



## Cut Calories and (Maybe) Add Years to Your Life

### 减少热量摄入或能更长寿

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Researchers seem to have discovered a **fountain** of youth, but it's **a tough sell**: eating far fewer calories.

研究人员似乎发现了一眼对抗衰老的青春之泉，但它不太容易让人接受：摄入更少的卡路里。

This is **apparently** not about losing weight but has more to do with the benefits of not over-fueling your cells. Scientists have found that **cutting way back on** food can double the lifespans of mice and add years for monkeys. And now there's new evidence from a big **clinical** study called Calerie.

这显然不是为了减肥，而是为了避免给细胞过度供能。科学家们发现，显著减少食物摄入可以使老鼠的寿命延长一倍，也能延长猴子的寿命。现在有了新的证据，来自一项名为 Calerie 的大型临床研究。

The Calerie study has published its findings in *Nature Aging*. Volunteers were **randomly assigned** to one of two groups. One group was supposed to eat only 75% of their normal intake for a period of two years. The others, in the **control group**, ate normally.

Calerie 的研究结果发表在《自然衰老》杂志上。志愿者被随机分为两组。一组在两年内只吃正常摄入量的 75%。对照组正常进食。

The calorie-cutting group worked with nutritionists to **figure out** what their normal intake was and how to reduce it while still getting enough **protein**, vitamins and **minerals**. By the end of the trial, they had cut about 300 calories from their daily intake — about half of the goal.

减少卡路里摄入的那组参与者与营养学家一起测算出他们的正常摄入量，并想办法在获取足够蛋白质、维生素和矿物质的同时减少卡路里摄入。

447 Words

**fountain** ['faʊntn] *n.* 喷泉；来源，源泉 | Tourism is a fountain of wealth for the city. 旅游业是该市的重要收入来源。

**a tough/hard sell** 滞销品，不容易被接受的事物

**apparently** [ə'pærəntli] *adv.* 看来，显然 | I thought she had retired, but apparently she hasn't. 我原以为她退休了，但显然她还没有退。

**cut back on** 减少，削减 | We're trying to cut back on the amount we spend on food. 我们正在试着削减购买食品的开支。

**way** [weɪ] *adv.* 很远，大量；非常，及其 | Things just got way difficult. 事情变得太困难了。

**clinical** ['klɪnɪkl] *adj.* 临床的；冷淡的，无动于衷的 | He told us the story in a cold and clinical manner. 他冷静而客观地给我们讲述了这个故事。

**randomly** ['rændəmli] *adv.* 随机地，任意地 | The winning numbers are randomly selected by computer. 获奖号码是由电脑随机选取的。

**assign** [ə'saɪn] *v.* 指定，指派；分配（某物），分派，布置 | The teacher assigned a different task to each of

到试验结束时，他们每天少吃了 300 卡路里左右——大约是目标的一半。

The study has a couple of limitations. The sample size was small — just 220 people across the two groups. And the calorie cutters got to work with a nutritionist and might have benefitted from eating better food than the control subjects, rather than just eating less.

这项研究有几个局限性。样本量很小，两组参与者总共只有 220 人。减少卡路里摄入的参与者有营养学家辅助，他们可能得益于比对照组的人吃得更好，而不仅仅是吃得更少。

**Nonetheless**, the changes they made showed some major health benefits, said William Kraus, a **cardiologist** at Duke University who collaborated on the study. Compared to the control subjects, the slightly calorie-deprived group showed markers of better **cardiovascular** and **metabolic** health.

尽管如此，参与这项研究的杜克大学心脏病专家威廉·克劳斯说，他们所做的改变对健康大有益处。与对照组相比，略微减少卡路里摄入的参与者的心血管和代谢指标更好。

What this study focused on was rate of aging, said **epidemiologist** and study co-author Daniel Belsky of the Columbia School of Public Health. They saw signs that the calorie cutters' cells were aging a tiny bit more slowly. It was a small difference **overall**, but might add up to something meaningful if the subjects kept at it. Das, of Tufts, said she's working on a **follow-up** study to see whether the subjects sustained the new eating patterns and how that affected them.

