

TRANSFORMING A PEER-REVIEWED STUDY INTO BITE-SIZED NUTRITION

The latest breaking study is always exciting news to health professionals. Could this piece of research answer a tricky question about a particular food? Are findings going to contradict other dietary guidance? Did the scientists find a big or little piece of the puzzle to further early science of nutrition?



Now, the excitement we feel as health professionals is often contrasted with the confusion elicited by clients and the public at large. ‘Does the study mean I can eat this food now?’ ‘I thought that eating this way is bad for me, but now it’s good?’ ‘Oh, it’s another study that I don’t understand so I’ll just forget about it!’

The gap between the two audiences has never been bigger, but it is surmountable like most things in life – by breaking it down into smaller pieces. The purpose of this handout is to give you some skills to take a complex study and make the results bite-sized and easier to understand.

THESE TECHNIQUES CAN MAKE RESULTS CLEAR AND MORE USEFUL TO A CLIENT:

- **First explain one outcome of the study** - the important one.
- **Tell how a piece of research fits into other dietary advice** - use an analogy to describe research.
- **Don’t go heavily into the design** - consider linking directly to a study in a post or blog (if appropriate).
- **Explain how the benefit fits** - within context of what we already know.
- **Give your opinion as an expert and assess the science critically** - don’t overstate the outcome.
- **Provide a concrete piece of advice** - to enhance the relevance of the study.

MESSAGE DELIVERY

**1.6 SECONDS
TO CAPTURE THE VIEWERS**

The attention span to learn new information is shorter than ever. A scrolling feed for example has 1.6 seconds to capture the viewer's notice – so how can we compete with a nutrition message that is complicated?

A CHECKLIST OF DELIVERING CLEAR MESSAGES INCLUDES THE FOLLOWING:

- BREVITY:**
Keep your study synopsis no more than 3 sentences or 20-30 seconds.
- STATED WITH PURPOSE:**
You are the nutrition expert and can assess whether or not a piece of research is impactful to clients and can promote their good health or further their knowledge. Give the results in a straightforward, confident manner without exaggerating.
- PERSONALISED:**
Explain how patients can benefit and make a small change to their diet or lifestyle. If you will personally follow the advice, providing your opinion brings the research to life.
- ENDING WITH THE CONTEXT:**
Be mindful of the limitations of the research and include them as necessary – it's the role of an expert to remind the public of the wider context of new research.

COMMUNICATING PORTION SIZE A LA FRANCAIS

**1 PORTION
= 23
ALMONDS**

Health professionals in France compete with a lot of mixed messages with portion size and official guidance on the portion size for nuts was recently changed by the French government to one handful (around 23 almonds) daily. In France, they have a popular children's game called 1-2-3, Soleil! So, a fun memory jog they can employ to help remember the new portion size guidance is to take on the expression '1,2,3 Almonds!' to explain 1 portion equals 23 almonds.

SPOTLIGHTING RESEARCH AND MAKING IT SIMPLE

To use as a timely example, a study published in late 2019 examined almond consumption with skin health as a novel health benefit. The pilot study, supported by the Almond Board of California, demonstrated how eating almonds can lead to a reduction in facial wrinkles in postmenopausal women. This educational handout will first delve into the study details and then share ways to communicate the facts in short form without oversimplifying or misinterpreting the meaning.

THE STUDY

Pilot Study Investigates the Effects of Daily Almond Consumption on Facial Wrinkles

Foolad N, Vaughn AR, Rybak I, Burney WA, Chodur GM, Newman JW, Steinberg FM, Sivamani RK. Prospective randomized controlled pilot study on the effects of almond consumption on skin lipids and wrinkles. *Phytotherapy Research*. 2019;1-6. <https://doi.org/10.1002/ptr.6495>.

STUDY DESIGN

28 healthy, postmenopausal women with Fitzpatrick skin type 1 (always burns, never tans) or 2 (usually burns, tans minimally) were randomly assigned to either an intervention or a control group.

