

That's a claim!



Key Concepts for thinking critically about health claims

BEWARE
of claims

THINK 'FAIR'
about the evidence

TAKE CARE
when you decide

BEWARE

Too good to be true
"100% safe!"

People often think about the benefits of treatments and ignore possible harms. But few treatments that work are 100% safe.

TAKE CARE

Right problem and options
What is your problem and what are your options?

Make sure that you understand what the health problem is that you are thinking about treating, and that you know what your choices are.

BEWARE

Too good to be true
"100% effective!"

Most claims that a treatment will make you 100% better or that it works for everyone turn out to be wrong.

BEWARE

Too good to be true
"100% certain!"

We can rarely, if ever, be 100% certain about the effects of treatments.

TAKE CARE

Relevant evidence
What outcomes matter to you?

Always ask yourself whether the treatment outcomes that are important to you have been checked in fair comparisons.

TAKE CARE

Relevant evidence
Are the people (or animals) very different?

Always ask yourself if the treatment comparisons included only people (or animals) that are very different from you.

BEWARE

Faulty logic
"Treatment needed!"

People who are sick often get better without a treatment. Sometimes a treatment does not help and may even make things worse.

BEWARE

Faulty logic
"It works like this!"

Treatments that should work in theory often do not work in practice.

BEWARE

Faulty logic
"Associated with!"

Just because using a treatment is associated with people getting better or worse, that doesn't mean that the treatment made them better or worse.

THINK 'FAIR'

Unfair comparison
Unreliable assessment of outcomes

Look out for outcomes that were not assessed reliably in treatment comparisons.

TAKE CARE

Relevant evidence
Are the treatments different from those available to you?

Always ask yourself if the treatments evaluated in fair comparisons are relevant.

TAKE CARE

Relevant evidence
Are the circumstances different from yours?

Always ask yourself if fair comparisons of treatments were conducted in circumstances that are relevant.

BEWARE

Faulty logic
"Lots of data!"

More data is not necessarily better data, whatever the source.

BEWARE

Faulty logic
"No comparison needed!"

Unless a treatment is compared to something else, it is not possible to know what would happen without it.

BEWARE

Faulty logic
"A study shows!"

If one treatment comparison (study) shows that people who got one treatment did better or worse than people who got something else, it does not mean that is the final answer.

THINK 'FAIR'

Unfair comparison
Dissimilar comparison groups

Look out for treatment comparisons where the comparison groups were not alike.

THINK 'FAIR'

Unfair comparison
Indirect comparisons

Look out for comparisons of treatments between studies that are different.

THINK 'FAIR'

Unfair comparison
Dissimilar care

Look out for treatment comparisons where the comparison groups were cared for differently.

THINK 'FAIR'

Unfair comparison
Dissimilar expectations

Look out for comparisons where people knew which treatment they received and knowing that could have changed how they felt or behaved.

THINK 'FAIR'

Unfair comparison
Dissimilar measurement

Look out for treatment comparisons where what happened was measured differently in the comparison groups.

THINK 'FAIR'

Unfair comparison
Lots of missing people

Look out for treatment comparisons where what happened was not measured in lots of people.

TAKE CARE

Advantages and disadvantages
Do the advantages outweigh the disadvantages for you?

Always ask yourself whether the possible advantages of a treatment outweigh the disadvantages of the treatment.

BEWARE

Faulty logic
"Old is better!"

Just because a treatment has been used for a long time or by many people, it does not mean that it helps or that it is safe.

BEWARE

Faulty logic
"New is better!"

Just because a treatment is new, expensive, or brand-named does not mean that it is better or safer than other treatments.

BEWARE

Faulty logic
"More is better!"

Taking more of a treatment often increases harms without increasing how much it helps.

THINK 'FAIR'

Unreliable summary
Unsystematic summary

Look out for summaries of studies comparing treatments that were not done systematically.

THINK 'FAIR'

Unreliable summary
Selective reporting

Look out for unpublished results of fair comparisons.

THINK 'FAIR'

Unreliable summary
Unfounded assumptions

Look out for treatment comparisons that are sensitive to assumptions that are made.

THINK 'FAIR'

Misleading description
Just words

Look out for treatment effects that are described just using words.

