EXERCISE BOOK

The Health Choices Book: Learning to think carefully about treatments
<table>
<thead>
<tr>
<th>Title</th>
<th>The Health Choices Book: Learning to think carefully about treatments. A health science book for primary school children. EXERCISE BOOK.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors</td>
<td>Matt Oxman,¹ Sarah Rosenbaum,¹ Allen Nsangi,² Daniel Semakula,² Angela Morelli,¹ Astrid Austvoll-Dahlgren,¹ Andrew D. Oxman,¹ Nelson K. Sewankambo,² Margaret Kaseje,³ Laetitia Nyirazinyoye,⁴ Claire Glenton,¹ Simon Lewin¹</td>
</tr>
<tr>
<td>Illustration</td>
<td>Sarah Rosenbaum, Miriam Grønli</td>
</tr>
<tr>
<td>Design</td>
<td>Sarah Rosenbaum, Angela Morelli</td>
</tr>
<tr>
<td>Publisher</td>
<td>Norwegian Institute of Public Health</td>
</tr>
<tr>
<td>Date</td>
<td>March 2016</td>
</tr>
</tbody>
</table>

¹Global Health Unit, Norwegian Institute of Public Health, Oslo, Norway ²College of Health Sciences, Makerere University, Kampala, Uganda ³Great Lakes University of Kisumu, Kenya ⁴School of Public Health, College of Medicine and Health Sciences, University of Rwanda, Kigali

Unrestricted non-commercial use, distribution and reproduction of this book is permitted, provided the source is properly cited. Feedback about how to improve the this book is welcome and should be sent to: contact@informedhealthchoices.org.

This book was prepared as part of the Informed Healthcare Choices project (www.informedhealthchoices.org), which was supported by the Research Council of Norway, project number 220603/H10. The funder did not have a role in drafting, revising or approving the content.
EXERCISE BOOK

for

The Health Choices Book: Learning to think carefully about treatments

A health science book for primary school children
## Contents

*This is a list of what is in the book.*

### Introduction

| Lesson 1 | Health, treatments and effects of treatments | 4 |

### John and Julie learn about BAD BASES for CLAIMS about treatments

| Lesson 2 | Claims based on someone’s personal experience using a treatment | 8 |
| Lesson 3 | Other bad bases for claims about treatments (Part 1) | 14 |
| Lesson 4 | Other bad bases for claims about treatments (Part 2) | 18 |

### John and Julie learn about COMPARISONS of treatments

| Lesson 5 | Comparisons of treatments | 24 |
| Lesson 6 | Fair comparisons of treatments | 30 |
| Lesson 7 | Fair comparisons with many people | 35 |

### John and Julie learn about CHOICES of treatments

| Lesson 8 | Advantages and disadvantages of a treatment | 40 |
### Review

<table>
<thead>
<tr>
<th>Lesson 9</th>
<th>What is most important to remember from this book</th>
</tr>
</thead>
</table>

### Glossary

<table>
<thead>
<tr>
<th>List of important words in this book and the meanings of those words</th>
</tr>
</thead>
</table>

PAGE 44

PAGE 50
Introduction

1 Health, treatments and effects of treatments

What you learned in this lesson:

1. What “health” is
2. What a “treatment” is
3. What an “effect of a treatment” is
4. What a “health researcher” is
5. What this book is about

Keywords for this lesson:

- Your **HEALTH** is how well your body and mind are.
- A **TREATMENT** is something you do for your health.
- An **EFFECT of a treatment** is something that a treatment makes happen.
- A **HEALTH RESEARCHER** is someone who carefully studies health to find out more about health.
Lesson 1: Health, treatments and effects of treatments
Write what the words mean. Remember that the meanings of the words are in the back of the book.

**EXAMPLE:** What is a “cartoon”?

A cartoon is a story with words and pictures put together.

1. What is your “health”?

2. What is a “treatment”?

3. What is an “effect” of a treatment?
Tick whether each point is true or false.

**EXAMPLES:**

Your health is important.

- ✔ True  ❌ False

Your health is not important.

