Offer afternoon-dosed furosemide to women with nocturia polyuria, following appropriate counselling regarding the potential benefits and associated risks.	Weak
Consider short-term use (up to two-weeks) of melatonin for symptom improvement in women with nocturia associated with sleep disturbance.	Strong

4.6.4.4 Surgical management

Considering the strong association between obesity and nocturia, a SR explored the effect of bariatric surgery and nocturia [624]. Pooled data from five cohort studies on men and women with BMI > 25 showed significant reduction of nocturia by 0.67 (95% CI: 0.24-1.10) but with high heterogeneity. Certainty of the evidence of this SR is low.

4.6.4.5 Summary of evidence and recommendations for surgical management of Nocturia

Summary of evidence	**LE**
Weight loss from bariatric surgery among obese patients may result in a reduction of nocturia episodes.	3

Recommendations	**Strength rating**
Inform overweight and/or obese women that bariatric surgery may result in a reduction in nocturia episodes.	Weak

4.6.5 ***Follow-up***

Follow-up of patients with nocturia is dependent on the underlying aetiology of this symptom and the treatment given.

4.7 Pelvic organ prolapse and lower urinary tract symptoms

4.7.1 ***Epidemiology, aetiology, pathophysiology***

Pelvic organ prolapse is a common condition in adult women. The prevalence of POP is 3-6% when bothersome symptoms are used to characterise the condition and increases to 50% when a purely anatomical definition is used [625].

The estimated lifetime risk for POP surgery is 12.6% [626]. Parity, vaginal delivery, instrumental delivery, ageing, and obesity are the most commonly recognised risk factors [627].

Although the aetiology of POP is not fully understood, birth trauma to the levator ani complex is recognised as central to its development. In normal physiology, an intact levator ani complex functionally closes the genital hiatus surrounding the vagina, limiting the pressure gradient between the intra-abdominal and intravaginal areas. During physical activities, this reduces stress on the endopelvic fascia and its condensations (e.g., ligaments), which are crucial in securing the bladder, uterus, and rectum to their surroundings. Current aetiological concepts include widening of the levator hiatus due to birth trauma, which creates a low-pressure area in the vagina and consequently increased stress on the ligaments, fascial elements, and PFMs during physical activity. When the supporting function of the muscles and connective tissues fails, POP may develop [628]. This concept also explains the time lapse between birth trauma and occurrence of POP. It has been questioned whether strenuous physical activity including heavy lifting is a risk factor for development of POP [629]. The prevalence of reported symptomatic POP in strenuous exercisers and athletes varies between 0 (small study on different sports) and 23 % (Olympic weightlifters and power lifters). Three studies evaluated the pelvic floor after a single exercise or one session of exercises and found increased vaginal descent or increased POP symptoms. One prospective cohort study reported the development of POP after six weeks of military parashot training, and one randomised trial reported increased POP symptoms after transverse abdominal training. The effect of strenuous exercise on POP development needs further prospective studies [629].

Pelvic organ prolapse and LUTS often occur simultaneously in women. In isolation, both POP and LUTS are prevalent conditions in women, although the prevalence of LUTS in women with POP exceeds that of LUTS in women without POP [625]. A multicentre prospective cohort study of treatment-seeking women with at least one urinary symptom, demonstrated a potential association between increasing prolapse in all compartments and voiding LUTS. The same study demonstrated a trend toward fewer OAB and SUI symptoms in patients presenting with LUTS and POP, especially when only considering anterior vaginal wall prolapse [630]. In contrast, other studies have demonstrated an association between POP and OAB symptoms.