PHYSICAL ACTIVITY AND SPORTS PARTICIPATION FOR TRANSGENDER AND GENDER DIVERSE (TGD) PEOPLE

NATIONAL LGBTQIA+ HEALTH EDUCATION CENTER
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INTRODUCTION

This publication is designed to support health centers in promoting physical activity and sports participation for transgender and gender diverse (TGD) patients. TGD people experience multiple mental and physical health disparities throughout the life course, including increased cardiometabolic risk.[1,2] Despite these increased risks, preventive health guidelines rarely address the unique needs of TGD people. In this publication, we therefore provide evidence-informed guidance for clinical care teams to support the health and wellness of their TGD patients. Clinicians will learn to:

- Identify current barriers and facilitators to sports participation
- List the unique benefits of physical activity and sports participation for TGD people
- Apply best practices for discussing physical activity with TGD patients
- Connect TGD patients to affirming sports-related resources and communities to facilitate their engagement in physical activity

PHYSICAL ACTIVITY AND TGD INDIVIDUALS – WHAT WE KNOW

There is a small, but growing body of research on health behaviors, health promotion, and cardiovascular disease among the TGD population. Highlights from these studies, across the life course, are summarized on the next page.

[1] Streed CG Jr, Beach LB, Caceres BA, et al. Assessing and addressing cardiovascular health in people who are transgender and gender diverse: A scientific statement from the American Heart Association. Circulation. 2021;144(6):e136-e148.

[2] Masumori N, Nakatsuka M. cardiovascular risk in transgender people with gender-affirming hormone treatment. Circ Rep. 2023;5(4):105-113.

ADOLESCENTS

Summary of research:
TGD adolescents are less likely than their cisgender peers to be at a healthy weight or to participate in physical activities and sports; they also are more likely to be bullied for their size.

Specific research findings:
In a state-wide survey of high school students (N=80,794), researchers found that TGD youth were more likely than cisgender youth to have a body mass index in the overweight/obese range (26% vs 10.5%), less likely to participate in weekly sports activities (74.8% vs 44.6%), and less likely to have 3 or more days/week of physical activity (50.2% vs 72.5%). Additionally, TGD adolescents were more likely to skip lunch (26% vs 10.4%) and more likely to be targeted by bullying behavior around weight or size (16% vs 5.5%).[3]

ADULTS

Summary of research:
Transgender males and gender diverse people are more likely to not exercise compared to cisgender people and transgender females.

Specific research findings:
In a nationally representative sample of 2,221 TGD people and 523,080 cisgender people, researchers observed higher rates of no exercise among transgender males (38.7%) and gender diverse individuals (34.1%), compared to cisgender males (22.4%), cisgender females (26.2%), or transgender females (30.8%).[4]

OLDER ADULTS

Summary of research:
TGD older adults are less physically active than their cisgender LGBQ peers.

Specific research findings:
In a cross-sectional survey of a non-probability sample of 2,560 U.S. adults > 50 years old identifying as LGBTQ, researchers assessed the direct and indirect effects of gender identity on health outcomes. Overall, 22.67% of transgender vs. 14.58% of cisgender participants reported a lack of physical activity. Additionally, transgender older adults had greater risk for poorer physical health as well as perceived stress and depression compared to cisgender participants.[5]

[3] Bishop A, Overcash F, McGuire J, Reicks M. Diet and physical activity behaviors among adolescent transgender students: school survey results. J Adolesc Health. 2020;66:484–490.

[4] Downing JM, Przedworski JM. Health of transgender adults in the U.S., 2014–2016. Am J Prev Med. 2018;55:336–344. doi:10.1016/j.amepre. 46. 2018.04.045

[5] Fredriksen-Goldsen KI, Cook-Daniels L, Kim HJ, et al. Physical and mental health of transgender older adults: An at-risk and underserved population. Gerontologist. 2014;54(3):488-500.