- ❌ True ✔️ False

1. Most treatments have both good and bad effects.

- ❌ True ✔️ False

2. This book tells you what treatments to use.

- ❌ True ✔️ False

3. Drinking juice is a treatment.

- ❌ True ✔️ False

4. Not drinking juice is a treatment.

- ❌ True ✔️ False

5. We can be completely sure about the effects of most treatments.

- ❌ True ✔️ False
2

Claims based on someone’s personal experience using a treatment

What you learned in this lesson:

1. What a “claim” is
2. What the “basis” for a claim is
3. What an “unreliable” claim” is
4. Why it is important to ask what the basis is for a claim about the effects of a treatment
5. Why someone’s personal experience using a treatment is a bad basis for claims about the effects of the treatment

Keywords for this lesson:

- A **CLAIM** is something that someone says that can be right or wrong.
- The **BASIS for a claim** is the support, foundation or reason for the claim.
- An **UNRELIABLE claim** is a claim with a bad basis.
- A **PERSONAL EXPERIENCE using a treatment** is something that happened to someone after using a treatment.
Lesson 2: Claims based on someone's personal experience using a treatment
Write what the words mean. Remember that the meanings of the words are in the back of the book.

**EXAMPLE:** What is your “health”?

Your health is how well your body and mind are.

1. What is a “claim”?
2. What is the “basis for a claim”?
3. What is an “unreliable” claim?
4. What is a “personal experience” of using a treatment?
Write which is the experience and which is the claim.

Example:

Sarah put cow dung on a burn and the burn went away. Therefore, she claims cow dung heals burns.

Sarah’s experience:
Putting cow dung on her burn and the burn going away.

Sarah’s claim:
Cow dung heals burns.

1. Andy says eating apples will make your teeth fall out because he once ate an apple and one of his teeth fell out.

Andy’s experience:

Andy’s claim:
2. One time, when Daniel had a fever, he took a warm bath. After only one hour, his fever was almost all gone. Now, Daniel says taking a warm bath will cure a fever.

Daniel’s experience:

__________________________________________

__________________________________________

Daniel’s claim:

__________________________________________

3. Last night, Christine slept for 12 hours! Today, she ran a race and came in first place! Because of this, Christine told the other runners that sleeping for a long time will make you run faster.

Christine’s experience:

__________________________________________

__________________________________________

Christine’s claim:

__________________________________________

__________________________________________
In the back of the exercise book there are pages for collecting claims like John and Julie do in the story.

Whenever you hear a claim about the effects of a treatment at school, at home or anywhere else, fill in the claim there.

In Lesson 9, you will answer whether you think the claims are reliable.
What you learned in this lesson:

Why these are bad bases for claims about the effects of a treatment:

1. How long the treatment has been used or how many people have used it
2. How much money the treatment costs or how new it is
Tick whether each point is true or false.

Example:
Someone’s personal experience using a treatment is a good basis for a claim about the effects of the treatment.

☐ True ☑ False

1. When people have the same claim for a long time, it is almost always right.
   ☐ True ☐ False

2. When people have made the same claim for many years, it is sometimes right and sometimes wrong.
   ☐ True ☐ False

3. If thousands of people make the same claim, they are right.
   ☐ True ☐ False

4. The more money that a treatment costs, the better it is.
   ☐ True ☐ False

5. Newer treatments are sometimes worse than older treatments.
   ☐ True ☐ False
Write why the claims are unreliable.

**Example:**
Sarah put cow dung on a burn and the burn went away. Therefore, she claims cow dung heals burns.

*The claim is unreliable because:*

It is only based on Sarah’s personal experience. It is possible that Sarah’s burn would have gone away without her putting cow dung on it.

1. One time, when Michael had a fever, he took a cold bath. After only one hour, his fever was almost all gone. Now Michael says taking a cold bath cures a fever.

*The claim is unreliable because:*

2. There are different types of coffee at the shop. Mercy buys the one that costs the most money. She says it is better for your health because it costs more money.

*The claim is unreliable because:*

Lesson 3: Other bad bases for claims about treatments (Part 1)
What you learned in this lesson:

Why these are bad bases for claims about the effects of a treatment:
1. That someone selling the treatment said something about it
2. That an expert said something about the treatment

Keyword for this lesson:
• An **EXPERT** is someone who knows a lot about something.
Tick whether each point is true or false.

**Example:**
The newer a treatment is, the better it is.

☐ True  ☑ False

1. New treatments are sometimes worse than old treatments.
   
   ☐ True  ☐ False

2. Not all experts make reliable claims.
   
   ☐ True  ☐ False

3. If an expert makes a claim based on a personal experience, the claim is unreliable.
   
   ☐ True  ☐ False

4. The basis for the claim is more important than who is making the claim.
   
   ☐ True  ☐ False
Write why the claims are unreliable.