Almonds were provided as 20% of total daily calorie intake for the intervention group (340 calories/day on average), about two 28-gram servings. The control group consumed a calorie-matched nut-free snack in place of almonds daily: cereal bar, energy bar or pretzels. All participants were advised not to consume any nuts or nut-containing products over the course of the study (except for the almond snack for the intervention group). They otherwise were advised to continue their usual daily energy intake. After a four-week dietary wash-out period, participants were randomized to one of the two study groups detailed above. Study visits occurred at baseline, 4 weeks, 8 weeks, 12 weeks and 16 weeks.

Facial wrinkles were assessed using high-resolution facial photography and validated 3-D facial modeling and measurement at baseline, 8 weeks and 16 weeks. Skin barrier function was assessed by measurement of sebum production and transepidermal water loss (TEWL).

RESULTS

- Photographic image analysis showed that the almond group had significant reductions in wrinkle width and severity, by 10 and 9%, respectively, compared to the control group at the 16-week time point ($P < 0.02$).
- There were no significant differences in sebum production between groups after 8 and 16 weeks.
- There were no significant differences between groups in transepidermal water loss (TEWL) from baseline after 8 and 16 weeks.
- There were no significant changes from baseline in the skin barrier function ($P = 0.65$) between the almond and control groups relative to baseline after 16 weeks.

LIMITATIONS

- Aging is a long-lasting process so the findings from this 16-week study may be difficult to reproduce and generalize to extended periods of time.
- Skin-aging is also multi-factorial in nature and although certain groups were excluded (i.e., those with a smoking history), there is variance in aging confounders, such as frequency of UV light exposure and emotional stress, which were outside the scope of the study.
- This study was limited to cosmetic evaluation, as no measurements were made regarding collagen production. Study did not evaluate disease or younger subjects, so results are limited to otherwise healthy post-menopausal females.
- This was a pilot study with a limited number of participants; future studies should expand to a larger recruitment pool.

WHAT ARE THE KEY TAKE-AWAYS?

Communicating about this research at first can seem difficult as there is a lot of information to convey and a client may become lost in some of the language. The first step is to look at the key findings of the research and then examine what details are critical to retain and which details can be omitted to accurately communicate the facts.

For this study, the results are probably of more importance and useful to a client than the design. As health professionals, it's important to assess how rigorous the study is and its strength, but a client may not care if it's a randomised controlled trial or survey. With this in mind, what does your client or patient need to know to understand the study clearly and its importance?

HERE ARE A VARIETY OF WAYS TO SUM UP THE RESULTS IN A SHORTER YET ACCURATE STATEMENTS:

- A daily snack of almonds (about 60 grams) in place of other nut-free snacks improved measures of wrinkle width and severity in postmenopausal women. The study, funded by the Almond Board of California, is the first of its kind to examine almonds' effects on skin health.
- At the end of four months, photographic image analysis showed statistically significant improvements for people who ate almonds compared to those who did not eat almonds where wrinkle width decreased by 10% and wrinkle severity decreased by 9%.
- Aging is complicated and lots of different factors play a role, including diet. This new piece of research on almonds shows that they may be a food to include in the diet to help reduce wrinkles.
- Almonds are a healthy food to include in your diet for lots of reasons – and skin health is just one more. Nuts provide a healthy nutrient package including essential fatty acids, fibre and plant protein – and can be incorporated as a snack, where a portion is 28g or a handful.



ACTIVITY: RESEARCH SUMMARY

Why not summarise a recent research paper of your choice following the principles from this handout?

EXPLAIN ONE OUTCOME OF THE STUDY

HOW DOES THE RESEARCH FIT INTO OTHER DIETARY ADVICE?

EXPLAIN THE DESIGN BRIEFLY

WHAT IS THE BENEFIT OF THE RESEARCH?

GIVE YOUR OPINION AS AN EXPERT AND ASSESS THE SCIENCE CRITICALLY

PROVIDE A CONCRETE PIECE OF ADVICE