

Hypersexuality or paraphilic behavior are extremely difficult to manage. Before initiating pharmacotherapy to control unwanted sexual behaviors, the current drug regimen should be evaluated for drugs that may be causing/exacerbating the behavior (eg. amphetamines/antiparkinson meds). **Cognitive behavioral modification, psychotherapy & environmental changes** should be implemented **first for treatment**. **Some modification strategies include:** correct any misidentification by the patient of other residents as their spouse or lover, increase attention & appropriate activities, make certain behaviors such as disrobing more difficult, move patient to different room if location is problematic. Attempts to distract & redirect their behavior with conversation, food or other activities can be successful. **Case reports** suggest that antiandrogens, estrogens, LHRH agonists & serotonergic medications may be **useful when other methods have failed**. **Baseline lab** evaluation may include: free & total testosterone, FSH, LH, estradiol, prolactin & progesterone. Of note is that following surgical castration & hyperprolactinemia, sexual behavior declines. The aim of pharmacological treatment would be to suppress sexual fantasies, to suppress sexual urges & behavior, & to reduce the risk of recidivism & further victimization. We wish to thank those who have assisted with this Q&A: Dr. L Thorpe, Dr. R Menzies & RxFiles advisors.)

Drug/Forms/Reason for use	Side effects(SE) / Comments	Young patients ^{3,4,7} Dose Cost/month	Older patients ^{1,2,5,6} Dose Cost/month
SSRI's - considered possible first line citalopram (Celexa) 20,40mg scored tab paroxetine (Paxil) 10,20,30mg tab sertraline[#] (Zoloft) 25,50,100mg cap -better impulse control, or for possible anti-compulsion effect & to ↓ sexual desire	SE: Especially early in therapy: insomnia, fatigue, headache, tremor, nausea, vomiting, diarrhea, falls, decreased concentration, confusion, SIADH & rarely extrapyramidal reactions. Titrate dose up as tolerated & wait 4-6 weeks for effect. Fluoxetine (Prozac) frequently studied in younger patients but due to weight loss & long half life often not recommended in elderly. Also tried has been clomipramine ~150mg/day & fluvoxamine (Luvox) .	20mg po od \$52 Celexa 40mg po od \$52 Max:60mg/day 20mg po od \$64 Paxil 40mg po od \$124 Max:60mg/day 50mg po od \$36 Zoloft 100mg po od \$38 Max:200mg/day	10mg po od \$29 20mg po od \$52 Max:30mg/d 10mg po od \$35 20mg po od \$64 Max:30mg/d 50mg po od \$36 100mg po od \$38 Max:100mg/d
bupirone (Buspar) 5,10mg tab -for ? anticomulsion & ↓ deviant fantasies	SE: Nausea, headache, dizziness, restlessness. Non-sedating & non-addicting. Onset 1 week; Max effect 6 weeks. Drug interactions:fluvoxamine, grapefruit juice. NO dependency & no cross tolerance with benzodiazepines.		5mg po tid \$50 Max:60-90mg/d 10mg po tid \$62
Add to SSRI's if limited response: cyproterone^{##} (Androcur) ◊ 50mg tab,300mg/3ml amp -antiandrogen;possible ↓ sexual fantasies, behavior, masturbation, intercourse & impact on erections	SE: hepatic dysfunction, fatigue, weight gain , transient depression ~5-10%, ↓ in body hair, gynecomastia ~15% & feminization, as well as cardiovascular toxicity including fluid retention , thromboembolism , myocardial ischemia. Alterations in glucose and cerebrovascular accidents have occurred. Dose to maintain testosterone concentration in a range that prevents feminization. Onset ~<1 month	PO Initial 50mg po od \$61 100mg po bid \$222 Range 50-500mg/day IM Usual 200mg q2wk \$180 300-400mg qwk \$350 Range 100-600mg qwk	PO Initial 50mg po od \$61 100mg po od \$115 IM Usual 200mg q2wk \$180 300-400mg qwk \$350
Add to SSRI's if limited response: medroxyprogesterone (Provera; ◊ Depo-Provera) 2.5,5,10,(100mg tab*):150mg/1ml & 250mg/5ml vial -antiandrogenic; ? ↓ libido, sexual arousal, fantasies, urges & behavior	Caution: with depression, diabetes, or conditions which may be worsened by fluid retention SE: weight gain , lethargy, headache, decreased sperm production, hot & cold flashes, hepatic dysfunction , nightmares, dyspnea, loss of body hair, hyperglycemia , leg cramps, GI disturbances, fluid retention , menstrual disorders, thromboembolism , feminization, depression and dermatologic effects. In clinical trials the concern of an ↑ risk for breast, uterine, or ovarian cancer has not been shown. Onset ~<1 month	PO Initial 50mg po od \$50 100mg po tid \$141 Range 50-600mg/day IM Usual 300mg qwk \$245 then ?↓100mg/wk maint. after wks Range: 75-700mg/wk	PO Initial 5mg po od \$12 100mg po od \$52 IM Usual 100mg q2wk \$67 150mg q2wk \$67 200mg q2wk \$125
MISC: cimetidine (Tagamet) 200,300,400,600mg tab;300mg/5ml liquid	Common SE: headache, arthralgia & nausea. Serious adverse effects of cimetidine are blood dyscrasias, hypotension, arrhythmias, CNS effects (delirium, confusion, depression), gynecomastia, renal dysfunction and hepatotoxicity. ?antiandrogen effects possible for efficacy.	300-800mg po bid \$13-23 Neurology 2000 → 14 of 20 demented ~73 yr old pts responded. The other six pts responded to adding ketoconazole 100-200mg/day or spironolactone 75mg/day; or both to cimetidine. Response time in ~1-8 weeks ¹	300-600mg po bid \$13-17
Antipsychotics -limited usefulness thioridazine (Mellaril) (10,25,50,100mg tab;2,30mg.ml liquid) risperidone (Risperdal) (0.25,0.5,1,2,3,4,mg tab; 1mg/ml soln)	SE: hypotension, sedation, anticholinergic, delirium, confusion, headache, dry mouth, constipation, weight gain, asthenia, nausea, akathisia, neuroleptic malignant syndrome, phototoxicity, parkinsonian side effects & tardive dyskinesia. Thioridazine prolongs the QTc interval in a dose related manner and may be associated with torsade de pointes type arrhythmias and sudden death, plus retinopathy occurs at large doses.	50-100mg po bid \$11-14 1mg po bid \$76 2mg po bid \$144	10-50mg po bid \$11 0.25mg po bid \$37 1mg po bid \$76
LHRH agonists Leuprolide acetate (Leupron & Depot) ◊ 5mg/ml vial;Depot: 3.75,7.5,11.25,22.5 &30mg Goserelin acetate (Zoladex & LA) ◊ Depot: 3.6mg & 10.8mg vial antiandrogen;?↓ exhibitionist, fantasies & urges	SE: hot flashes, erectile dysfunction, ↓ libido, ↓ sperm count, ↓ body hair, injection site irritation & rare anaphylaxis (consider first a 1mg SC Lupron test dose), renal dysfunction , flare reaction-a transient ↑ testosterone level when initiate treatment & possible worsening of patients condition. -Goserelin pellet sc into anterior abdominal wall Long term risk of osteoporosis with these agents & others if testosterone levels are dramatically reduced for an extended period of time.	3.75/7.5mg IM q month \$340-420 11.25/22.5mg IM q3month ~\$310-360 (\$950-1100 per 3 months) 3.6mg SC q month \$410 10.8mg SC q3month ~\$360 (\$1100 per 3 months) Monitor: serum testosterone,LH,CBC,BUN,Scr q 6 months	