**Example:**
Alice eats potatoes everyday. She says it makes her stronger because many people have told her so.

*The claim is unreliable because:*

The basis is how many people have said that eating potatoes everyday makes you stronger. This is a bad basis for the claim.

1. Christopher has bought some candles. He says that if you use the candles, you will not get malaria. He says it is right because people who sell the candles say so.

*The claim is unreliable because:*

→
2. Josephine says that eating soup will make the flu go away. She says it is true because a cook told her so. The cook knows a lot about foods.

*The claim is unreliable because:*  

3. Rehema heard a fisherman say that eating boiled fish is better for your health than eating grilled fish. Rehema says the fisherman is right because he knows so much about fish.

*The claim is unreliable because:*
What you learned in this lesson:

1. Why health researchers must compare a treatment to another treatment or no treatment

Keyword for this lesson:

- A RELIABLE claim is a claim with a good basis.
- To COMPARE treatments is to look at the differences between two or more treatments.
- A RESEARCH QUESTION is a question that researchers try to answer.
Write what the words mean. Remember that the meanings of the words are in the back of the book.

Example:
What is a “health researcher”?  
A health researcher is someone who carefully studies health to find out more about health.

1. What is a “reliable” claim?

2. What is a “comparison” of treatments?

3. What is to “measure”?
Tick the best way to measure what happened in each comparison of treatments.

**Example:**

How much people weigh after using different treatments

- [x] Weigh them on a scale
- [ ] Look at them

1. How fast people run when using different treatments

- [ ] Time them with a watch
- [ ] Ask them

2. Whether people still have fevers after using different treatments

- [ ] Touch their heads
- [ ] Smell them

3. Whether people still feel head pain after using different treatments

- [ ] Ask them
- [ ] Look at them
Imagine that the faces are people who have been in comparisons of two tablets for malaria. People in Group A were given a new tablet for malaria. People in Group B were given an old tablet. Each face like this is a person with malaria:

Each face like this is a person with malaria: ☹

Measure the difference between the groups.

**Example:**

*Group A:*

*Group B:*

---

**How many people had malaria in each group?**

Group A: 10 out of 20

Group B: 5 out of 20

**What was the difference between the groups?**

There were 5 more people with malaria out 20 in Group A.
Lesson 5: Comparisons of treatments

EXERCISE 3

Group A: Group B:

How many people had malaria in each group?

Group A: _____ out of 20

Group B: _____ out of 20

What was the difference between the groups?

There were _____ more people with malaria out 20 in Group _____.

Group A: Group B:

How many people had malaria in each group?

Group A: _____ out of 50

Group B: _____ out of 50

What was the difference between the groups?

There were _____ more people with malaria out 50 in Group _____.
6

Fair comparisons of treatments

What you learned in this lesson:

1. What a “fair” comparison of treatments is
2. Why health researchers should be fair when comparing treatments
3. How health researchers should be fair when comparing treatments

Keywords for this lesson:

• A FAIR comparison of treatments is a comparison where the only important difference is the treatments.
• Choosing by CHANCE who gets which treatment is a way of choosing without knowing who will get which treatment.
Tick whether each point is true or false.

**Example:**
Many times, health researchers have compared using a treatment to not using the treatment.

- True
- False

1. Health researchers’ comparisons may not always be fair.
   - True
   - False

2. If you think that a treatment will make you happier, you could feel happier after using it without the treatment really doing anything.
   - True
   - False

3. In a fair comparison, the treatment is the only important difference between groups.
   - True
   - False

4. Health researchers can measure something by asking questions.
   - True
   - False
Imagine that Professor Compare and Professor Fair are studying the measles vaccine.

A vaccine is an injection that is used to stop people from getting a disease.

Measles is a type of disease.

So, the measles vaccine is a treatment for stopping people from getting measles.

The Professors are going to compare using the vaccine to not using the vaccine.

1. What is the Professor’s research question?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

2. Should the Professors choose who gets the vaccine? Why?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
3. Should the people in the comparison choose who gets the vaccine? Why?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

4. Should the people in the comparison know if they got the vaccine? Why?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
John and Julie learn about COMPARISONS of treatments

7

Fair comparisons with many people

What you learned in this lesson:

1. Why health researchers should give the treatments to many people in their fair comparisons

Keyword for this lesson:

*Finding something by CHANCE in comparisons that were too small* is finding something without knowing why it happened because the comparisons were too small.
The teacher will lead the activity using 10 red and 10 blue cards. There are 10 people with stomach pain on each card. Each time a card is turned, write how many people on that card no longer have stomach pain.

