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**Title:** MAGNETIC RESONANCE IMAGING OF THE PELVIC FLOOR IN CONTINENT FEMALES

**Aims of Study:**

Clinical investigation of the female pelvic floor has recently focused on MRI and vaginal prolapse; however, normal values for pelvic floor movement have not been defined. Our goal was to establish the normal range of pelvic floor movement in continent females, as measured by MRI, so that abnormalities can be quantified when imaging incontinent patients and women with vaginal prolapse.

**Methods:**

Fifty-two continent females participated in our IRB-approved study. After standard examination, the bladder, urethra, vagina, and rectum were opacified with a mixture of 25 Mm Gadodiamide and saline (bladder), or antimicrobial gel (urethra, vagina, rectum). Subjects were asked to perform pelvic floor contraction, relaxation and straining maneuvers as T<sub>1</sub>-weighted 3D Fast SPGR images were acquired during suspended respiration.

**Results:**

MRI clearly defined pelvic anatomy and quantified the magnitude of pelvic floor movement. The mean bladder descent was 11.5 mm. The mean posterior levator plate angle and posterior urethrovesical angle change were 13.9° and 11.1°, respectively. Overall, we noted a surprisingly large variation in pelvic floor laxity among continent females.

**Conclusions:**

MRI during pelvic floor contraction and straining permits clear visualization and accurate measurement of the pelvic floor in continent controls. Our measurements establish a reference for evaluating patients with urinary incontinence and vaginal prolapse.

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