BARRIERS AND FACILITATORS TO PHYSICAL ACTIVITY AND SPORTS PARTICIPATION

There are several reasons why TGD people may be less physically active than cisgender people. Most of these reasons are rooted in anti-TGD stigma and discrimination, which creates environments where TGD people may be judged, alienated, harassed, and forced to disclose.[6]

Barriers[6,7]

- **Non-inclusive spaces** (e.g., a lack of gender-inclusive changing facilities or uniforms)
- **Physical discomfort during transition** (e.g., pain or discomfort due to binding/tucking, hormonal changes, surgical recovery)
- **Concerns for physical and/or psychological safety** in spaces where people access physical activity (e.g., harassment from teammates or coaches)
- **Single gender teams and classes** (e.g., women-only or men-only gyms or sports teams that explicitly or implicitly do not allow TGD people)
- **State-level policies that ban transgender youth** from participating in school or college sports consistent with their gender identity; as of this writing, 24 states have passed such laws or regulations[8]

Even in the face of these many barriers, TGD people feel motivated to engage in physical activity and sports. Research has uncovered several facilitators to physical activity for TGD people.

Facilitators[8,9]

- **Gender-affirming hormone therapy.** Being on gender affirming hormone therapy is associated with increased body satisfaction and physical activity participation for TGD people.
- **LGBTQIA+ and mixed gender team sports and spaces** can create welcoming and affirming opportunities for TGD people to engage in physical activity.
- **Participating in individual recreational sports**, such as running, swimming, and hiking reduces the likelihood of encountering discrimination and harassment; however, TGD people would prefer to also participate in team sports, if barriers were removed.

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[6] Masumori N, Nakatsuka M. cardiovascular risk in transgender people with gender-affirming hormone treatment. Circ Rep. 2023;5(4):105-113.

[7] Lightner JS, Schneider J, Grimes A, et al. Physical activity among transgender individuals: A systematic review of quantitative and qualitative studies. PLoS One. 2024;19(2):e0297571.

[8] Movement Advancement Project. Bans on Transgender Youth Participation in Sports. Available from: https://www.lgbtmap.org/equality-maps/youth/sports_participation_bans

[9] Alnawwar MA, Alraddadi MI, Algethmi RA, Salem GA, Salem MA, Alharbi AA. The effect of physical activity on sleep quality and sleep disorder: A systematic review. Cureus. 2023;15(8):e43595.

GENERAL BENEFITS OF PHYSICAL ACTIVITY

Physical activity has many general benefits to overall health and wellbeing.[9-11]

- **Short-term** health and wellness benefits of physical activity
    - Improved sleep quality
    - Reduced anxiety
    - Better control of blood glucose
    - Lower blood pressure
- **Long-term** health and wellness benefits of physical activity
    - Brain health – Reduced risk of Alzheimer's Disease, dementia, and depression
    - Heart health – Lower risk of heart disease, stroke, and Type 2 Diabetes
    - Cancer prevention – Lower risk of bladder, breast, colon, endometrial, esophagus, kidney, lung, and stomach cancers
    - Healthy weight – Reduced risk of weight gain
    - Bone strength – Improved bone health
    - Balance and coordination – Reduced risk of falls

Physical activity is also one of the four essential health behaviors included in the American Heart Association's key measures for improving and maintaining cardiovascular health.[12]

Be more active **Eat better** **Quit tobacco** **Get healthy sleep**

[10] Al-Mhanna SB, Rocha-Rodriguesc S, Mohamed M, Batrakoulis A, et al. Effects of combined aerobic exercise and diet on cardiometabolic health in patients with obesity and type 2 diabetes: A systematic review and meta-analysis. BMC Sports Sci Med Rehabil. 2023;15(1):165.

[11] Anderson E, Shivakumar G. Effects of exercise and physical activity on anxiety. Front Psychiatry. 2013;4:27.

[12] American Heart Association. www.heart.org/en/healthy-living/healthy-lifestyle/lifes-essential-8

SPECIFIC BENEFITS OF PHYSICAL ACTIVITY FOR THE TGD POPULATION

The benefits of physical activity specific to TGD people include the following:

Cardiovascular Health[1]

- TGD people have an increased risk of poor cardiovascular outcomes, specifically relating to myocardial infarction among transgender men and venous thromboemobolus among transgender women.
- The American Heart Association recognizes the importance of modifiable risk factors among transgender individuals, including physical activity, and argues for the importance of more research in this area.

Bone Health[13,14]

- Before starting hormone treatment, TGD people have an increased risk for lower bone mineral density. This risk is likely related to lower levels of calcium and vitamin D, which are due to dietary patterns, increased prevalence of eating disorders, and lower physical activity participation.
- Long-term puberty suppression in transgender adolescents can lower bone mineral density, especially in transgender girls. Bone density can be partially restored once gender affirming hormone therapy starts.
- Gender-affirming hormone therapy does not have a negative impact on bone mineral density in adult transgender men or transgender women, and may improve bone health.
- Physical activity improves bone health by increasing muscle mass and loading stress onto bones; it is therefore critically important for TGD children and adults to participate in physical activity, including weight-bearing exercise, in order to build bone density.