<table>
<thead>
<tr>
<th>Group Red</th>
<th>Group Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the space below, write the number of people who no longer had pain after taking a <strong>red pill</strong></td>
<td>In the space below, write the number of people who no longer had pain after taking a <strong>blue pill</strong></td>
</tr>
<tr>
<td>Red Card 1:</td>
<td>Blue Card 1:</td>
</tr>
<tr>
<td>Red Card 2:</td>
<td>Blue Card 2:</td>
</tr>
<tr>
<td>Red Card 3:</td>
<td>Blue Card 3:</td>
</tr>
<tr>
<td>Red Card 4:</td>
<td>Blue Card 4:</td>
</tr>
<tr>
<td>Red Card 5:</td>
<td>Blue Card 5:</td>
</tr>
<tr>
<td>Red Card 6:</td>
<td>Blue Card 6:</td>
</tr>
<tr>
<td>Red Card 7:</td>
<td>Blue Card 7:</td>
</tr>
<tr>
<td>Red Card 8:</td>
<td>Blue Card 8:</td>
</tr>
<tr>
<td>Red Card 9:</td>
<td>Blue Card 9:</td>
</tr>
<tr>
<td>Red Card 10:</td>
<td>Blue Card 10:</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>Total:</strong></td>
</tr>
</tbody>
</table>

Lesson 7: Fair comparisons with many people
Tick whether each point is true or false.

**Example:**
In a fair comparison, the groups are similar.

✔️ True  ☐ False

1. In fair comparisons, health researchers can be more sure why something happens when it happens many times.
   ☐ True  ☐ False

2. If a comparison is big enough, it is not important whether it is fair.
   ☐ True  ☐ False

3. Most of the time, health researchers should make more than one fair comparison of the same treatments.
   ☐ True  ☐ False
Remember that the two meanings of “by chance” are in the back of the book

1. What does it mean to choose “by chance” who gets which treatment?

2. What does it mean to find something “by chance” in a comparison that was too small?
Advantages and disadvantages of a treatment

What you learned in this lesson:

1. What an “advantage” of a treatment is
2. What a “disadvantage” of a treatment is
3. What an “informed choice” is
4. Why it is important to make informed choices of treatments
5. How to make informed choices of treatments

Keywords for this lesson:

- An **INFORMED** choice is a choice made when you understand the information that you have.
- An **ADVANTAGE** of a treatment is something about a treatment that you think is good.
- A **DISADVANTAGE** of a treatment is something about a treatment that you think is bad.
Write what the words mean. Remember that the meanings of the words are in the back of the book.

**Example:**

What is a “fair” comparison of treatments?

A comparison where the only important difference is the treatments.

1. What is an “informed choice”?

2. What is an “advantage” of a treatment?

3. What is a “disadvantage” of a treatment?
Tick whether each point is true or false.

**Example:**
If a comparison is big enough, it is not important whether it is fair.
☑ True  ☑ False

1. Costing a lot of money is an advantage of a treatment.
   ☐ True  ☐ False

2. A good effect is an advantage of a treatment.
   ☐ True  ☐ False

3. When two people make informed choices that means they are making the same choice.
   ☐ True  ☐ False

4. An advantage to one person can be a disadvantage to another person.
   ☐ True  ☐ False

5. Disadvantages of a treatment are always more important than the advantages.
   ☐ True  ☐ False
Lesson 9: What is most important to remember from this book
Remember!

- Think carefully before choosing whether to use a treatment.
  - Most treatments have both good and bad effects.
  - What someone says about a treatment can be wrong.

CLAIMS about treatments

When you hear a claim about the effects of a treatment, always ask:

- **What is the basis for the claim?**

  If the basis for the claim is bad, the claim is unreliable.
  These are bad bases for claims about the effects of a treatment:

1. Someone’s personal experience using the treatment
2. How long the treatment has been used or how many people have used it
3. How much money the treatment costs or how new it is
4. That someone selling the treatment says something about it
5. That an expert says something about the treatment, if not based on fair comparisons

COMPARISONS of treatments

If the basis for the claim is good, the claim is reliable.
Fair comparisons are a good basis for claims about the effects of treatments.
This is how health researchers make a fair comparison:

1. They compare one treatment to another treatment or to no treatment.
2. They choose who gets which treatment by chance (like flipping a coin).
3. They do not let anyone know who got which treatment until the end.
4. They give the treatments to many people, so what they find is not by chance.

