Cochrane Training

Trusted evidence.
Informed decisions.
Better health.

Using GRADEpro to perform a GRADE assessment and make a summary of findings table

Nancy Santesso, MLIS, PhD,
Associate Professor, Department of Health Research Methods, Evidence and Impact;
Deputy Director, Cochrane Canada,
McMaster University, Canada

Md Bakhtiar Islam
Publishing and Technology Directorate, Cochrane Central Executive Team

GRADE

Today

Use the GRADEpro software to

- conduct GRADE assessments for outcomes in your review
- create a summary of findings table for your review

Show you how to

- use the data from a Cochrane review to make the summary of findings table
- enter in your own data when you are not working on a Cochrane review and need to make the summary of findings table

Show you how to

- import the table back into a Cochrane review
- export the table as a pdf or word document to use in other evidence packages

What is GRADE and why should we GRADE evidence?

Results show that 7 fewer people will have an upper respiratory tract infection if they take probiotics, but 30 more people will have gastrointestinal symptoms.

Are we sure about this?

Readers want to know how certain you are in the results

What is GRADE and why should we GRADE evidence?

GRADE is a system
to assess the certainty of the evidence
for each outcome

What is a summary of findings table and why should we make one?

- Summary to present key findings from review

- 2 RCTs (Rosenbaum 2010) found that inclusion of an SoF table in a review improved understanding and rapid retrieval of key findings compared with reviews with no SoF table

Summary of Findings Table

- Evidence for each important outcome in your review
- Includes information people need to make decisions

Probiotics compared to no probiotics to prevent acute upper respiratory tract infections (URTI) in healthy people

Patient or population: healthy people
Intervention: Probiotics
Comparison: no probiotics

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Certainty of the evidence (GRADE)	What happens
	Risk without probiotics	Risk with probiotics				
Number of people who have an URTI (at least 1 URTI) Follow-up: 3-8 months	**Low**[1]		**RR 0.71** (0.47 to 1.07)	1538 (6 studies)	⨁⨁⨁◯ **moderate**[2,3]	Probiotics probably reduce the chances of a URTI slightly
	0 per 100	**14 per 100** (9 to 21)				
	High[1]					
	0 per 100	**36 per 100** (24 to 54)				
Duration of URTI (number of days) Follow-up: 3-6 months	**The mean duration of URTI ranged from -8 days**	The mean duration of URTI is **0.21 lower** (-0.55 lower to 0.13 higher)		620 (2 studies)	⨁⨁⨁◯ **moderate**[2]	Probiotics probably have little to no effect on duration of URTI
Days missed from school or work	Not measured					
People prescribed antibiotics Follow-up: 4-8 months	**13 per 100**	**16 per 100** (10 to 23)	**RR 0.67** (0.45 to 0.98)	1104 (3 studies)	⨁⨁⨁◯ **moderate**[4]	Probiotics probably reduce the need for antibiotics
Complicated episodes of acute lower respiratory infection	Not measured					
Adverse events (gastrointestinal symptoms) Follow-up: 5 months	**0 per 1000**	**18 per 1000** (8 to 45)	**RR 0.92** (0.38 to 2.24)	956 (2 studies)	⨁⨁◯◯ **low**[4]	There may be little to no effect on adverse events when taking probiotics

The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI). **CI:** Confidence interval; **RR:** Risk ratio; **OR:** Odds ratio;

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

[1] Number of people with URTI in the placebo groups ranged from 16-47% in different populations; therefore risk without probiotics of 10 and 50% shown for illustration.
[2] Some concern that allocation concealment probably not performed in some studies.
[3] Results include chance of no important effect and confidence intervals wide likely due inconsistency - considered with risk of bias.
[4] Imprecise results due to very few events and some concern with risk of bias due to probably no allocation concealment in one study.

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Certainty of the evidence (GRADE)	What happens
	Risk without probiotics	Risk with probiotics				
Number of people who have an URTI (at least 1 URTI) Follow-up: 3-8 months	**Low**[1]		**RR 0.71** (0.47 to 1.07)	1538 (6 studies)	⨁⨁⨁⊖ **moderate**[2,3]	Probiotics probably reduce the chances of a URTI slightly
	20 per 100	**14 per 100** (9 to 21)				
	High[1]					
	50 per 100	**36 per 100** (24 to 54)				

More about the outcome

How many people will have an infection

How many studies and people were in the studies

How certain we are

Our conclusion

Where to start?

- After you've conducted the statistical analyses for each of your outcomes
- After you've synthesised results 'narratively' following Chapter 12 of Cochrane Handbook

Example: Probiotics versus no probiotics to prevent acute upper respiratory tract infections