

A Clinical Study of Sitting versus Squatting

In April, 2002, an Iranian radiologist, Dr Saeed Rad, published a study which compared the effectiveness of sitting versus squatting for evacuation.²⁴ One of his conclusions relates to the cause of a type of hernia known as "rectocele," which is a bulge of the front wall of the rectum into the vagina.

Thirty subjects participated in the study – 21 male, 9 female – ranging in age from 11 to 75 years. Each patient received a barium enema so the internal mechanics of voiding could be recorded on an X-Ray image. Each patient was studied in both the squatting and the sitting positions.

Using these images, Dr Rad measured the angle where the end of the rectum joins the anal canal. At this junction point, the puborectalis muscle (see diagram on page 10) creates a kink to prevent incontinence.

Dr Rad found that when the subjects used sitting toilets the average angle of this bend was 92 degrees, forcing the subjects to strain. When they used squat toilets, the angle opened to an average of 132 degrees. At times it reached 180 degrees, making the pathway perfectly straight.

Using squat toilets, all the subjects reported "complete" evacuation. "Puborectalis relaxation occurred easily and straightening of the rectum and anal canal facilitated evacuation. The anal canal became wide open and no folding was noticed in the terminal rectum."

In the sitting position, "a remarkable folding was created in the terminal rectum predisposing it to rectocele formation, and