Writing a clear-language research summary

NMIN capacity-building webinar

March 31, 2021
Learning objectives

1. Use simple text and structure.
2. Keep writing lively.
3. Identify three writing models.
4. Plan four sections of a lay summary.
My research paper is so cool, people will LOVE this!!!
Scientists

expands audience
remove paywalls
translate your work
journal/grant criteria

KT tool

Public
What is a clear language summary?

- interesting and short
- “plain talk” from the lab
- dumb down science (X)
- expands the audience (✓)
Keep it SIMPLE

Make it short and to the point
Simple TEXT

• 15-20 words in a sentence

• Short paragraphs

• Everyday words
  • Speed up not accelerate
  • Show not indicate
• Minimize scientific-technical terms (“jargon”)
  • **Nerves** not neurons
    • **Cell death** not apoptosis
      • **Swelling** not edema
  
• Explain jargon with an **analogy**
  • “The CD34 protein acts like a molecular Teflon …”
Simple TEXT

• Avoid **acronyms** … **unless they’re useful**
  • introduce it after full terminology used once
  • c11orf30/EMSY → EMSY (easier to remember!)

• Aim for a **Grade 10** reading level
  • use online “readability” calculators
PRO TIP

**Readability calculator** (uses 7 readability formulas, including SMOG Index, Fog Scale, Flesch-Kincaide Grade Level)

**Microsoft Word built-in readability statistics**
Simple STRUCTURE

- Logical flow from a reader’s point of view
  - reader does not know your topic
  - reader should understand upon first reading
Simple STRUCTURE

1. Write down all findings/messages

2. Choose 3 most important findings
   • list in order of importance to your reader

3. Plan logical flow of information
   • don’t introduce new ideas late in the text
Keep it LIVELY
Active versus Passive

• Use an **active** voice, not passive

  • **active** = the “doer”
  • direct, clear and concise

  • **passive** = the “receiver”
  • wordy and awkward

• *I’m lovin’ it*
• *It is being loved by me*
A new planet **was found** by scientists.

The DNA **was subjected to** analysis.

To investigate the source of nutrients, eggshell membranes **were compared**.

Scientists **found** a new planet.

We **analyzed** the DNA.

We **compared** eggshell membranes to investigate the source of nutrients.
To check for passive voice … add “by zombies” after the verb

- A new planet was found by scientists.
- The DNA was subjected to analysis … **by zombies**.
- To investigate the source of nutrients, eggshell membranes were compared … **by zombies**.
### Passive voice: the shift

<table>
<thead>
<tr>
<th>Type of writing</th>
<th>% passive</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novels</td>
<td>2-14%</td>
<td>People</td>
</tr>
<tr>
<td>Magazines</td>
<td>10-20%</td>
<td>Mostly people, some facts</td>
</tr>
<tr>
<td>Business writing</td>
<td>25-25%</td>
<td>Mix of people and facts</td>
</tr>
<tr>
<td>Technical and scientific writing</td>
<td>35-45%</td>
<td>Mostly facts</td>
</tr>
</tbody>
</table>

Peter Bakker, lexical density program (UK)
Scientific article
“pyramid”

Media article
“inverted pyramid”

Lay summary
“hourglass”

LEDE: most important info
who, what, where, when, why, how

BODY: Important details

TAIL: background, extra context, links

What is this research about?

What did the researchers do?

What did they find?

How can the research be used?
**What is this research about?**

Food allergy is a new area of research that is gaining interest among researchers. This condition is characterized by an allergic reaction to certain foods that can range from mild to severe, affecting millions of people worldwide.

**Research Questions:****

1. What factors contribute to the development of food allergies?
2. How can we prevent or manage food allergies in infants and young children?
3. What are the long-term consequences of food allergies?

**Primary Researchers:**

- **Researcher:** Dr. Sarah Johnson
- **Institution:** University of California, Los Angeles

**Keywords:**

- Food allergy
- Prevention
- Management
- Long-term consequences

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**What is the risk of developing food allergies?**

Infants born with food allergies are at a higher risk of developing other allergic conditions such as asthma and eczema. The introduction of solid foods early in life may increase the risk of developing food allergies.

**What should parents do?**

Parents should consult with their pediatrician or a specialized allergist to develop a personalized plan for preventing food allergies in their infants. Avoiding certain foods, such as eggs and peanuts, during the first year of life, can significantly reduce the risk of developing food allergies.

