

新东方背诵文选80篇：64盐与新陈代谢SaltandMetabolism PDF  
转换可能丢失图片或格式，建议阅读原文

[https://www.100test.com/kao\\_ti2020/207/2021\\_2022\\_\\_E6\\_96\\_B0\\_E4\\_B8\\_9C\\_E6\\_96\\_B9\\_E8\\_c96\\_207304.htm](https://www.100test.com/kao_ti2020/207/2021_2022__E6_96_B0_E4_B8_9C_E6_96_B9_E8_c96_207304.htm) 64 Salt and Metabolism

Just how salt became so crucial to our metabolism is a mystery. One appealing theory traces our dependence on it to the chemistry of the late Cambrian seas. It was there, a half billion years ago, that tiny metazoan organisms first evolved systems for sequestering and circulating fluids. The water of the early oceans might thus have become the chemical prototype for the fluids of all animal life - the medium in which cellular operations could continue no matter how the external environment changed. This speculation is based on the fact that, even today, the blood serums of radically divergent species are remarkably similar. Lizards, platypuses, sheep, and humans could hardly be more different in anatomy or eating habits, yet the salt content in the fluid surrounding their blood cells is virtually identical. As early marine species made their way to fresh water and eventually to dry land, sodium remained a key ingredient of their interior, if not their exterior, milieu. The most successful mammalian species would have been those that developed efficient hormonal systems for maintaining the needed sodium concentrations. The human body, for example, uses the hormones renin, angiotensin, and aldosterone to retain or release tissue fluids and blood plasma. The result, under favorable conditions, is a dynamic equilibrium in which neither fluid volume nor sodium concentration fluctuates too dramatically. But if the body is deprived of salt, the effects soon become dangerous,

despite compensatory mechanisms. 盐与新陈代谢盐为何成为人类新陈代谢的关键是一个谜；一个富有吸引力的理论认为我们对盐的依赖可从寒武纪海洋的化学变化中得到线索。五亿年前，就是在那里，微小的后生动物首先进化成与外隔绝的循环液体系统。因此，早期海洋里的水可能是所有动物体内液体的化学原型--一个无论外界环境如何改变，其细胞活动仍将继续的环境。这个设想是建立这一事实基础上：即使是在今天，物种迥异的众多动物血清非常相似。蜥蜴、鸭嘴兽、绵羊和人类，在解剖学和饮食习惯上完全不同，但细胞周围的液体中的盐含量却基本上是相等的。在海洋生物向淡水区域并最终向陆地移动的过程中，盐始终是它们生存环境--如果不是外部环境，其码也是内部环境中的关键成份。最高级的哺乳类动物为保持所需的盐浓度而进化出了高效的内分泌系统。例如，人体为了保留或释放组织液体和血浆而使用高血压蛋白原酶、血管紧张素、醛固酮等激素。这样在有利的环境下，液体与其中盐浓度之间形成的动态平衡，两者均不致出现大起大落。但如果身体里丧失了盐分，尽管有各种的补偿机制，后果将马上极其危险。100Test 下载频道开通，各类考试题目直接下载。详细请访问 [www.100test.com](http://www.100test.com)