

# UCLA-led team may have found key to cause of Cushing disease

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Cushing disease is a life-threatening disorder most commonly triggered by tumors, often benign, in the pituitary glands, resulting in excess production of adrenocorticotrophic hormone (ACTH). The condition is marked by progressive weight gain, excessive fatty tissue deposits and a rounding of facial features, known as "moon face," and can lead to diabetes, hypertension, osteoporosis, obesity and psychological disturbances.

Cushing disease, which is more common in women than men, is also associated with a three- to four-fold increase in the risk of premature death. But what drives the tumor growth and the excess production of ACTH?

UCLA researchers and their colleagues have now found that testicular orphan [nuclear receptor](#) 4 (TR4) is overexpressed in the tumors. The scientists discovered that by knocking down TR4 in [lab mice](#), they were able to reverse tumor growth and excess ACTH production.

The findings could potentially lead to a drug therapy for Cushing disease.

The findings were published in the May 21 issue of the journal *Proceedings of the National Academy of Sciences*.

Provided by University of California, Los Angeles

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