



**schouten** specialist in  
plant-based protein

## Market Outlook

Meat alternatives ultra-processed? Time for nuance.

# Introduction

- The debate around ultra-processed foods is growing. Meat alternatives are also under scrutiny – but is that justified?
- In this outlook, we share insights from a scientific report that adds nuance to the discussion.
- Ultra-processed foods are referred to in English as 'Ultra Processed Foods' (UPFs); this abbreviation is used throughout the presentation.





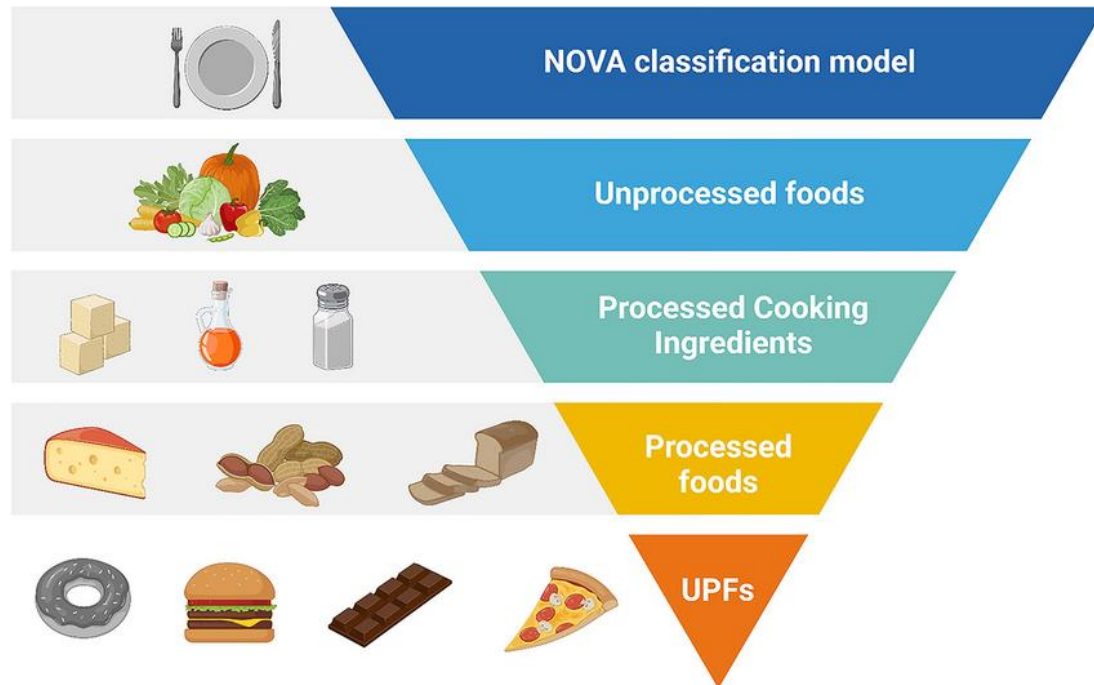




# NOVA-classification

The NOVA classification, developed by the University of São Paulo, categorizes foods based on their level of processing.

It distinguishes four groups:



Read more about the NOVA classification system [here](#)





# Wide range of UPF's

According to the NOVA classification system, UPF's are:

- Industrially produced
- Contain multiple ingredients
- Undergo several processing steps

As a result, many products fall into this category — ranging from meat alternatives and baby food to soft drinks and hot dogs.



## ✓ Relatively healthy UPF products

Example	Why relatively healthy?
Whole grain supermarket bread	Contains fiber, B vitamins, and little saturated fat
Plant-based meat alternatives	Often rich in protein, fiber, and iron
Shelf-stable baby food	Specifically developed to meet infants' nutritional needs
Fortified plant-based dairy	Soy drinks with calcium/vitamin D, often a healthier alternative
Canned legumes	Minimally processed + high in fiber and protein
Whole grain breakfast cereals (low in sugar)	Rich in fiber, vitamins, and complex carbohydrates

# ✗ Relatively unhealthy UPF products

*Recommended to limit, according to organizations such as the WHO and the Netherlands Nutrition Centre*

