



PRESS RELEASE

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DOES GENDER-AFFIRMING HORMONE THERAPY AFFECT MARKERS OF KIDNEY HEALTH?

Studies suggest that it may in transgender men but not in transgender women.

Highlight

- Results from relevant studies indicate that gender-affirming hormone therapy may increase blood levels of creatinine (indicating potential kidney dysfunction or simply a change in lean muscle mass) in transgender men but does not significantly impact blood levels of creatinine in transgender women.

Washington, DC (August 16, 2022) — Gender-affirming hormone therapy modifies body composition and lean muscle mass in transgender persons. A recent analysis published in *CJASN* examined the effects of masculinizing and feminizing gender-affirming hormone therapy on markers of kidney function.

For the analysis, a team led by David Collister, MD, PhD (University of Alberta) searched the medical literature and identified 26 relevant studies. At 12 months after initiating gender-affirming hormone therapy, blood levels of creatinine (a marker of kidney function) increased by 0.15mg/dL in transgender men and decreased by -0.05mg/dL in transgender women. (An increase in creatinine may indicate possible kidney dysfunction or simply reflect a change in underlying lean muscle mass.) No study reported the impact of gender-affirming hormone therapy on other markers or measures of kidney function (e.g. albumin or protein in the urine, cystatin C, directly measured kidney function), indicating the need for additional research.

“It is important to understand how gender-affirming hormone therapy impacts kidney physiology and how it changes values of common laboratory tests so that patients are properly assessed and not mislabeled with health or disease with regards to kidney function,” said Dr. Collister.

An accompanying editorial notes that the analysis raises several important questions that should be the focus of subsequent investigations, most notably the mechanism through which gender-affirming hormone therapy is associated with changes in creatinine and whether it independently affects kidney function.

Additional study authors include Emily Krupka, BSc, Sarah Curtis, Thomas Ferguson, MSc, Reid Whitlock, MSc, Adam C. Millar MD, MScCH, Marshall Dahl, MD, Raymond

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Disclosures:

S.B. Ahmed reports serving as an Advisory Board Member of Canadian Institutes of Health Research Institute of Gender and Health (volunteer position), as Education Chair of the Organization for the Study of Sex Differences (volunteer position), and as a *Canadian Medical Association Journal* Governance Council Member (elected position).

D. Collister reports employment with Alberta Health Services; consultancy agreements with Akebia; research funding from Canadian Institutes of Health Research, Kidney Foundation of Canada, and Boehringer Ingelheim/Research Manitoba; and serving in an advisory or leadership role for Canadian Nephrology Trials Network (Executive Committee, Scientific Operations Committee).

S. Curtis and R. Whitlock report employment with the Chronic Disease Innovation Centre.

T. Ferguson reports employment with Seven Oaks Hospital Chronic Disease Innovation Centre; consultancy agreements with Quanta Dialysis Technologies, Clinpredict, and Strategic Health Resources (Tricida Inc, Protagonist Therapeutics); ownership interest in Klinrisk Inc.; and honoraria from Baxter Canada.

A.C. Millar reports consultancy agreements with Novo Nordisk Canada, honoraria from Dexcom Canada, and speakers bureau for Dexcom Canada.

N. Tangri reports consultancy agreements with Tricida Inc., PulseData Inc, Mesentech Inc., Renibus, and Marizyme; ownership interest in Tricida Inc., PulseData Inc, Mesentech Inc., Clinpredict Ltd, Renibus, Marizyme, Klinrisk, and Quanta; research funding from AstraZeneca Inc., Tricida Inc, Janssen, Otsuka, BI-Lilly, and Bayer; honoraria from Otsuka Pharmaceuticals, AstraZeneca Inc., BI-Lilly, Janssen, Pfizer, and Bayer; patents or royalties from Marizyme and Klinrisk; serving in an advisory or leadership role for Tricida Inc., Clinpredict, and Klinrisk; and other interests or relationships with National Kidney Foundation and Clinpredict and as Founder of Klinrisk.

M. Walsh reports employment with Ontario Renal Network; research funding from Canadian Institutes of Health Research, National Health and Medical Research Council, Health Research Council, British Heart Foundation, National Institute of Health Research, and Vifor (no salary support received through any research funding); serving in an advisory or leadership role for Bayer (steering committee, payment to institution) and Otsuka (national leader, payment to institution); and other interests or relationships with Novo Nordisk (event adjudication, payment to institution).

The article, titled "The Effect of Gender-Affirming Hormone Therapy on Measures of Kidney Function: A Systematic Review and Meta-Analysis," will appear online at <http://cjasn.asnjournals.org/> on August 16, 2022, doi: 10.2215/CJN.01890222.

The editorial, titled “Advancing Kidney Health Equity: Influences of Gender-Affirming Hormone Therapy on Kidney Function,” will appear online at <http://cjasn.asnjournals.org/> on August 16, 2022, doi: 10.2215/CJN.08280722.

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