

- state". A practical method for grading the cognitive state of patients for the clinician[J]. J Psychiatr Res, 1975, 12(3):189-198.
- [11] 伍侨, 谭佳容, 廖小刚, 等. 中国老年人群社会隔离发生率的Meta分析[J]. 中国循证医学杂志, 2023, 23(4):398-403.  
Wu Q, Tan J R, Liao X G, et al. Meta-analysis of the prevalence of social isolation in the elderly population in China[J]. Chin J Evid-Based Med, 2023, 23(4):398-403.
- [12] Mersha A G, Tollosa D N, Bagade T, et al. A bidirectional relationship between diabetes mellitus and anxiety: A systematic review and meta-analysis[J]. J Psychosom Res, 2022, 162:110991.
- [13] Maina J G, Balkhiyarova Z, Nouwen A, et al. Bidirectional mendelian randomization and multiphenotype GWAS show causality and shared pathophysiology between depression and type 2 diabetes[J]. Diabetes Care, 2023, 46(9):1707-1714.
- [14] Yuan S, Larsson S C. Epidemiology of sarcopenia: prevalence, risk factors, and consequences[J]. Metabolism, 2023, 144:155533.
- [15] Nascimento C M, Ingles M, Salvador-Pascual A, et al. Sarcopenia, frailty and their prevention by exercise[J]. Free Radic Biol Med, 2019, 132:42-49.
- [16] Wang M, Tan Y, Shi Y, et al. Diabetes and sarcopenic obesity: pathogenesis, diagnosis, and treatments[J]. Front Endocrinol (Lausanne), 2020, 11:568.
- [17] Zhu J, Zhou D, Wang J, et al. Frailty and cardiometabolic diseases: a bidirectional Mendelian randomisation study[J]. Age Ageing, 2022, 51(11):afac256.
- [18] Moran C, Than S, Callisaya M, et al. New horizons-cognitive dysfunction associated with type 2 diabetes[J]. J Clin Endocrinol Metab, 2022, 107(4):929-942.
- [19] Xue M, Xu W, Ou Y N, et al. Diabetes mellitus and risks of cognitive impairment and dementia: a systematic review and meta-analysis of 144 prospective studies[J]. Ageing Res Rev, 2019, 55:100944.
- [20] Lara E, Caballero F F, Rico-Urbe L A, et al. Are loneliness and social isolation associated with cognitive decline? [J]. Int J Geriatr Psychiatry, 2019, 34(11):1613-1622.
- [21] Davies K, Maharani A, Chandola T, et al. The longitudinal relationship between loneliness, social isolation, and frailty in older adults in England: a prospective analysis[J]. Lancet Healthy Longev, 2021, 2(2):e70-e77.
- [22] Saum K U, Dieffenbach A K, Müller H, et al. Frailty prevalence and 10-year survival in community-dwelling older adults: results from the ESTHER cohort study[J]. Eur J Epidemiol, 2014, 29(3):171-179.

## 片语健康

### 食物线索

食物线索 (Food cue) 是诱惑进食的刺激。在现代社会, 食物线索无处不在: 有视觉的, 如广告中的汉堡图像、菜单图片, 食物包装设计和社交媒体上美食博主的演示; 有嗅觉的, 如餐厅飘出的香味、烘焙店的黄油气味; 有听觉的, 如吃薯片的脆响、煎肉的声音; 有社会性的, 如朋友聚餐、在社交媒体上进行美食分享等<sup>[1]</sup>。

在食物匮乏的远古时代, 具有敏锐识别优质 (高能量、高营养) 食物线索的个体有更多的获取优质食物 (如高蛋白猎物, 高糖水果) 的机会, 因而能储存更多能量以应对不可预测的饥荒。水果的鲜艳色泽、可猎食动物的样貌或坚果的油脂气味都可能是救命信号。这些信号是食物线索, 关乎生存。对食物线索敏感的人有更大的可能性生存并繁衍后代。久而久之, 识别食物线索和对食物线索反应的机制就被“写进了”人类的基因组, 成为“生存密码”。这些密码编程出现代人大脑的奖赏系统, 如中脑皮质边缘多巴胺系统 (Mesocorticolimbic dopamine system)。这一系统调控摄食动机和愉悦感, 使人产生“想要吃”的冲动和行为。

在食物过剩的现代, 对食物线索的本能反应会导致对食品的过度渴求, 与环境发生错配。错配的结果是不“真饿”时也追求美食。美食可激活大脑的奖赏系统, 使人愉悦。不断追求这种愉悦导致食物消费增加<sup>[1]</sup>。久而久之, 就肥胖了。

#### 参考文献

- [1] Hayashi D, Edwards C, Emond J A, et al. What is food noise? A conceptual model of food cue reactivity[J]. Nutrients, 2023, 15(22):4089.

(作者: 于永利)