HOME

Lab-Grown Meat Has Already Been Sold in America—But How Many Consumers Know What They're Eating?

By bestfolkmedicine · 27/10/2026 · 15 min read



For generations, meat came from animals raised on farms. But a new chapter in food production has begun: animal cells grown in controlled industrial environments are now being turned into products people can eat. Cultivated meat has already reached American restaurants and even a grocery store. Yet important questions remain about its ingredients, safety, nutritional value, labeling, and long-term impact on our food supply.

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Imagine walking into your favorite grocery store and purchasing a package of meatballs.

They look like ordinary meatballs.

They cook like meatballs.

And according to the manufacturers, they are designed to deliver the familiar taste and texture of meat.

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But there is a detail you might not expect.

Some of the animal fat inside them may never have come from a slaughtered animal.

Instead, it was produced by growing animal cells in a controlled environment using biotechnology.

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This is not a hypothetical product from a distant future.

On November 1, 2025, cultivated-meat products were sold directly to consumers at a grocery store in Berkeley, California.

ezstandalone.cmd.push(function () { ezstandalone.showAds(132); });
The event marked a significant milestone for an industry seeking to transform how animal protein is produced.

But while supporters celebrate the potential environmental and animal-welfare benefits, others are asking difficult questions.

What exactly goes into laboratory-grown meat?

How is it made?

Has its safety been established?

And perhaps most importantly, will consumers always know when the food they purchase contains cultured animal cells?

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1. The Day Lab-Grown Meat Entered an American Grocery Store

On November 1, 2025, San Francisco biotechnology company Mission Barns held a limited retail sale at Berkeley Bowl West in California.

The product was a package of meatballs made with plant-based protein and cultivated pork fat.

That distinction is important.

These were not meatballs made entirely from laboratory-grown pork muscle.

ezstandalone.cmd.push(function () { ezstandalone.showAds(134); });
They were hybrid products combining conventional plant ingredients with real animal fat produced through cell cultivation.

Mission Barns had completed a U.S. Food and Drug Administration premarket safety consultation for its cultivated pork fat in March 2025.

In July 2025, the company announced that it had also received the required U.S. Department of Agriculture inspection authorization and product-label clearance.

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These regulatory milestones made commercial sales possible.

But the November event was limited, not the beginning of widespread supermarket distribution.

It was a carefully organized introduction of a novel food technology to American consumers.

The sale demonstrated that cultivated animal-cell ingredients were no longer confined entirely to research laboratories.

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They had reached the retail marketplace.

2. What Exactly Is Lab-Grown Meat?

Laboratory-grown meat is also called cultivated meat, cultured meat, or cell-cultivated meat.

Unlike plant-based alternatives made entirely from ingredients such as soy, pea protein, or mushrooms, cultivated meat begins with actual animal cells.

The process usually follows several stages.

First, animal cells are collected.

A small sample of cells is obtained from an animal, and suitable cells are selected for cultivation.

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Second, the cells are placed into a nutrient-rich environment.

They receive nutrients such as amino acids, sugars, minerals, vitamins, and growth-supporting substances.

Third, the cells multiply.

Specialized equipment called bioreactors provides controlled conditions, including temperature, oxygen availability, and nutrient delivery.

Fourth, the resulting cells are harvested.

Depending on the product, they may be processed into food ingredients, combined with plant proteins, or structured into meat-like products.

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The aim is to produce animal-derived tissue without raising and slaughtering an entire animal for every batch.

However, the process can differ substantially between companies.

Cultivated chicken, cultivated pork fat, and cultivated fish are not necessarily manufactured using identical methods.

3. Is This Real Meat or an Artificial Substitute?

This is one of the most debated questions surrounding cultivated meat.

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Biologically, the starting material consists of animal cells.

A cultivated chicken product contains cells originating from chickens.

Cultivated pork fat contains fat cells originating from pigs.

That makes it fundamentally different from an entirely plant-based burger.

However, a cultivated ingredient is not necessarily nutritionally or structurally identical to a conventional cut of meat.

A traditional piece of meat contains complex arrangements of muscle fibers, connective tissues, fat, blood vessels, and other components.

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Many cultivated products currently use simpler cell-based materials combined with additional food ingredients.

For consumers, the distinction matters.

A meatball made with cultivated pork fat and pea protein is not the same product as a conventional pork meatball.

Both may provide protein and fat, but their ingredients and nutritional composition can differ.

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That is why accurate labeling is essential.

4. What Do Manufacturers Feed the Cells?

Here is where cultivated meat becomes particularly interesting.