CHOICES of treatments:

When you choose whether to use a treatment, always ask:

- **What are the advantages and disadvantages of the treatment?**
- What is most important to me?
Instructions

Open to the back of your exercise book to where you have collected claims.

Fill in the basis for each claim and tick one of the boxes to show that you think it is reliable or unreliable, or that you are not sure. There is an example on the next page.

Remember, the bases that you have learned about are:

- Someone’s personal experience using the treatment
- How long the treatment has been used or how many people have used it
- How much money the treatment costs or how new it is
- That someone selling the treatment said something about it
- That an expert said something about the treatment
- A fair comparison of the treatment to other treatments or no treatment
- An unfair comparison of the treatment to other treatments or no treatment

If you do not know what the basis for a claim is, leave the space empty for that claim.
Example:

Claim:
Cow dung heals burns!

Treatment:
Putting cow dung on a burn

Effect:
Healing burns

Basis:
Someone’s personal experience

Is the claim reliable?
☐ Yes    ☑ No    ☐ Not sure

Claim:

Treatment:

Effect:

Basis:

Is the claim reliable?
☐ Yes    ☐ No    ☐ Not sure
Lesson 9: What is most important to remember from this book

EXERCISE

Claim:

______________________________

Treatment:

______________________________

Effect:

______________________________

Basis:

______________________________

Is the claim reliable?

☐ Yes  ☐ No  ☐ Not sure

Claim:

______________________________

Treatment:

______________________________

Effect:

______________________________

Basis:

______________________________

Is the claim reliable?

☐ Yes  ☐ No  ☐ Not sure
Claim:

_____________________________________

Treatment:

_____________________________________

Effect:

_____________________________________

Basis:

_____________________________________

Is the claim reliable?

☐ Yes    ☐ No    ☐ Not sure

Claim:

_____________________________________

Treatment:

_____________________________________

Effect:

_____________________________________

Basis:

_____________________________________

Is the claim reliable?

☐ Yes    ☐ No    ☐ Not sure
List of important words in this book and the meanings of those words

A

An **ADVANTAGE** of a treatment is something about a treatment that you think is good.

**WORDS THAT MEAN THE OPPOSITE:** “Disadvantage” → See “D”.

**EXAMPLE:** “Good effects of a treatment are advantages of that treatment. Another advantage of some treatments is that they cost little or no money.”

**IN LUGANDA:** “Ekirungi ku bujjanjabi obumu oba obulala”

**IN KISWAHILI:** “Manufaa”

B

To **BASE a claim on something** is to support a claim with something.

**EXAMPLE:** “Sarah’s claim was based on her experience.”

**IN LUGANDA:** “Okusinziira kyoba oyogeddeyogedde kubujjanjabu ku nsonga emu oba endala”

**IN KISWAHILI:** “Kwa kuzingatia”

The **BASIS for a claim** is the support, foundation or reason for the claim.

**EXAMPLE:** “Sarah’s experience was the basis for her claim”

**IN LUGANDA:** “Ensonga esinziirwako ekyogerwayogerwa”

**IN KISWAHILI:** “Uasili”
Choosing by **CHANCE** who gets which treatment is a way of choosing without knowing who will get which treatment. **EXAMPLE:** “John and Julie tossed a coin to choose which friends got juice and which friends got water. This way, they chose by chance who got juice. John and Julie did not know who would get juice.”

**IN LUGANDA:** “Omuntu okufuna ekintu lwa lukisakisa gamba nga okukuba akalulu okusalawo ani afuna ekintu ekimu obba ekirala”

**IN KISWAHILI:** “Kibahati”

Finding something by **CHANCE** in comparisons that were too small is finding something without knowing why it happened because the comparisons were too small. **EXAMPLE:** “Health researchers compared two medicines to find out which is better for head pain. They gave one medicine to the first group and another medicine to the second group. People in the first group felt their head pain go away fastest. However, there were too few people in the comparison. It is possible that they found the first medicine was better by chance. They could not know why people in the first group felt their head pain go away fastest.”

**IN LUGANDA:** “Ekintu okuzuulibwa oba okusangibwa lwa mukisa bukisa oba lwa lukisakisa”

**IN KISWAHILI:** “Kibahati”

A **CLAIM** is something that someone says that can be right or wrong. **EXAMPLE:** “Sarah’s claim was that cow dung heals burns. Her claim is wrong.”

