dark blue top and leggings. The background is a plain, light-colored wall.

## Lower urinary tract infection

## Home remedies safe enough to try

### **Barley water**

An old and very quick-acting remedy for easing urinary pain is to make homemade barley water. Barley contains a soluble carbohydrate, mannitol, that is eliminated by the kidneys and acts directly in the urinary tract as an 'osmotic diuretic' (ie it pulls more water along with it so diluting the urine) and it even appears to soothe irritated urinary tract at the same time. It is extremely safe though does add calories if you are on a tightly-controlled diet. To make barley water at home take 100g of pearl barley (obtainable in larger supermarkets), rinse under a cold tap and then add to a saucepan with a litre of water. Bring to the boil and simmer for 15-20 minutes and the water turns white. Add the juice of at least two lemons to this, strain and keep in a closed container in the fridge. Drink a good cup of this at a time, and probably 2-3 times a day. If it helps you will see the benefits within an hour or so. Barley water can be used along with cranberry supplements as well.

## Reducing antibiotics – what are the positive options?



## RECAP

All this and more,  
including the references,  
is available at the  
College of Medicine  
Self Care resource

OUR HEALTH DIRECTORY

[ourhealth.directory/instead-of-antibiotics/](http://ourhealth.directory/instead-of-antibiotics/)

# THANK YOU

and pick up these cards  
for your patients!