Example	Why relatively healthy?
Chips, snacks, fast food	High in salt, fat, and calories; often low in nutritional value
Soft drinks, energy drinks	High in added sugars, no nutrients
Candy, cookies, pastries	High in sugar and fat; little to no fiber
Instant-noodles	High in salt and fat; low in nutritional value
Sweetened breakfast cereals	Often more sugar than beneficial nutrients
Processed meat (e.g., hotdogs)	High in salt, saturated fat, and sometimes nitrites/nitrates







# Nutritional profile of meat alternatives

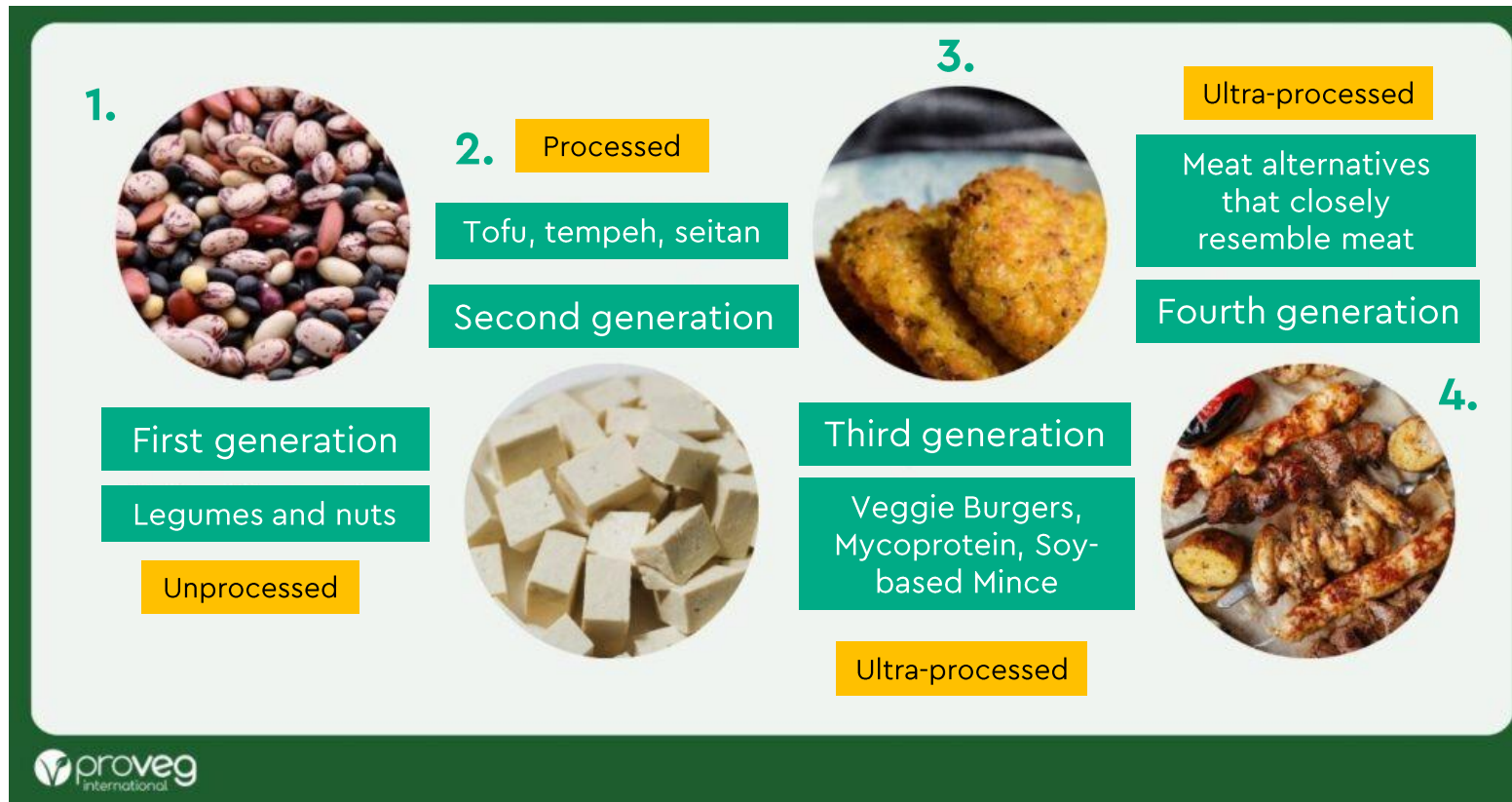
Meat alternatives generally contain:

- ✓ Low in saturated fat
- ✓ Low in sugar
- ✓ High in fiber
- ✓ High in protein
- ✓ Fortified with iron and vitamin B12
- ✓ Contain relatively few calories

Although meat alternatives are low in calories, studies have shown that they are just as satiating as meat. For example, [this one](#) and [this one](#).