**IN LUGANDA:** “Ekintu ekyogerwayogerwa”

**IN KISWAHILI:** “Madai”
To **CLAIM**
is to say something that can be right or wrong.
*EXAMPLE:* “Sarah **claimed** that cow dung heals burns. Her **claim** is wrong.”
*IN LUGANDA:* “Okwogerayogera ebintu ku kintu”
*IN KISWAHILI:* “Kudai”

A **COMPARISON** of treatments
is a look at the differences between two or more treatments.
*WORDS THAT MEAN THE SAME:* “Study of treatments” or “Test of treatments”
*EXAMPLE:* “Health researchers have made **comparisons** between sleeping under a mosquito net and sleeping without a net.”
*IN LUGANDA:* “Okugeraageranya okukoleddwa wakati w’obujjanjabi obumu n’obulala”
*IN KISWAHILI:* “Kilinganisho”

To **COMPARE** treatments
is to look at the differences between two or more treatments.
*EXAMPLE:* “Health researchers have **compared** sleeping under a mosquito net to sleeping without a net.”
*IN LUGANDA:* “Okugeraageranya obujjanjabi obumu n’obulala”
*IN KISWAHILI:* “Kulinganisha”

**D**

A **DISADVANTAGE** of a treatment
is something about a treatment that you think is bad.
*WORD THAT MEANS THE OPPOSITE:* “Advantage” → See “A”.
*EXAMPLE:* “Bad effects of a treatment are **disadvantages** of that treatment. Another **disadvantage** of some treatments is that they cost a lot of money.”
*IN LUGANDA:* “Ekitali kirungi ku bujjanjabi obumu oba obulala” oba “Ekibi ku bujjanjabi obumu oba obulala”
*IN KISWAHILI:* “Kwa madhara”
An **EFFECT** of a treatment
is something that a treatment makes happen.
**EXAMPLE:** “Seeing better is an effect of wearing glasses.”
**IN LUGANDA:** “Ekivaamu mukufuna oba okukozesa obujanjabi”
**IN KISWAHILI:** “Tokeo”

An **EXPERT**
is someone who knows a lot about something.
**EXAMPLE:** “An herbalist is an expert in herbal medicine, but herbalists can be wrong. All experts can be wrong.”
**IN LUGANDA:** “Kakensa” oba “Kafulu”
**IN KISWAHILI:** “Mtaalam”

A **FAIR** comparison of treatments
is a comparison where the only important difference is the treatments.
**WORDS THAT MEAN THE OPPOSITE:** “Unfair comparison” → See “U”
**EXAMPLE:** “Health researchers compared sleeping under a mosquito net to sleeping without a net. The people in the one group were similar to the people in the other group. It was a fair comparison because the only important difference between the groups was whether people slept under a net or not.”
**IN LUGANDA:** “Okugeraageranya obujanjabi obumu n’obulala okw’obwenkanya”
**IN KISWAHILI:** “Mthilisho halisi”
To **FIND** something after a comparison is to find a difference or similarity.

*EXAMPLE:* “Health researchers **found** that fewer people got malaria of those who slept under nets.”

*IN LUGANDA:* “Okuzuula ensonga oba ekintu oluvannyuma lw’okukola okugeraageranya wakati w’ekintu ekimu n’ekirala”

*IN KISWAHILI:* “Gundua”

A **FINDING** from a comparison is a difference or similarity found after a comparison.

*EXAMPLE:* “The health researchers’ **finding** was that fewer people got malaria of those who slept under nets.”

*IN LUGANDA:* “Ekizuuliddwa oba ekisangiddwa oluvanyuma lw’okukola okugeraageranya”

*IN KISWAHILI:* “Matokeo”

**H**

Your **HEALTH** is how well your body and mind are.

*EXAMPLE:* “Julie’s **health** is good because she is free from sicknesses and injuries. John has an infection, so his **health** is worse than Julie’s.”

*IN LUGANDA:* “Eby’obulamu”

*IN KISWAHILI:* “Afya”

A **HEALTHCARE CHOICE** is a choice about how to care for your health or others’ health.

*EXAMPLE 1:* “When you choose to use a treatment, you are making a **healthcare choice.**”

*EXAMPLE 2:* “When the government chooses which treatments to pay for and give people, they are making a healthcare choice.”