**Citation:**

Before you begin …

- Who is your audience?
- What does your audience want to know?
- Write down 3 most important findings from your study
What is this research about? 5-7 sentences

• “so what” relevance to your reader
  • why does the research matter?

• does research fit into a bigger picture the reader can relate to?

• define terms, use analogies
So why do those hips break? This is a question of great importance, as hip fractures are debilitating. Repairing one requires traumatic surgery that, even if successful, may not enable a patient to regain the full mobility they had beforehand.

So, understanding how hip fractures occur, and ultimately preventing them is vital for improving the quality and length of life or our aging population.

What did the researchers do? 5-7 sentences

- # of participants
- what questions did you ask?
- how did you collect the data?
- use active voice
EXAMPLE

What did the researchers do?

The researchers studied 403 infants and their mothers who are participating in the Canadian Healthy Infant Longitudinal Development (CHILD) Study—a national study that is following 3,500 Canadian children and their families from before birth to school age and beyond to identify the root causes of asthma, allergy and other chronic conditions.

Mothers in the study completed detailed questionnaires about their distress levels throughout their pregnancy and after their babies were born. Mothers and caregivers also provided information about their breastfeeding and infant feeding practices, medication use and home environment.

When the infants were three months old, the researchers measured slgA levels in their stool and compared the babies’ slgA levels and their mothers’ level of distress to look for a relationship between the two.

Liane Kang, Research SKETCH: A mother’s distress during pregnancy and her baby’s allergy risk.
What did the researchers find? 7-10 sentences

- explain 3 main findings
- illustrate findings with clear evidence/data
- narrative, no graphs or tables (unless designed for lay audience)
What did the researchers find?

The researchers found that the new dendritic cells turned off the allergic response to peanut and egg white protein. Within four weeks, mice that received the dendritic cell treatment had a 50% to 90% lower anaphylactic response compared to those treated with saline.
How can this research be used? 3-7 sentences

• importance of findings
  • relevance to reader?

• suggest how research may be used by specific groups (parents, doctors, policymakers)

• what’s next?
How can this research be used?

This research suggests that mothers, including those with asthma, can help their babies develop healthy lungs and reduce their risk of wheezing by breastfeeding. The protective effect is stronger with longer and more exclusive breastfeeding; however, even partial breastfeeding can be beneficial.
Title

Question format
• “Are girls really better readers?”
• “Are children’s and youth’s diets affected by their environment?”

Statement format
• “Gender, Race and the Chances of Promotion”
• “Listening to the Brain When the Body Cannot Speak”

Simple version of original title
• “Missing in Action: Fathers in Child Welfare”

When should parents feed potentially allergenic foods to their infants?
New Canadian research suggests that delaying the introduction of milk, egg and peanut may actually increase the risk of food allergy among infants.
Subheading

New Canadian research suggests that delaying the introduction of milk, egg and peanut may actually increase the risk of food allergy among infants.

What is this research about?

Food allergy is a case of “mistaken identity” where the immune system overreacts to a food or a substance in a food, triggering an allergic response that may include symptoms such as a rash, itching, hives or swelling, digestive problems and, in more severe reactions, shortness of breath, chest tightness and a severe drop in blood pressure. About 7.5% of Canadians report having a food allergy and the problem
18-point checklist

Have I ...  

- kept sentences and paragraphs short?  
- written at Grade 10 level?  
- used everyday words?  
- focused on what the reader wants to know?  
- shared the “so what”?  

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Keep it SIMPLE

Keep it LIVELY

Use the MODEL

- What is the research about?
- What did we do?
- What did we find?
- How can it be used?
Resources for clear language writing

- Clear Language and Design (CLAD) thesaurus
- Plain language.gov
- Plain Language, Clear and Simple: a handbook intended by Gov. of Canada that outlines how to write using plain language, available in English and French
- CancerHelp UK Glossary
- Readability calculator Microsoft Word built-in readability statistics
- Duke University Scientific Writing Resource
- Biomedical Editor
- Access to Understanding: Promoting understanding of biomedical research
- Going public: Writing about research in everyday language
- How to Write a Lay Summary
- Writing about biomedical and health research in plain English: A guide for authors
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  http://www.researchimpact.ca/researchsearch/

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  https://snaps.mcmaster.ca/
Q&A

THANK YOU !!!
Resources used for this presentation