# There are different generations of meat alternatives




The **first** generation of meat alternatives is unprocessed and includes **legumes and nuts**.

The **second** generation consists of the same base ingredients as the first, but in processed forms such as **tofu, tempeh, and seitan**.

**Third** and **fourth** generation meat alternatives are classified as "**ultra-processed**" because the proteins used undergo prior processing and the products contain multiple ingredients.

[Source: ProVeg](#)



The background of the slide is a close-up, shallow-focus photograph of a newspaper. The newspaper is folded, showing multiple layers of pages. Some text and a table are visible on the pages. Overlaid on the top of the image are several semi-circular shapes in muted colors: a light beige one, a purple one, and a green one. On the right side, there is a teal semi-circular shape. At the bottom center, there is a small green circle.

"In recent years, media and influencers have portrayed a one-sided image of meat alternatives as ultra-processed and unhealthy."



# This perception hinders the protein transition

- A 2024 [study](#) shows that many Europeans consider meat alternatives — even second-generation ones — to be ultra-processed foods.
- This perception affects their judgment of the products' healthiness: half avoid meat alternatives altogether as a result.
- However, the negative health effects found in UPF research mainly relate to soft drinks, processed meats, and sweets — not to meat alternatives.





# Animal-based increases risk, plant-based may be protective, study finds

Subgroup	HR (95% CI)	Interpretation
Ultra-processed grains & bread	0.97 (0.94–1.00)	No increased risk, possibly slightly lower
Plant-based alternatives	0.97 (0.91–1.02)	No increased risk, possibly slightly lower
Candy & desserts	0.99 (0.95–1.03)	No increased risk
Savory snacks	1.00 (0.96–1.04)	No increased risk
Other UPFs	1.01 (0.97–1.05)	No clear increased risk
Ready-to-eat meals	1.01 (0.98–1.04)	No clear increased risk
Sauces, spreads, seasonings	1.03 (1.00–1.06)	Slightly increased risk
Animal products	1.09 (1.05–1.12)	Clearly increased risk
Sweetened beverages (incl. light)	1.09 (1.06–1.12)	Clearly increased risk
Total UPF intake	1.09 (1.05–1.12)	Increased risk with higher consumption

[Link to the study](#)

In this table you see **different types of UPFs**. The table shows whether people who eat a lot of a certain type have **more or less chance of getting both cancer and heart disease**.

**HR (hazard ratio):** this number shows how the risk compares to people who eat little of that type of food.

HR = 1 → same risk  
HR > 1 → higher risk  
HR < 1 → lower risk

95% CI (in brackets): shows how certain the researchers are.

If the entire number in brackets is above 1, the risk is probably truly increased.