*IN LUGANDA:* “Okusalawo ku nsonga z’ebyobulamu”

*IN KISWAHILI:* “Uduma ya kiafya”
**HEALTH RESEARCH**
is the careful studying of health to find out more about health.

*Example:* “Health researchers carefully compared sleeping under mosquito nets to sleeping without nets. By doing this health research, they found out more about the effects of sleeping under a net.”

*Words that mean the same:* “Health science”

*In Luganda:* “Okunoonyereza kuby’obulamu okw’ekikugu”

*In Kiswahili:* “Utafiti wa afya”

A **HEALTH RESEARCHER**
is someone who carefully studies health to find out more about health.

*Example:* “Some health researchers study the effects of treatments on our health. For example, they have carefully compared sleeping under mosquito nets to sleeping without nets. By doing this, they found out more about the effects of sleeping under a net.”

*Words that mean the same:* “Health scientist”

*In Luganda:* “Abasawo abakugu abanoonyereza kuby’obulamu”

*In Kiswahili:* “Mdadisi wa afya”

**HEALTH SCIENCE**
→ See “Health research” above.

A **HEALTH SCIENTIST**
→ See “Health researcher” above.

An **INFECTION**
is a disease caused by germs.

*Example:* “John got an infection in his finger after putting cow dung on it.”

*In Luganda:* “Obulwadde”

*In Kiswahili:* “Ambukizo”
INFORMATION about treatments
is what we are told or learn about treatments.
EXAMPLE: “Health researchers’ findings are information about treatments.”
IN LUGANDA: “Obubaka ku by’obujjanjabi”
IN KISWAHILI: “Ambukizo” or “Amakuru”

An INFORMED choice
is a choice made when you understand the information that you have.
EXAMPLE: “Health researchers compared using an antibiotic to not using one. John and Julie understood the health researchers’ findings. They made informed choices about whether to use the antibiotic.”
IN LUGANDA: “Okusalawo okukolebwa nga omuntu asoose kutegeera en-songa zonna ezikwata ku ky’asalawo”
IN KISWAHILI: “Ambukizo”

M

To MEASURE
is to look at how much there is or how many there are of something.
EXAMPLE: “Health researchers compared sleeping under a mosquito net to sleeping without a net. They measured how many people got malaria.”
IN LUGANDA: “Okupima” oba “Okubala”
IN KISWAHILI: “Kupima”

To MISLEAD
is to make someone think something is right when it is wrong.
WORD THAT MEANS THE SAME: “Confuse” or “Fool”
EXAMPLE: “An unreliable claim can mislead you.”
IN LUGANDA: “Okubujaabuza”
IN KISWAHILI: “Kupotosha”
A **PERSONAL EXPERIENCE** using a treatment is something that happened to someone after using a treatment. 

**EXAMPLE:** “Sarah claims cow dung heals burns. Her claim is based on her personal experience putting cow dung on a burn. Her claim is wrong.”

**IN LUGANDA:** “Ekintu ky’oyiseemu nga omuntu ssekinnoomu mukufuna obujjanjabi” oba “Omuntu kyabeera afunye oba kyalabye oba kyawulid-de mubulamu bwe nga omuntu ssekinnoomu oluvannyuma lw’okufuna oba okukozaesa obujjanjabi obumu oba obulala”

**IN KISWAHILI:** “Ujuzi”

A **PROFESSOR** is a teacher or researcher at a university. 

**EXAMPLE:** “Professor Fair and Professor Compare teach at the university. They teach students who are studying to become doctors and health researchers. The Professors do health research as well.”

**IN LUGANDA:** “Omukenkufu” oba “Pulofeesa”

**IN KISWAHILI:** “Profesa”

A **RELIABLE** claim is a claim with a good basis. 

**WORDS THAT MEAN THE OPPOSITE:** “Unreliable” → See “U”.

**EXAMPLE:** “Mosquito nets stop people from getting malaria. This is a reliable claim because it is based on fair comparisons.”

**IN LUGANDA:** “Ekyogerwayogerwa ekyesigika”

**IN KISWAHILI:** “Ya maana”
RESEARCH
is the careful studying of something to find out more about that something.

WORD THAT MEANS THE SAME: “Science”

EXAMPLE: “Professor Fair and Professor Compare do research about treatments to find out more about their effects.”

