
Sports Medicine: Keeping Transgender Athletes in the Game

By Emily Paulsen

Transgender individuals face distinctive concerns when it comes to participating in sports, from restrictions on their ability to compete with athletes of their identified gender to the challenges of balancing hormone therapy and gender-affirming surgery with their athletic schedule. Many factors can keep transgender athletes out of the game—in fact, only 14% of transgender boys and 12% of transgender girls play organized sports—but physicians can help combat this by familiarizing themselves with the medical issues specific to this patient group.

“For people who participate in sports, their athletic identity is part of who they are, but so is their gender

identity,” says Jocelyn Wittstein, MD, a Duke sports medicine physician who sees many transgender patients in her practice. “If affirming your gender identity means giving up your athletic identity, this can have a major impact on mental and physical health.”

“Whether they are pre-transition, in transition, or afterward, there are stressors on trans athletes,” she says, including the mental and emotional stresses of being transgender as well as the physical stress of undergoing transition and gender-affirming care. “It’s life-changing—and, in some cases, life-saving—for them to be able to affirm their gender and participate in sports.”



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The experience of being transgender and the complexities of gender-affirming treatment mean that transgender patients' bodies can be more complicated than cisgender patients' bodies, says Deanna Adkins, MD, a pediatric endocrinologist and director of the Duke Child and Adolescent Gender Care Clinic. Sports medicine physicians play an important role in treating athletes or those who are trying to become active again, Adkins says. "Sports medicine doctors have the right mindset for this. They look at the whole patient."

Understanding how gender-affirming treatment affects patients and their participation in sports can help physicians achieve optimal outcomes. Here are a few points to consider.

Bone growth. Gender-affirming hormones affect how bones grow, fuse, and develop. This can influence the treatment of injuries and the timing of procedures such as patella stabilization, ACL reconstruction, and scoliosis management. "Surgeons need to collaborate with endocrinologists to understand how that person's growth is affected by their gender-affirming treatment," says Wittstein. This is especially important for patients who are taking puberty blockers or testosterone. Wittstein suggests potentially delaying surgery and relying on physical therapy to treat the condition while waiting for the patient's bones to fuse.

Bone structure. Bone structure in transgender patients may vary depending on the timing and type of gender-affirming treatments, says Adkins. For instance, children who have been on puberty blockers followed by hormones go through puberty for their identified gender. This can lead to remodeling of bone structure that aligns more with their identified gender. For those who go through two puberties (one in their natal sex, the other in their identified gender), their bone structure fuses in the first one.

Bone density. Many transgender patients feel uncomfortable in their bodies, especially pre-transition, and may not participate in sports or exercise. They are also at high risk for disordered eating, and transfeminine patients tend to have a low BMI. These risk factors, combined with the effects of estrogen, can lead to early-onset osteoporosis and osteopenia, Adkins says.

Blood clots and surgical implications. Exogenous estrogen or progesterone (which trans men may take to stop their periods) raise the risk for blood clots. "The risk for clots should be in the forefront of the physician's mind when managing a trans patient for surgery or injury recuperation," Adkins says, "but they shouldn't assume that the patient needs to go off their hormones." Endocrinologists try to keep patients in the expected physiologic range to minimize clot risk, she says, and stopping these hormones can be traumatic for patients. If it does become necessary, physicians should talk with the patient beforehand to anticipate challenges and develop coping strategies.

Hormone and medication optimization. For patients who are in training or competition, hormonal imbalances may impede training progress. Hematocrit levels can also rise above the norms set by governing bodies for some sports leagues that require periodic testing. Adkins says sports medicine physicians should work with the patient's endocrinologist to balance hormones and help address those issues. In addition to hormones, many transgender patients are on medications for depression or anxiety, which are associated with weight gain that can interfere with participation and performance in sports. Working with the patient's mental health care team can help optimize those medications, as well.

Muscle pain and frequent injuries. When a transgender patient presents with unexplained pain or frequent injuries, many factors may be involved. Inactivity can lead to disuse atrophy, which can make even simple activities painful. Adkins has also seen high rates of collagen vascular disease and Ehlers-Danlos syndrome among her transgender patients. She suggests doing a full workup for these conditions and working with specially trained physical therapists to address ongoing issues with pain or injury. The physical therapists at Adkins' clinic work on health habits and help patients build chest muscles in preparation for chest surgery and pelvic muscles before vaginoplasty.

Sports medicine physicians should try their best to keep transgender patients involved in sports, says Adkins. "Being involved in athletics is hugely helpful for our patients," she says. For transgender athletes, seeing their bodies reflect how they identify helps increase the confidence to live a healthy life.