Chapter 5 – Pelvic Floor Rehabilitation

5.1 Introduction

The Integral Theory System for pelvic floor rehabilitation (PFR) differs from traditional methods in four major ways:

1. It addresses symptoms of urgency, nocturia, frequency, abnormal emptying and pelvic pain in addition to stress incontinence
2. It introduces two new techniques, squatting and reverse pushdown exercises so as to strengthen the 3 directional muscle forces.
3. It combines electrotherapy, hormones, fast and slow twitch exercises.
4. It is designed to seamlessly fit into a patient’s daily routine.

The scope of traditional pelvic floor rehabilitation methods is mainly confined to Kegel exercises for improvement in stress incontinence, and ‘bladder drill’ to improve urgency symptoms. ‘Bladder drill’ can be explained as a ‘training’ of the neural inhibitory circuits from the cortex to all the inhibitory centres to maximal efficiency. Although urge symptoms are not addressed with conventional pelvic floor exercises, anecdotal reports of patients controlling urge symptoms by ‘crossing their legs and squeezing’ are consistent with the pelvic muscles having a role in control of urgency symptoms. This can be explained by the pelvic muscles stretching the vaginal membrane to support the stretch receptors (cf. the trampoline analogy).

Current pelvic floor rehabilitation (PFR) methods in the female address mainly stress incontinence. ‘Squeezing’, upward pulling of the pelvic diaphragm as described by Kegel (1948) is the core element of all traditional methods.

All organs and even levator plate (LP) are actively pulled upwards and forwards with ‘squeezing’ (fig 5-01). Only voluntary contraction of puborectalis can explain these movements. This movement does not pull directly against any of the pelvic ligaments, although it is likely that PCM reflexly contracts to pull the hammock forwards against the pubourethral ligament. The unbroken lines (fig 5-01) represent the resting position and the broken lines the squeezing position. Vascular clips have been applied to the anterior vaginal wall: ‘1’ to midurethra; ‘2’ to bladder neck; ‘3’ to bladder base.

Acknowledgement: The routine presented is that practised by Dr Patricia M. Skilling, Kvinno Centre, Perth, Australia.
Fig. 5-01 The muscle movements during 'squeezing' are upwards and forwards. LP = levator plate; B = Foley balloon; R = rectum. Note the difference with the movements in figure 5-02. Because 'squeezing' is not the natural mechanism, it must be learned (fig 5-02). (Kegel 1948)
Rest = unbroken lines
Squeeze = broken lines

Fig. 5-02 Reflex muscle movements during coughing and straining. Same patient and labelling as figure 5-01. Note how the 3 different directional movements and downward angulation of levator plate pull against the pubourethral and uterosacral ligaments.
Rest = unbroken lines
Strain = broken lines

5.2 The Integral Theory System for Pelvic Floor Rehabilitation

Every part of the pelvic floor system contributes to function. The Integral Theory approach to rehabilitation emphasises the need to strengthen all the parts of the system that contribute to continence: muscle, connective tissue and neuromuscular transmission. In particular, exercises such as squatting, 'reverse push-downs' and electrotherapy in the posterior fornix are included in the protocol so as to strengthen the three directional muscle forces and their ligamentous attachments. The Integral Theory system for pelvic floor rehabilitation was specifically designed for busy women with commitments to home, children, jobs and careers. Minimal time outlay and weaving every element of treatment seamlessly into a daily routine were important goals in the protocol.

5.2.1 Indications

There were no exclusion criteria in the descriptions below. Any patient, regardless of the seriousness of her condition, was accepted for PFR. Patients who lost less than 2 gm urine with the cough stress test, or less than 10 gm in a 24 hour period, were particularly encouraged to do PFR. Also, patients with successful surgery were encouraged to learn PFR so as to maintain their good results.