Animal cells cannot simply multiply indefinitely without suitable nutrients.

In the body, cells receive oxygen and nutrients through biological systems.

Inside a bioreactor, manufacturers must recreate enough of those conditions to keep the cells growing.

Cell-culture media may contain:

- Amino acids needed for protein synthesis
- Glucose or other energy sources
- Vitamins and essential minerals
- Salts that help regulate the cellular environment
- Growth factors or other signaling substances
- Additional ingredients required by particular cell lines

Some production systems also use proteins or other components that support cellular growth.

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Historically, certain cell-culture methods used fetal bovine serum, a substance obtained from bovine fetal blood.

Because of cost, ethical concerns, and manufacturing challenges, cultivated-meat companies have worked to develop serum-free alternatives.

Importantly, this does not mean that every cultivated-meat product contains fetal bovine serum.

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Different companies use different formulations, and commercially authorized products undergo review of their specified manufacturing processes.

The legitimate consumer question is not whether these substances sound unfamiliar.

It is whether the finished product is consistently produced, appropriately controlled, and safe to eat.

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5. Is Lab-Grown Meat Safe to Eat?

This question deserves a careful answer.

In the United States, cultivated meat is subject to federal food-safety oversight.

For cultivated livestock and poultry products, FDA and USDA share regulatory responsibilities.

The FDA evaluates the cell-cultivation process and associated safety information.

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USDA oversees the harvesting, processing, inspection, and labeling of covered meat and poultry products.

In March 2025, the FDA completed its premarket consultation for Mission Barns' cultivated pork fat.

The agency reported having no further questions at that time about the company's safety conclusion for the product manufactured using its specified process.

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This is meaningful regulatory scrutiny.

But it is not proof that every possible cultivated-meat product is automatically safe.

Safety findings are specific to particular products, production methods, and manufacturing controls.

Cultivated meat production also requires careful management of potential hazards, including microbial contamination, inappropriate chemical residues, and unintended changes in manufacturing conditions.

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These are areas that food-safety systems must address.

At the same time, it is misleading to suggest that cultivated meat has been shown to cause cancer, infertility, hormonal disorders, or other serious diseases in consumers.

Convincing human evidence establishing those claims is not available.

The scientifically appropriate position is that specific products have undergone regulatory safety assessments, while broader questions about future formulations, large-scale manufacturing, and long-term dietary patterns continue to deserve research.

6. Could Cultivated Meat Contain Unwanted Substances?

One concern surrounding cultivated meat involves substances used during cell growth.

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Growth factors, nutrients, and other compounds help maintain the conditions necessary for cell multiplication.

This has led some consumers to wonder whether unwanted residues could remain in the finished food.

Such questions are legitimate, but they require evidence rather than assumptions.

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Regulatory safety assessments consider the composition of the final product, manufacturing inputs, potential contaminants, and production controls.

Possible food-safety concerns include unwanted microbial contamination, residues from production processes, and changes in cell composition.

These concerns are not unique to cultivated meat.

Conventional meat production also requires controls against pathogens, chemical contaminants, and other hazards.

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The relevant question is whether manufacturers can demonstrate that their finished products consistently meet food-safety requirements.

It is also important to distinguish between *growth factors* used in cell cultivation and hormones administered to animals during conventional farming.

They are not automatically the same substances, and their presence during manufacturing does not establish that harmful concentrations remain in the finished product.

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7. What About Cancer Cells? Are They Growing Tumors to Make Food?

One particularly controversial claim circulating online is that cultivated meat is made from cancer cells.

This is an oversimplification.

Some cultivated-meat producers investigate or use cell lines capable of reproducing for extended periods.

These may include immortalized cell lines, which can continue dividing under appropriate laboratory conditions.

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Immortalization does not necessarily mean that cells are cancerous.

Cancer cells and immortalized cells can share certain characteristics, but they are not equivalent.

Importantly, eating animal cells is fundamentally different from having those cells grow inside the body.

The digestive system breaks down food into smaller components.

There is no convincing evidence that eating appropriately produced cultivated meat causes cancer because the cells were grown in a bioreactor.

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Nevertheless, the characteristics and stability of production cell lines are important subjects for safety assessment.

Manufacturers must demonstrate that their production methods yield suitable food materials.

8. Is Lab-Grown Meat Healthier Than Traditional Meat?

That remains an open question.

Cultivated meat is often promoted as a potential way to produce animal protein more efficiently.

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But whether it is healthier depends on the specific product.

For example, cultivated pork fat is still animal fat.