**Animal-based products** → HR = 1.09  
➤ People who eat a lot of this have a 9% higher chance of disease.

**Plant-based alternatives** → HR = 0.97  
➤ No increased risk, maybe even slightly lower.

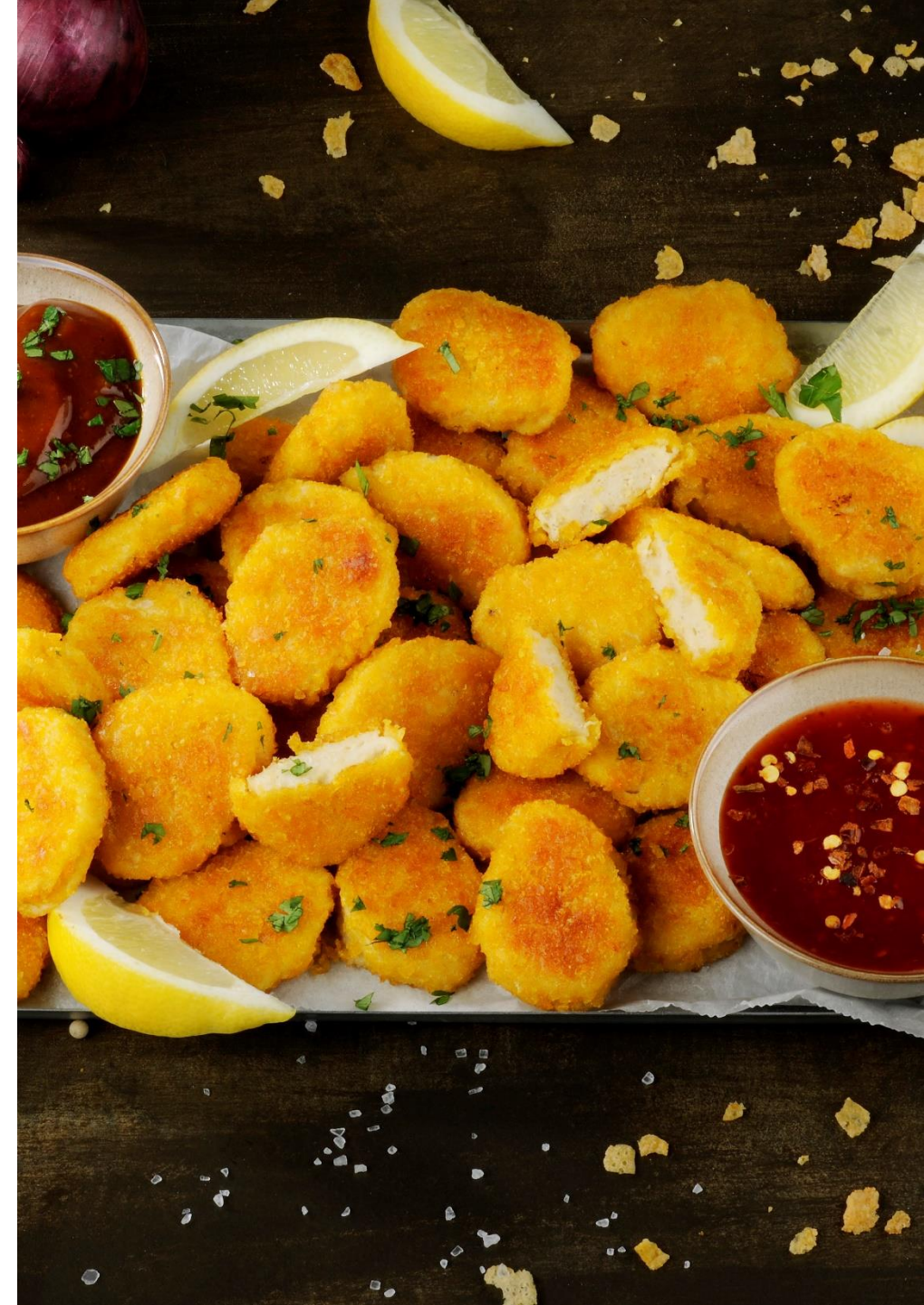
# Important nuance

In the media, meat alternatives are often labeled as ultra-processed, with this label almost automatically being associated with "unhealthy".

But **UPFs** are **not synonymous** with "**unhealthy**"

The health effects of a product depend on:

- **Nutritional values:** such as levels of sugar, salt, saturated fat, fiber, protein, vitamins, and minerals
- **Ingredient composition:** which ingredients are used (e.g. added sugars, artificial additives, whole grains, etc.)
- **Portion size:** how much is consumed at one time
- **Frequency of consumption:** how often it is eaten
- **Context of the overall diet and lifestyle:** does it fit within a healthy overall pattern?





