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Domestic cats eat whatever they can catch

Domestic cats (*Felis catus*) are beloved companions for many people, but they are also invasive predators that have been linked to numerous birds, mammals and reptiles going extinct. Their eating habits are of interest to ecologists, to determine the risk these cats pose to endangered species. Writing in *Nature Communications*, Lepczyk *et al*. report a global assessment of the diet of free-ranging domestic cats — and find that they are not picky eaters (C. A. Lepczyk *et al*. *Nature Commun.* **14**, 7809; 2023).

The authors constructed the largest database of cat's diets so far by exhaustively combing through hundreds of previous studies. Their meta-analysis identified 2,084 species eaten by cats, of which 981 (about 47%) were birds, 463 (22%) were reptiles and 431 (21%) were mammals. Surprisingly high numbers of insects (119 species; 6%) and amphibians (57 species; 3%) were also identified.

The emerging picture is that cats are extremely indiscriminate predators that eat whatever animals they can capture or scavenge. Worryingly, about 17% of the identified species are of conservational concern. The authors say that the findings will aid scientists' understanding of the impact of cats on ecological systems. **Andrew Mitchinson**

Medical research

MYC protein helps cancer to take its vitamins

Martina Wallace

Identifying nutrient dependencies of cancer cells is crucial for developing new therapies. The discovery that an aggressive type of cancer cell has a high uptake of vitamin B5 sheds light on the link between vitamin availability and tumour growth.

A rise in the levels of the protein MYC in tumours is associated with poor clinical outcomes in people who have cancer, including increased rates of cancer spread (metastasis) and decreased survival times[1]. Because MYC is a transcription factor that controls the expression of a wide range of genes, increases in its abundance can result in the rewiring of cellular metabolism to support tumour growth[2]. However, the complexity of the metabolic pathways involved, and the intricate interactions between the tumour and its micro-environment, make it challenging to identify nodes that could be targeted therapeutically. Writing in *Nature Metabolism*, Kreuzaler *et al*.[3] show that cells with high levels of MYC increase their uptake of vitamin B5 (also known as pantothenic acid), a nutrient that supports key metabolic processes. This finding might provide a way to target cancer cells through their metabolism.

The authors used advanced imaging methods to analyse mice bearing breast-cancer tumours. Tumours usually consist of a mixture of cancer cells with different gene-expression profiles or features. This gives them the flexibility to adapt to changing micro-environments that often have poor nutrient supplies and low levels of oxygen[4].