

# Calorie Counting the Government Way

The Ultimate History Project

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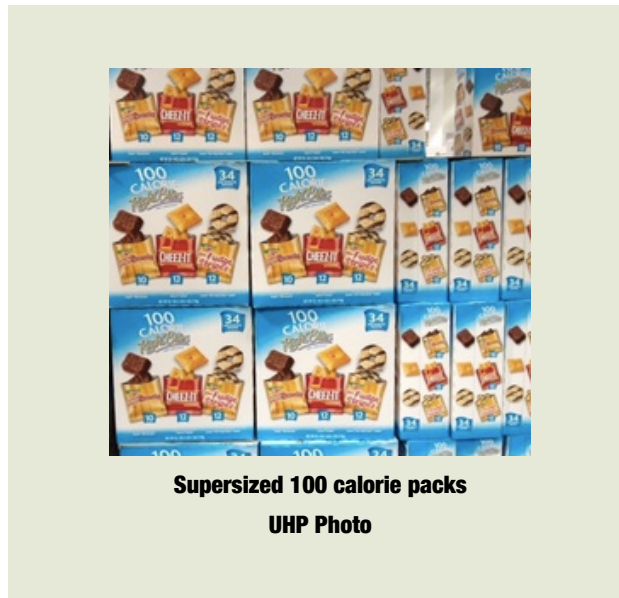
Today the “100 calorie pack” lines supermarket shelves. You can buy a neatly packaged hundred calories of crackers, cookies, almonds, or snack cakes. You can even snag hundred calorie packs of guacamole or marshmallows. The individual servings promise you will have a healthy snack experience and avoid the all too familiar guilt of downing half a box of cookies in one sitting...assuming you can stick to one 100-cal portion, that is.

The hundred calorie portion is nutrition made easy.

All that excess packaging and convenient consumption may make the 100 calorie concept look like something only 21st century America could produce. In fact, 100 calorie portions are more than a century old. Wilbur Olin Atwater, a chemist working with the Department of

Agriculture, invented the modern idea of the calorie in the late 19th century.

The calorie was simply a measurement of food energy, of fuel.



Atwater and his lab then spent the next two decades trying to figure out just how many calories men and women needed.

## Putting Graduate Students in Lockdown

He locked volunteers (and even some of his own graduate students!) in contraptions called “respiration calorimeters.” These were sealed off rooms designed to measure exactly how much heat (energy) was

expended as the volunteer ate, exercised, and performed chores.

By knowing exactly how much energy a man or woman used, Atwater reasoned, we could know exactly how much energy one needed to consume to complete their work. If Americans would become familiar with this new measure they could be completely efficient, with no lost energy or fuel. In Progressive Era America, nothing was as exciting as the idea of men as modern, economical machines.

Calories did not make immediate sense to the general population, as there was no precedent for thinking about food in terms of any number but price. Home economists and others working in the new field of dietetics, however, saw real potential in using calories to shape American eating habits. For calories to gain traction publicly they would need to be introduced to citizens in a simple way.

## 100 Calorie Blocks

Yale physiologist Irving Fisher introduced a more practical approach to calories in 1906.

Explaining that it was difficult to get people to measure their food and to track their consumption, Fischer



Locked in a Calorimeter, National Archives and Records Administration

suggested calories be understood in 100 calorie blocks. Irving believed that his 100 calorie tables would be most helpful for institutions, especially sanatoriums or private hospitals. Employees at these institutions could figure out exactly how much food to serve each patient. No wasted food and no hard math!

By the late 1910s, home economics and dietetics textbooks began to adopt versions of the 100 calorie portion method. As students

using these books became teachers, mothers, social workers, and reformers, they shaped how the next generation came to think about calories.

## Standardizing Advice

In 1921 the 100 calorie portion had become government-level nutrition advice. A Department of Agriculture nutritionist described how much food Americans needed in 100-

calorie terms. A twelve-year old boy needed twenty-seven 100 calorie blocks per day. A sedentary adult woman needed twenty-two blocks.

It was calories counting without fancy trackers or calculators. No one expected healthy Americans to carefully track how many 100 calorie portions they ate each day (although some proposed careful monitoring for the ill and malnourished). The popularization of the model for home use meant average

American women would become familiar with calories. In the process, experts hoped, they would come to understand nutrition as a modern and scientific project.

So, the 100 calorie portions of the early 20th century were designed to make it simpler, to live a healthy life by providing clear visuals of portion size. The contemporary 100 calorie packs, in all their shelf-stable, pre-packaged glory, promise to make that healthy life style even

simpler.

This simplification comes at a price, though. No two foods, even both in 100 calorie portions, will be equally nutritious.

For Further Reading:

Walter Gratzer, *The Terrors of the Table: The Curious History of Nutrition*

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Calorie portions, 1930s, National Archives and Records Administration