Its fatty-acid composition may differ from conventional pork fat depending on production conditions.

A hybrid meatball containing cultivated fat and pea protein may have a different nutritional profile from an ordinary pork meatball.

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Possible differences include total fat, saturated fat, protein, sodium, and micronutrient content.

Some manufacturers hope to modify fat composition or fortify products with additional nutrients.

But those possibilities do not automatically make cultivated meat healthier.

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Consumers should evaluate the actual nutrition facts and ingredient lists rather than assuming that a technologically advanced food must be nutritionally superior.

There is currently insufficient evidence to conclude that cultivated meat as an entire category is healthier than conventional meat.

9. The Israeli Connection: A Company Approved in America That Suddenly Shut Down

Another major development has attracted attention.

Israeli-founded company Believer Meats, previously known as Future Meat Technologies, invested in a large cultivated-meat production facility in Wilson, North Carolina.

ezstandalone.cmd.push(function () { ezstandalone.showAds(157); });
The company planned to manufacture cultivated chicken at a commercial scale.

In July 2025, the FDA completed its premarket consultation for the company's cultivated chicken-cell material.

The company subsequently obtained USDA inspection and labeling clearances.

These achievements represented significant progress toward commercialization.

However, in December 2025, Believer Meats ceased operations amid financial difficulties, including a dispute involving unpaid construction costs.

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Its shutdown demonstrated that regulatory clearance and commercial success are two very different things.

Even if cultivated-meat production is technically possible and receives regulatory acceptance, companies still face enormous financial challenges.

These include production costs, equipment, investment requirements, and the difficulty of competing with established meat suppliers.

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The Israeli company's experience illustrates how uncertain the industry's economic future remains.

10. Will Consumers Know They Are Buying Lab-Grown Meat?

This may be the most important issue for ordinary shoppers.

Consumers should be able to distinguish cultivated meat from conventional meat before purchasing it.

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In the United States, USDA oversees labeling for cultivated livestock and poultry products covered by its jurisdiction.

Products must comply with applicable requirements for truthful and nonmisleading labeling.

Companies must obtain appropriate label approval before commercial sales.

However, questions remain about the most understandable terminology.

Should products say *cell-cultivated chicken*?

Cultivated meat?

Cell-grown pork fat?

Or *lab-grown meat*?

Each description may create a different impression.

Supporters of terms such as *cultivated* argue that they accurately describe the production process without suggesting the food is artificial.

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Critics argue that consumers may find the term unfamiliar and prefer more direct descriptions of how the food was produced.

Another challenge involves hybrid products containing both plant ingredients and cultivated animal components.

A product described simply as plant-based could mislead consumers if it also contains animal-derived cultivated fat.

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Clear ingredient disclosure is especially important for people avoiding particular animal species for personal, ethical, or religious reasons.

For example, cultivated pork fat still originates from pig cells.

It should not be assumed suitable for someone who avoids pork.

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The broader principle is straightforward: whatever terminology regulators permit, consumers deserve accurate information about the food they purchase.

11. Why Are Some American States Banning Cultivated Meat?

Despite federal regulatory clearances, cultivated meat has encountered significant political opposition.

Several states have introduced or enacted restrictions on the manufacture, distribution, or sale of cell-cultivated meat.

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Supporters of these restrictions have raised concerns about food transparency, potential economic consequences for livestock producers, and the need for additional scrutiny of new food technologies.

Others argue that outright bans unnecessarily restrict consumer choice and prevent companies from introducing products that have completed federal safety reviews.

The controversy has created a complicated regulatory landscape.

A cultivated-meat product may meet federal regulatory requirements while still facing restrictions in particular states.

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This makes commercialization more difficult for companies hoping to establish a national market.

It also raises an interesting public-policy question.

Should consumers be allowed to choose between conventional and cultivated meat when both satisfy applicable food-safety standards?

Or should governments restrict a new technology until more evidence becomes available?

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The debate is likely to continue as the technology develops.

12. Is Cultivated Meat Really Better for the Environment?

One of the industry's biggest promises is environmental sustainability.

Traditional livestock farming requires land, water, feed, and energy.

Certain forms of livestock production also generate substantial greenhouse-gas emissions.

Cultivated meat could potentially reduce the need to raise animals and use agricultural land for feed.

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Some environmental assessments suggest advantages under particular production scenarios.

However, industrial cell cultivation also requires resources.

Bioreactors consume electricity.

Nutrient media must be manufactured.

Facilities require temperature control, cleaning, processing, and specialized equipment.