哥伦比亚大学公共卫生学院的流行病学家、该研究的合著者丹尼尔·贝尔斯基说，这项研究的重点是衰老速度。他们发现减少卡路里摄入的人细胞衰老速度稍微慢了一点。总的来说，这是一个很小的差异，但如果受试者坚持下去，可能会产生一些有意义的结果。塔夫茨大学的达斯说，她正在进行一项后续研究，看看受试者是否能维持新的饮食模式，以及这会对他们产生什么影响。

Kraus, the cardiologist, **laid out** some reasons why eating

the children. 老师给每个孩子都布置了不同的作业。

**control group** (用作对照实验比较标准的) 对照组

**figure out** 弄懂，搞清楚；理解 (某人) | We had to figure out the connection between the two events. 我们必须弄清楚这两件事之间的联系。

**protein** ['prəʊtɪn] *n.* 蛋白质 | a high protein diet 高蛋白饮食

**mineral** ['mɪnərəl] *n.* 矿物质

**nonetheless** [ˌnʌnðə'les] *adv.* 尽管如此 | The problems are not serious. Nonetheless, we shall need to tackle them soon. 问题不严重。不过我们还是需要尽快处理。

**cardiologist** [ˌkɑːrdi'ɑːlədʒɪst] *n.* 心脏病医生，心脏病学家

**cardiovascular** [ˌkɑːrdioʊ'væskjələr] *adj.* 心血管的  
**metabolic** [ˌmetə'bɒlɪk] *adj.* 新陈代谢的

**epidemiologist** [ˌepɪˌdiːmi'ɑːlədʒɪst] *n.* 流行病学家

**overall** [ˌoʊvər'ɔːl] *adv.* 全部，总计；总体上，大致上 *adj.* 全面的；综合的；总体的 *n.* 外套，罩衣；连身工作服 | Overall, this is a very useful book. 总的来说，这是一本很有用的书。

**follow-up** *adj.* 后续的，进一步的 | a follow-up study 进一步的研究

**lay out** 阐述，讲解，说明；规划，布置；铺开，展开；花费 | Cuomo

less might slow aging. The energy-producing part of your cells, called the **mitochondria**, get overworked when you eat a lot. “It’s like running your car engine hot,” he said. Toxic **byproducts** get produced — **reactive** oxidative species, also known as **free radicals**.

心脏病专家克劳斯解释了少吃为什么可以延缓衰老。当你吃得太多时，细胞中负责产生能量的部分，即线粒体，就会过度工作。“这就像汽车发动机过热，”他说。在此过程中会产生有毒的副产品——活性氧化物质，也称为自由基。

So cutting calories can reduce the load on those mitochondria, he said. Exercise can have a similar effect and helps the mitochondria burn the metabolic trash. “It reduces the trash load in the cell and makes it more efficient,” he said.

因此，减少卡路里摄入可以减少线粒体的负荷，克劳斯说。运动也有类似的效果，可以帮助线粒体燃烧代谢垃圾。他说：“运动可以减少细胞中的垃圾，使其更有效率。”

Cutting calories might help people live longer and healthier on average. But there’s no guarantee it will add years to your life.

减少卡路里摄入可能有助于人们更长寿、更健康，但并不能保证一定能延长寿命。

laid it out in simple language. 科莫用简单的语言作了解释。

**mitochondria** [ˌmɪtəˈkɑːndriəl]  
n. 线粒体

**byproduct** [ˈbaɪˌprɒdʌkt] n. 副产品；意外结果，副作用 | Job losses are an unfortunate byproduct of the recession. 失业是经济衰退的不幸产物。

**reactive** [riˈæktɪv] adj. 活性的，能起化学反应的 | Ozone is a highly reactive form of oxygen gas. 臭氧是一种非常活跃的氧气形态。

#### ◇ 背景知识

#### **free radical**

自由基，机体氧化反应中产生的有害化合物，具有强氧化性，可损害机体的组织和细胞。大量资料已经证明，衰老、炎症、肿瘤、血液病等疾病的发生机理与体内自由基产生过多或清除自由基能力下降有着密切的关系。

### ► 脉络梳理