HEALTH RISKS OF TESTOSTERONE FOR FEMALES

The use of testosterone in females to induce male secondary sex characteristics is associated with a range of significant health risks across multiple organ systems. This document summarizes key adverse outcomes and safety signals—new observed effects that suggest association with testosterone use—identified in the medical literature.

Cardiovascular and Blood Risks

Increased risk of heart attack, blood clots, and stroke.

- **Heart Attack:** Studies report a significantly increased risk. One analysis found nearly fivefold increased odds of a heart attack compared to other women not on hormones. Another large cohort study found a 3.7-fold higher incidence.
- **Adverse Lipid Profile:** Testosterone consistently creates a more atherogenic lipid profile by significantly increasing "bad" cholesterol (LDL) and triglycerides while significantly decreasing "good" cholesterol (HDL). These changes are sustained over the long term.
- **Erythrocytosis (dangerously high number of red blood cells):** A well-established risk, occurring in 11% of individuals in one large study. The cumulative risk increases over time, reaching 38% at 10 years and 50% at 14 years. This condition thickens the blood, increasing the risk of blood clots, stroke, and heart attack.
- **Blood Clots (VTE):** Evidence suggests an increased risk for VTE, including deep vein thrombosis and pulmonary embolism.
- **High Blood Pressure:** Increased systolic blood pressure is a known effect.
- **Atherosclerosis (hardening of the arteries):** Testosterone is associated with an increased risk of early-stage atherosclerosis, a precursor to heart attack and stroke.

Gynecological and Reproductive Harms

Testosterone causes significant and potentially irreversible damage to the female reproductive system.

- **Ovarian Damage:** Testosterone exposure leads to poorer ovarian follicle health and increased DNA damage in oocytes (eggs). This suggests adverse effects on the primordial follicle pool and reduced egg viability, impacting future fertility.
- **Uterine and Endometrial Pathology:** Despite stopping periods, the uterine lining often remains active. Pathologies are common, including endometrial polyps, fibroids, and hyperplasia. A multicenter study found active endometrium in 69% of individuals on testosterone who underwent hysterectomy.
- Infertility: The therapy suppresses ovarian function, leading to infertility. The reversibility of these effects is not guaranteed.

Bone Health

- **Reduced Bone Density:** Individuals who undergo oophorectomy (removal of ovaries) can experience significant reductions in bone mineral density, with one study finding low bone density in 10.5% of a 10-year cohort.

Cancer Risks

Emerging data signals potential cancer risks in hormone-sensitive tissues.

- **Endometrial Cancer:** The presence of endometrial hyperplasia, a precursor to cancer, has been documented. A case of endometrial intraepithelial neoplasia was reported in a 32-year-old after four years of testosterone.
- **Breast Cancer:** Data have identified reports of breast cancer as an adverse drug reaction.
- **Liver Cancer:** A case of androgen-receptor-positive hepatocellular carcinoma (HCC) was documented in a 17-year-old after just 14 months of testosterone therapy.

Urogenital and Pelvic Issues

Symptoms impacting quality of life and long-term health are common.

- **Vaginal Atrophy:** Testosterone induces vaginal atrophy, leading to dryness, irritation, and painful intercourse (dyspareunia).
- **Prostatic Metaplasia:** In one study, 100% of individuals on testosterone developed prostatic metaplasia in their vaginal tissue—the growth of prostate-like glands. The long-term cancer risk of this change is unknown.
- **Pelvic Pain:** Among 486 participants, 72% of survey respondents experienced pelvic pain after starting testosterone.
- **Pelvic Floor Dysfunction:** A study found 94% of participants on testosterone had symptoms of pelvic floor dysfunction, including urinary incontinence (leakage of urine) and other urinary and bowel issues.

Neurological and Psychiatric Risks

- **Idiopathic Intracranial Hypertension (IIH) (high pressure around the brain):** IIH is the most predominant serious neurological adverse event found in an analysis of the FDA's reporting system. It can cause severe headaches and vision loss.
- **Psychiatric and Behavioral Risks:** Reports include anxiety, depression, and suicidal ideation.

Surgical Complications

- **Vaginal Cuff Dehiscence (separation of the edges of the tissue that is sewn together after hysterectomy):** Testosterone use is associated with more than double the risk of the vaginal cuff tearing open, a serious surgical complication.

Mortality

- **Increased Mortality (early death):** A large, multi-decade study found that individuals on testosterone had an 80% increased overall mortality risk compared to other women, an increase primarily attributed to non-natural causes of death.

In addition to the known increased risks, many long-term consequences remain unknown, underscoring the need for caution and comprehensive, ethically sound informed consent.

Scan the QR code for an online version of this document and links to citations or go to di-ag.org/testosterone-health-risks.