1. Neurology 2000 May 23;54(10):2024 Hypersexuality in patients with dementia: possible response to cimetidine. Wiseman SV, McAuley JW, Freidenberg GR, Freidenberg DL.
2. J Am Geriatr Soc 1999 Feb;47(2):231-4 Pharmacologic treatment of hypersexuality and paraphilias in nursing home residents. Levitsky AM, Owens NJ.
3. Can J Psychiatry 2001 Feb;46(1):26-34 The neurobiology, neuropharmacology, & pharmacological treatment of the paraphilias & compulsive sexual behaviour. Bradford JM.
4. Can J Psych 2000 Aug;45:559-563. Protocols for the use of cyproterone,medroxyprogesterone & leuprolide in the treatment of paraphilia.
5. J Gerontol Nurs 1998 Apr;24(4):44-50Addressing hypersexuality in Alzheimer's dx. Kuhn DR, et al. 6. From very limited case reports 7. Clinical Handbook of Psychotropic Drugs,Bezchlibnyk-Butler 10th Ed. # most studied SSRI for hypersexuality ## most studied antiandrogen in terms of its effects as a treatment for sexual deviation (often in pedophiles)
◊ =Exception Drug Status in Sk ✕ = Non-formulary in Sk BG=blood glucose BUN=blood urea nitrogen CBC=complete blood count LFT=liver function tests LH=luteinizing hormone Scr=serum creatinine SE=side effects