THINK 'FAIR'

Misleading description
Relative effects

Look out for treatment effects that are described as relative effects.

THINK 'FAIR'

Misleading description
Average effects

Look out for treatment effects that are described as average differences.

TAKE CARE

Advantages and disadvantages
Few people or events

Look out for treatment effects that are based on small studies with few people.

TAKE CARE

Advantages and disadvantages
How sure are you?

Always ask yourself how sure you are that the possible advantages of a treatment are better than the possible disadvantages of the treatment.

BEWARE

Faulty logic
"Early is better!"

Earlier detection of 'disease' is not necessarily better.

BEWARE

Faulty logic
"Personalised medicine!"

It is rarely possible to know in advance who will benefit, who will not, and who will be harmed by using a treatment.

BEWARE

Trust alone
"As advertised!"

Someone with an interest in getting people to use a treatment, such as making money, may exaggerate benefits and ignore possible harmful effects.

THINK 'FAIR'

Misleading description
Subgroup analyses

Look out for results that are reported for a selected group of people within a study or systematic review.

THINK 'FAIR'

Misleading description
No confidence interval

Look out for results that are reported using p-values instead of confidence intervals.

THINK 'FAIR'

Misleading description
No evidence

Look out for a "lack of evidence" being described as evidence of "no difference".

THINK 'FAIR'

Misleading description
Statistically significant

Look out for results that are reported as "statistically significant" or "not statistically significant".

BEWARE

Trust alone
"It worked for me!"

If someone got better after using a treatment it does not necessarily mean that the treatment made them better.

BEWARE

Trust alone
"Recommended by experts!"

Just because a treatment claim is made by an expert or authority, you cannot be sure that it is trustworthy.

BEWARE

Trust alone
"Peer reviewed!"

"Peer-reviewed" and published studies may not be fair comparisons.

Introduction

What should you eat? There are lots of claims about what you should and should not eat. For example, there are claims that chocolate causes acne, that it stimulates sexual desire, and that it is good for your heart. How can you know which of these claims are trustworthy? And how should you decide when to act on claims like these, or other claims about what is good or bad for your health?

There are lots of claims like this about what is good for our health. A **claim** is something someone says that can be right or wrong. A **"treatment"** can be anything you do for your health — for example, taking a medicine, exercising, eating chocolate, or not eating chocolate. It can also be something that we do for the health of a community — for example, making sure that water is safe to drink, making sure everyone has access to health care when they need it, or reducing the use of fossil fuels. An **effect** is something a treatment makes happen — like making you feel better or worse, making people more or less likely to have a heart attack or a stroke, or curing someone who is sick.

People make lots of claims about treatment effects. How can we tell which claims are right or wrong? To do this, you need to look at what supports their claim — its **basis**. For example, someone's personal experience is not a good basis for a claim about what is good for your health. This is because we don't know what would have happened if that person had done something else.

To know if a treatment (like eating chocolate) causes an effect (like sexual desire), the treatment has to be **compared** to something else (like not eating chocolate). Researchers compare a treatment given to people in one group with something else given to people in another group. Those comparisons provide **evidence** — facts to support a conclusion about whether a claim is right or wrong. For those comparisons to be fair, the only important difference between the groups should be the treatments they receive.

A **good choice** is one that uses the best information available at the time. For health choices, this includes using the best available evidence of treatment effects. Good choices don't guarantee good outcomes, but they make good outcomes more likely.

www.thatsclaim.org/health

BEWARE of claims that have a bad basis

Many claims about the effects of treatments are not trustworthy. Often this is because the reason (the basis) for the claim is not trustworthy.

You should be careful when you hear claims that are:

- Too good to be true
- Based on faulty logic
- Based on trust alone

THINK 'FAIR' - and check the evidence from treatment comparisons

Evidence from comparisons of treatments can fool you. You should think carefully about the evidence that is used to support claims about the effects of treatments.

Look out for:

- Unfair comparisons of treatments
- Uncareful summaries of comparisons
- How treatment effects are described

TAKE CARE - and make good choices

Good treatment choices depend on thinking carefully about what to do.

Think carefully about:

- What your problem is and what your options are
- Whether the evidence is relevant to your problem and options
- Whether the advantages are better than the disadvantages