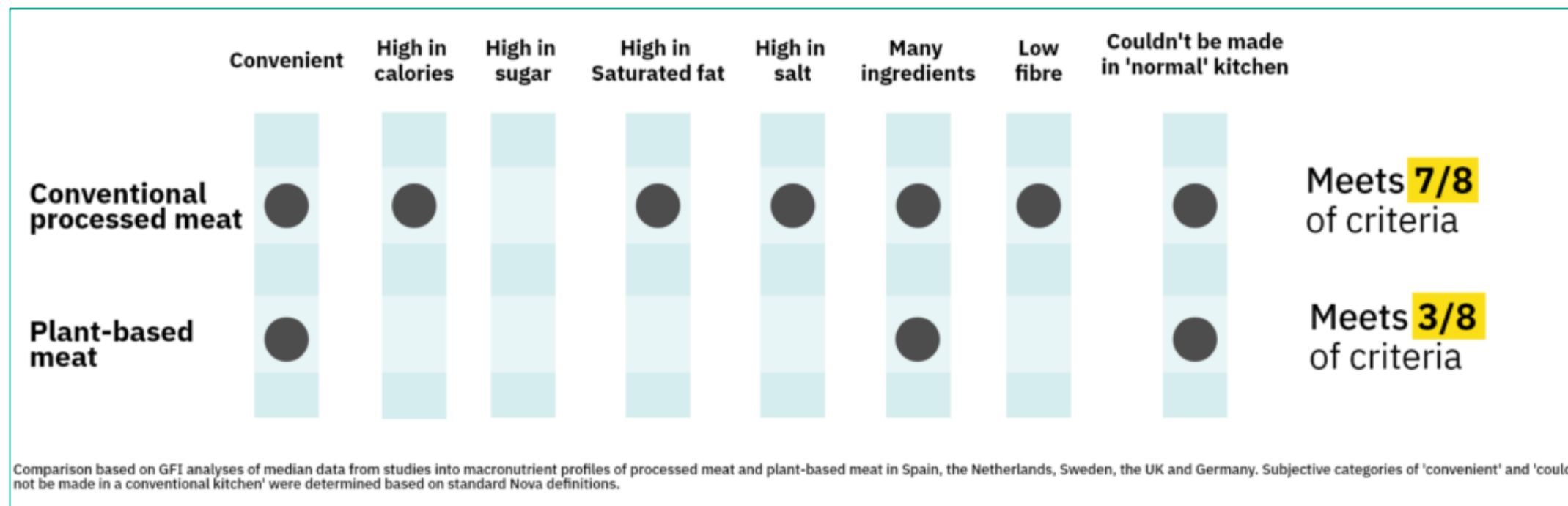


Publications often fail to draw comparisons with processed meat.



# Replacing meat with meat alternatives can actually be beneficial

Both processed meat and meat alternatives fall under the UPF category. However, there are significant differences between the two product groups in how they score on the UPF criteria.



- Studies also show that **replacing meat with meat alternatives** can lead to a **reduction in LDL cholesterol** and contribute to **weight loss**.



