

- tomography[J]. *Transl Vis Sci Technol*, 2015,4(5):7.
- [15] Ortuño-Lizarán I, Beach T G, Serrano G E, et al. Phosphorylated α -synuclein in the retina is a biomarker of Parkinson's disease pathology severity[J]. *Mov Disord*, 2018,33(8):1315-1324.
- [16] Bodis-Wollner I, Kozlowski P B, Glazman S, et al. α -synuclein in the inner retina in Parkinson disease[J]. *Ann Neurol*, 2014,75(6):964-966.
- [17] Almer Z, Klein K S, Marsh L, et al. Ocular motor and sensory function in Parkinson's disease[J]. *Ophthalmology*, 2012,119(1):178-182.
- [18] Nowacka B, Lubinski W, Honczarenko K, et al. Ophthalmological features of Parkinson disease[J]. *Med Sci Monit*, 2014,20:2243-2249.
- [19] Chorostecki J, Seraji-Bozorgzad N, Shah A, et al. Characterization of retinal architecture in Parkinson's disease[J]. *J Neurol Sci*, 2015,355(1-2):44-48.
- [20] Horsager J, Knudsen K, Sommerauer M. Clinical and imaging evidence of brain-first and body-first Parkinson's disease[J]. *Neurobiol Dis*, 2022,164:105626.
- [21] Fischer M D, Synofzik M, Kernstock C, et al. Decreased retinal sensitivity and loss of retinal nerve fibers in multiple system atrophy[J]. *Graefes Arch Clin Exp Ophthalmol*, 2013,251(1):235-241.
- [22] Stemplewitz B, Kromer R, Vettorazzi E, et al. Retinal degeneration in progressive supranuclear palsy measured by optical coherence tomography and scanning laser polarimetry[J]. *Sci Rep*, 2017,7(1):5357.
- [23] Unlu M, Gulmez Sevim D, Gultekin M, et al. Correlations among multifocal electroretinography and optical coherence tomography findings in patients with Parkinson's disease[J]. *Neurol Sci*, 2018,39(3):533-541.
- [24] Kaur M, Saxena R, Singh D, et al. Correlation between structural and functional retinal changes in Parkinson disease[J]. *J Neuroophthalmol*, 2015,35(3):254-258.
- [25] Mahlknecht P, Seppi K, Poewe W. The concept of prodromal Parkinson's disease[J]. *J Parkinsons Dis*, 2015,5(4):681-697.

片语健康

真饿和假饿

饿是对食物的渴望，分为真饿和假饿。

真饿是生理性饥饿 (Physiological hunger)^[1]。“腹中空空”“饥肠辘辘”“眼冒金星”“四肢无力”是真饿。真饿而不得食，会“一命呜呼”！活着需要能量，能量来自食物，真饿驱动摄食。当食物缺乏时，胃、脂肪、肠道和胰腺等外周器官产生多种激素。这些激素经血液循环到达奖励/执行大脑区域，与神经元互动产生内稳态饥饿信号 (Homeostatic hunger signals)^[2]。内稳态饥饿信号管理的基本原理是根据能量消耗调节能量摄入行为，维持人体的能量平衡稳态 (Energy homeostasis)^[3]。这种管理不受意识控制，使大多数成年人在数月或数年内体质量无大变化^[2]。

假饿是非生理性饥饿。假饿是有意识食物渴望 (Food cravings)。这种渴望是由“食物线索”引起的摄食冲动^[1]。假饿驱动“非生理需求进食”，就是在不缺乏能量的状态下进食。这种进食，不是为充饥、生存，而是为享乐、消遣。若经常这样，会使能量摄入持续大于能量消耗，从而打破“能量平衡稳态”。多余的能量以脂肪的形式贮存，贮存多了，就胖了^[2]。

真饿在腹，假饿在心。假饿是驱动肥胖的欲望，是心瘾。

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.
- [2] Ayres J S. The biology of physiological health[J]. *Cell*, 2020,181(2):250-269.
- [3] Lingvay I, Cohen R V, Roux C, et al. Obesity in adults[J]. *Lancet*, 2024,404(10456):972-987.

(作者:于永利)