Mental Health[15,16]

- TGD people have a higher prevalence of depression, anxiety, and post-traumatic stress disorder due to experiences of bias, stigma, discrimination, and social isolation.[17]
- Physical activity is a well-studied non-pharmacologic treatment for poor sleep, anxiety, and depression.

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[13] Lee JY, Finlayson C, Olson-Kennedy J, Garofalo R, Chan YM, Glidden DV, Rosenthal SM. Low Bone Mineral Density in Early Pubertal Transgender/Gender Diverse Youth: Findings From the Trans Youth Care Study. J Endocr Soc. 2020;4(9)

[14] Wiepjes CM, den Heijer M, T' Sjoen GG. Bone health in adult trans persons: an update of the literature. Curr Opin Endocrinol Diabetes Obes. 2019;26(6):296-300.

[15] Kredlow MA, Capozzoli MC, Hearon BA, et al. The effects of physical activity on sleep: A meta-analytic review. J Behav Med.2015;38:427–449.

[16] Anderson E, Shivakumar G. Effects of exercise and physical activity on anxiety. Front Psychiatry. 2013;4:27.

COMMUNITY AND SOCIAL PHYSICAL ACTIVITY PARTICIPATION

The setting in which we participate in physical activity matters. Multiple studies support leisure time physical activity as beneficial to health.[18,19] Participating in social physical activities, whether team sports or other group activities, has an additional positive impact on social and emotional wellbeing.[20]

PHYSICAL ACTIVITY RECOMMENDATIONS FOR PATIENTS

Age-specific recommendations

- When promoting exercise with patients, clarify that physical activity can be "anything that gets your body moving,"[21] including "movement…during leisure time, for transport to get to and from places, or as part of a person's work".[22]
- Share age-specific physical activity recommendations from the Physical Activity Guidelines for Americans (2nd Edition), U.S. Department of Health and Human Services.[23] ***Box 1*** summarizes these recommendations by age group.
- While these recommendations can be set as goals, give the overall message that any physical activity is better than none, and, moving more is better.[24]

Exercise types and intensities

- Provide examples to patients of light, moderate, and vigorous exercise (see ***Box 2***).
- Explain the differences between muscle and bone strengthening exercise.

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[17] Bockting WO, Miner MH, Swinburne Romine RE, Hamilton A, Coleman E. Stigma, mental health, and resilience in an online sample of the US transgender population. Am J Public Health. 2013;103(5):943-951.

[18] McKercher CM, Schmidt MD, Sanderson KA, Patton GC, Dwyer T, Venn AJ. Physical activity and depression in young adults. Am J Prev Med. 2009;36(2):161-164.

[19] LHoltermann A, Schnohr P, Nordestgaard BG, Marott JL. The physical activity paradox in cardiovascular disease and all-cause mortality: The contemporary Copenhagen General Population Study with 104,046 adults. Eur Heart J. 2021;42(15):1499-1511.

[20] Easterlin MC, Chung PJ, Leng M, Dudovitz R. Association of team sports participation with long-term mental health outcomes among individuals exposed to adverse childhood experiences. JAMA Pediatr. 2019;173(7):681-688.

[21] Centers for Disease Control and Prevention. Physical Activity. 2019. Available from: https://www.cdc.gov/physicalactivity/index.html

[22] World Health Organization. Physical Activity. 2022. Available from: https://www.who.int/news-room/fact-sheets/detail/physical-activity.