IN LUGANDA: “Okunoonyereza okwasayansi okw’ekikugu”

IN KISWAHILI: “Utafiti”

A RESEARCH QUESTION
is a question that researchers try to answer.

EXAMPLE: “The research question was: Does sleeping under mosquito nets stop people from getting malaria?”

IN LUGANDA: “Ensonga enoonyerezebwako” oba “Ekibuuzo abanoonyereza kyebaba bagezaako okuddamu oba okuzuula” oba “Ensonga abanoonyereza gyebabeera bagezaako okwekenneenya”

IN KISWAHILI: “Swali la utafiti”

A RESEARCHER
is someone who carefully studies something to find out more about it.

WORD THAT MEAN THE SAME: “Scientist”

EXAMPLE: “Professor Fair and Professor Compare are researchers who study treatments to find out more about the effects.”

IN LUGANDA: “Omuntu anoonyereza mungeri eya saayansi ey’ekikugu”

IN KISWAHILI: “Mtafiti”

S

SCIENCE
→ See “Research” above.

A SCIENTIST
→ See “Researcher” above.
To be **SURE about the effects of a treatment** is when you have very little doubt about the effects of a treatment.

**WORDS THAT MEANS THE SAME:** “Certain” or “Confident”

**EXAMPLE:** “We cannot be completely sure about the effects of most treatments.”

**WORDS THAT MEANS THE OPPOSITE:** “Unsure” or “Uncertain”

**IN LUGANDA:** “Obukakafu ku kiki ekiva mu kufuna obujjanjabi obumu oba obulala”

**IN KISWAHILI:** “Kuwa na uhakika”

---

**T**

**A TREATMENT**

is something you do for your health.

**EXAMPLE:** “Wearing glasses is a treatment.”

**IN LUGANDA:** “Obujjanjabi” oba “Ekintu kyonna ekikolebwa osobole okusigala nga oli bulungi oba weeyongere okubeera obulungi mu nsonga z’ebymbulamu” oba “Ekintu kyonna ekikolebwa okutuwonya oba okuziyiza obulwadde”

**IN KISWAHILI:** “Tibabu”

---

**U**

An **UNFAIR COMPARISON of treatments**

is a comparison where there are other important differences than the treatments.

**WORDS THAT MEAN THE OPPOSITE:** “Fair comparison”  →  See “F”.

**EXAMPLE:** “Health researchers compared sleeping under a mosquito net to sleeping without a net. The people in the first group lived in an area where there are very few mosquitoes. It was an unfair comparison because there was an important difference between the groups other than the treatments.”

**IN LUGANDA:** “Okugeraageranya obujjanjabi obumu n’obulala okutali kwabwenkanya oba okulimu okubbira”

**IN KISWAHILI:** “Mithilisho isiyo halisi”
An **UNRELIABLE claim**
is a claim with a bad basis.

*WORDS THAT MEAN THE OPPOSITE:* “Reliable” → See “R”.

*EXAMPLE:* “Sarah claimed that cow dung heals burns. The basis for her claim was her experience putting cow dung on a burn. Her claim was **unreliable** because it was only based on an experience.”

*IN LUGANDA:* “Ekyogerwayogera ku kintu nga tekyesigika”

*IN KISWAHILI:* “Kutokuwa na uhakika”
Remember!

- Think carefully before choosing whether to use a treatment.
- Most treatments have both good and bad effects.
- What someone says about a treatment can be wrong.

CLAIMS about treatments

*When you hear a claim about the effects of a treatment, always ask:*

- **What is the basis for the claim?**

  *If the basis for the claim is bad, the claim is unreliable. These are bad bases for claims about the effects of a treatment:*

  1. Someone’s personal experience using the treatment
  2. How long the treatment has been used or how many people have used it
  3. How much money the treatment costs or how new it is
  4. That someone selling the treatment says something about it
  5. That an expert says something about the treatment, if not based on fair comparisons

COMPARISONS of treatments

*If the basis for the claim is good, the claim is reliable. Fair comparisons are a good basis for claims about the effects of treatments.*

*This is how health researchers make a fair comparison:*

1. They compare one treatment to another treatment or to no treatment.
2. They choose who gets which treatment by chance (like flipping a coin).
3. They do not let anyone know who got which treatment until the end.
4. They give the treatments to many people, so what they find is not by chance.

CHOICES of treatments:

*When you choose whether to use a treatment, always ask:*

- **What are the advantages and disadvantages of the treatment?**
  - What is most important to me?