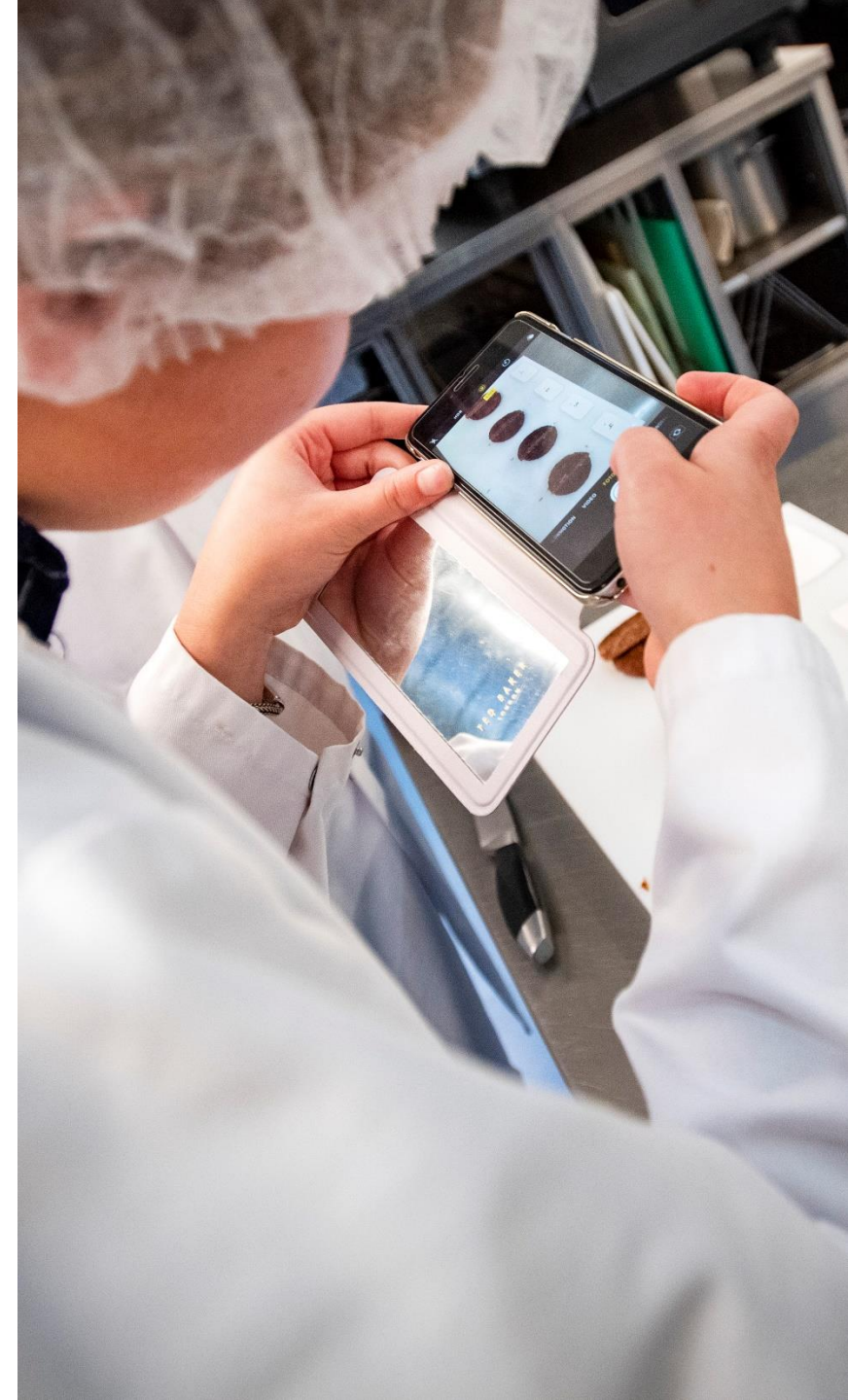
# It's an accessible way to eat both healthier and more sustainably

- The consumption of red and processed meat still exceeds recommended levels in many European countries.
- The Netherlands Nutrition Centre advises eating no more than 500 grams of meat per week, with a maximum of 300 grams of red meat, and to limit the intake of processed meat as much as possible.
- Meat alternatives can offer an accessible way to reduce this intake, without major behavioral changes and with added health benefits.
- In addition, meat alternatives can significantly contribute to achieving sustainability goals.




# Room for improvement

- Not all meat alternatives are inherently healthy.
- In recent years, significant salt reductions have been made in many meat alternatives, but some products still have room for improvement.
- Additionally, not all meat alternatives are fortified with nutrients like iron and vitamin B12 — although this has become more common in recent years.
- Producers like Schouten are actively working on less processed products, with fewer ingredients and improved nutritional profiles.





A woman with long brown hair, wearing a maroon top, is seated at a table in a restaurant. She is holding a fork and knife, with a small amount of food on the fork. The background is blurred, showing other tables and chairs. The scene is lit with warm, natural light. There are decorative graphic elements: a large green leaf-like shape in the top right corner, a smaller green leaf-like shape in the bottom left corner, and a teal leaf-like shape on the right side. The word "Wrap-up" is overlaid in white text.

**Wrap-up**

# Wrap-up

- Meat alternatives are subject to confusing public perception, partly due to the NOVA classification of ultra-processed foods and further reinforced by media and influencers.
- This perception often lacks nuance.
- Although there is still room for improvement within this product group, meat alternatives are generally a healthier and more sustainable option compared to red and processed meat – depending on their nutritional composition.





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Questions? Please feel free to contact me

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