[23] U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. Washington, DC: U.S.Department of Health and Human Services; 2018. Available from: https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf

[24] Centers for Disease Control and Prevention. Physical Activity Among Adults Aged 18 and Over: United States, 2020. NCHS Data Brief No. 443, August 2022. Available from: https://www.cdc.gov/nchs/products/databriefs/db443.htm#section_3

Box 1: Age-specific Physical Activity Recommendations for the General Population[24]

POPULATION	RECOMMENDATIONS
Children and adolescents (6 – 17 years)	**Promote physical activity that is enjoyable.** • 60 minutes/day of moderate-to-vigorous activity, at least 3 days/week • Include muscle- and bone-strengthening activities at least 3 days/week
Adults	**Move more and sit less.** • 150 minutes/week of moderate-intensity physical activity • Include 2 days/week of muscle strengthening activity
Older Adults	**Be as physically active as abilities allow.** • Determine realistic goals relative to fitness capacity • Include balance training in addition to aerobic and muscle-strengthening activities

Box 2: Examples of Physical Activity Based on Intensity and Type of Exercise[25]

INTENSITY/TYPE	DESCRIPTION	EXAMPLES
Light	Easily able to carry on a conversation No sweating No shortness of breath	• Household chores • Walking • Playing catch
Moderate	Some difficulty talking Feel warm Light sweating/shortness of breath	• Jogging/fast walking • Playing tag • Yardwork
Vigorous	Unable to talk Short of breath Red Face, Sweating	• Manual Labor • Running • Skipping rope • Skiing, skating
Muscle Strengthening	Pushing/pulling bodyweight or object	• Climbing • Resistance training
Bone Strengthening	Increased impact	• Running • Jumping

Box 2 adapted from: Lobelo F, Muth ND, Hanson S, Nemeth BA; Council on Sports Medicine and Fitness; Section on Obesity. Physical Activity Assessment and Counseling in Pediatric Clinical Settings. Pediatrics. 2020 Mar;145(3):e20193992.

TALKING WITH PATIENTS ABOUT PHYSICAL ACTIVITY

Ask about[25]

- Current physical activity
- Frequency, intensity, duration, and enjoyment level

Assess

- Physical literacy: The ability, confidence, and desire to be physically active for life (Physical literacy is rooted in early, positive experiences with physical play; many TGD people may not have this foundation due to bias and discrimination)
- Opportunities to grow and cultivate physical literacy
- Gaps between current and recommended physical activity levels

Assist

- Identify patient-centered opportunities and goals
- Start small and realistic
- Follow up regarding progress towards a patient's personal goals

[25] Lobelo F, Muth ND, Hanson S, Nemeth BA; Council on Sports Medicine and Fitness; Section on Obesity. Physical Activity Assessment and Counseling in Pediatric Clinical Settings. Pediatrics. 2020 Mar;145(3):e20193992.

ADVOCATING FOR TGD PATIENTS

Stigma towards TGD people occurs at the structural, interpersonal, and individual/internalized levels. Each type of stigma can negatively impact access to physical activity for TGD people. ***Box 3*** provides strategies that health centers can advocate for in the community, with their patients, and within their own institutions to address stigma at each level.[6]

Box 3: Strategies for Addressing Stigma and Promoting Physical Activity among TGD Patients[6]

LEVEL OF STIGMA	STRATEGIES
Structural/Institutional	• All gender facilities (restrooms and locker rooms) • Gender inclusive dress codes and uniforms • Effective implementation of policies re: bullying and harassment
Interpersonal	• Consider individual, home-based exercise • LGBTQIA+ affirming settings and activities • Peer mentoring
Internalized/Individual	• Self-efficacy, confidence, positivity within TGD communities • Improved access to gender-affirming medical transition

RESOURCES

General Resources

SHAPE America: Transgender inclusion statement and other resources from the Society of Health and Physical Educators.

TRANSATHLETE.COM: Resources for students, athletes, coaches, and administrators to find information about transgender inclusion in athletics at various levels of play.

Athlete Ally: Education and advocacy on building LGBTQIA+ inclusive sports communities.

Bans on Transgender Youth Participation in Sports:
Up-to-date information on legislative bans by the Movement Advancement Project

Association for Size Diversity and Health:
Education, advocacy, and networking focused on addressing weight-centered bias and promoting health at every size.

Fair Play: The Importance of Sports Participation for Transgender Youth:
Report by the Center for American Progress

Get the Facts About Transgender and Non-Binary Athletes:
Report by the Human Rights Campaign

Resources from the National LGBTQIA+ Health Education Center

Webinars

Health Benefits and Considerations of Sports Participation and Physical Activity for TGD People

Body Image, Perception, and Health Beyond the Binary

Body Image, Perception, and Health Support for Older LGBTQIA+ Adults

Health at the Intersection of Body Image, Identity, and Development LGBTQIA+ Children and Youth

Weight Stigma in Gender-Affirming Care

Publications

Why Weight? Diabetes Prevention and Care Learning Collaborative

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