The environmental impact therefore depends on several factors, especially the energy sources used and how efficiently production can be scaled.

A facility powered by low-carbon electricity may have a very different footprint from one relying heavily on fossil fuels.

Some studies have questioned whether energy-intensive cultivated-meat production could, under certain assumptions, generate greater environmental impacts than conventional meat.

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The result is not a simple conclusion that cultivated meat is always better—or always worse.

Large-scale environmental performance remains uncertain and must be evaluated using transparent, comparable assessments.

13. Why Isn't Lab-Grown Meat Already in Every Supermarket?

If the technology works and selected products have cleared regulatory review, why haven't cultivated burgers and chicken breasts become everyday supermarket items?

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The answer is largely economic and technical.

Growing animal cells at a commercial scale is substantially more complicated than growing them in small laboratory containers.

Companies need large amounts of suitable culture media.

The cells must remain healthy and productive.

Equipment must prevent contamination.

Manufacturing processes must produce consistent results at prices consumers are willing to pay.

And companies must persuade retailers and consumers that the products offer meaningful benefits.

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The U.S. retail sale of cultivated pork meatballs in November 2025 was a notable milestone, but it was a limited event.

It did not establish widespread supermarket availability.

As of October 2026, cultivated meat remains a niche market with limited consumer access rather than a routine product found throughout American grocery chains.

14. Five Questions Every Consumer Should Ask Before Buying Cultivated Meat

As new food technologies enter the market, informed purchasing decisions become increasingly important.

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What animal species did the cells come from?

The source animal matters for dietary restrictions, allergies, religious considerations, and personal preferences.

Is the product entirely cultivated meat or a hybrid?

Some products combine cultivated animal ingredients with plant proteins, binders, seasonings, and other components.

What is the complete ingredient list?

The final product's ingredients and nutritional composition matter more than broad marketing claims about the technology.

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Has the specific product completed the relevant safety and regulatory processes?

Regulatory clearance for one product does not automatically apply to another product made using different cells or manufacturing methods.

How is the food labeled?

Consumers should be able to identify the presence of cultivated animal material and understand what they are purchasing.

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These questions are not reasons to fear unfamiliar foods.

They are the same principles of transparency and informed choice that should apply to conventional, plant-based, and highly processed foods.

15. The Bigger Question: Who Will Control the Future of Meat?

Beyond safety and nutrition lies another important issue.

Food production is increasingly becoming a meeting point between agriculture, biotechnology, intellectual property, and industrial manufacturing.

Cultivated-meat companies may rely on proprietary cell lines, specialized growth media, patented manufacturing technologies, and expensive bioreactors.

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That raises questions about market concentration and access.

Will cultivated meat eventually be produced by a small number of large corporations?

Could smaller producers participate?

How might the technology affect livestock farmers, rural communities, and existing agricultural supply chains?

And will consumers benefit from greater food choice or encounter another highly concentrated food-production industry?

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There are no simple answers.

The outcome will depend on technological progress, market competition, agricultural policies, and consumer demand.

Final Thoughts: Innovation Is Moving Forward, but Consumers Deserve the Full Story

The arrival of cultivated meat in American retail marks an important milestone in food technology.

What once seemed impossible—producing edible animal-derived tissue without raising an entire animal for slaughter—has become a demonstrated manufacturing process.

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Specific cultivated products have completed U.S. regulatory safety reviews.

A limited grocery-store sale has already occurred.

And companies continue exploring ways to produce animal protein through cellular agriculture.

But important questions remain.

Will these products be affordable?

Will their nutritional profiles offer real advantages?

Can manufacturers demonstrate consistent safety at industrial scale?

Will the environmental benefits match the promises?

And will consumers clearly understand what they are buying?

These are reasonable questions—not evidence that cultivated meat is inherently unsafe.

The future of food should not depend on blind enthusiasm for new technology or automatic rejection of anything unfamiliar.

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It should depend on **scientific evidence, transparent labeling, responsible regulation, and genuine consumer choice.**

Because whether meat comes from a farm, a bioreactor, or a combination of cultivated and plant-derived ingredients, people deserve to know what is on their plates.

Lab-grown meat has already crossed an important threshold in America. The next question is whether consumers will embrace it.

ezstandalone.cmd.push(function () { ezstandalone.showAds(178); });

And that brings us to a question worth discussing:

Would you eat meat grown from animal cells in a laboratory—or would you always choose traditional farm-raised meat?

Share your thoughts in the comments.

Read online: https://bestfolkmedicine.com/2026/10/lab-grown-meat-sold-america-safety-ingredients-labeling/

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