

Letter to the Editor

## Rehabilitation needs pharmacological awareness

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Dear Editor,

### WHEN RECOVERY STALLS: WHY PHARMACOLOGY MUST ENTER THE REHABILITATION ROOM

In outpatient rehabilitation, when patients stop progressing, clinicians often look inward: Is the diagnosis incorrect? Are the exercises too intense? Is the patient non-compliant? Rarely, however, do we ask if medications might be impeding recovery. In a health system increasingly marked by complexity, the absence of pharmacological thinking in rehabilitation practice represents a blind spot that must be addressed.

The prevalence of polypharmacy among older adults is well documented. Estimates suggest that more than 40% of older adults take five or more medications daily, increasing their risk for adverse drug reactions, cognitive impairment and functional decline.<sup>[1]</sup> While prescribing physicians are typically aware of potential drug–drug interactions, this knowledge is often siloed—rarely transmitted to those providing rehabilitation, especially in private or outpatient settings.

### AN INVISIBLE BARRIER TO PROGRESS

Functional performance is not solely determined by joint range, muscle strength, or motor control. Medications—even common ones—can blunt gains subtly but meaningfully. Statins, benzodiazepines, antihypertensives and selective serotonin reuptake inhibitors (SSRIs) all carry neuromuscular side effects that can affect fatigue, balance and proprioception [Table 1]. In older adults, where pharmacokinetics and pharmacodynamics are altered, these effects can accumulate, often masquerading as age-related decline or poor effort.<sup>[2]</sup>

One under-recognised example is statin-associated muscle symptoms (SAMS). These range from mild fatigue or myalgias to severe myopathy and rhabdomyolysis. While the incidence of clinically overt SAMS is low, mild-to-moderate symptoms may affect up to 20% of statin users.<sup>[3]</sup> The risk escalates with age, female sex, polypharmacy and the use of CYP3A4 inhibitors such as antifungals or macrolide antibiotics.<sup>[4]</sup> In a rehabilitation context, these symptoms—fatigue, weakness, reduced tolerance to exercise—are easily misattributed to musculoskeletal pathology or low physical conditioning.

### WHY IT GOES UNNOTICED

In most physiotherapy curricula, pharmacology is covered minimally, often in relation to analgesics or corticosteroids. The assumption is that drug management falls outside the rehabilitative domain.

**Table 1:** Common medications that may impair functional recovery in older adults.

Drug class	Examples	Potential effects on function	Mechanism or interaction
Statins	Simvastatin, atorvastatin	Myalgia, fatigue, proximal weakness	Myotoxicity, exacerbated by CYP3A4 inhibitors. <sup>[3,4]</sup>
Benzodiazepines	Lorazepam, diazepam	Sedation, impaired balance, fall risk	GABAergic CNS depression. <sup>[1]</sup>
Antidepressants (SSRIs)	Escitalopram, sertraline	Fatigue, decreased motivation, tremors	Serotonergic effects, hyponatremia in elderly. <sup>[2]</sup>
Antihypertensives	Amlodipine, beta-blockers	Postural hypotension, dizziness, reduced exercise tolerance	Peripheral vasodilation, bradycardia. <sup>[1]</sup>
Anticholinergics	Oxybutynin, amitriptyline	Confusion, reduced coordination, cognitive decline	Central anticholinergic burden. <sup>[5]</sup>
Opioids	Tramadol, morphine	Sedation, dizziness, impaired motor control	CNS depression, altered sensorimotor response <sup>[6]</sup>
CYP3A4 Inhibitors	Fluconazole, erythromycin	Potentiate statin toxicity, prolong sedation	Inhibit statin and sedative metabolism <sup>[4]</sup>

CNS: Central nervous system, SSRIs: Serotonin reuptake inhibitors

However, in practice, this creates a gap: Patients present with functional impairments shaped, in part, by their medication profile. Without pharmacological awareness, these influences go unrecognised and unchallenged.

Moreover, clinicians often receive incomplete medication histories. Temporary prescriptions—such as antifungals, antibiotics, or recent dose adjustments—are rarely reported spontaneously by patients and may not be captured in referral documents. Yet such additions can critically alter the pharmacokinetic landscape.

The result? Therapeutic inertia. When progress stalls, clinicians may increase intensity, shift techniques, or refer for imaging. Rarely is a medication review initiated. This can delay resolution, erode patient trust and increase costs.

## THE CASE FOR INTEGRATION

The growing complexity of outpatient rehabilitation demands a new paradigm. As we embrace precision medicine and personalised care, it is paradoxical that we neglect the pharmacological context. Rehabilitation specialists, especially those working with older adults, should develop what could be termed pharmacological curiosity: A readiness to ask about recent drug changes, side effects and new prescriptions. Such questions should not replace medical oversight, but they can prompt timely referrals and prevent therapeutic misdirection.

Several practical steps can be adopted:

1. Routine medication screening as part of intake assessment, especially in patients  $\geq 65$  years or on lipid-lowering therapy
2. Interdisciplinary dialogue between physiotherapists and primary care physicians or pharmacists, particularly when progress deviates from expected trajectories

3. Education and training in drug classes most relevant to functional recovery, including statins, antidepressants, anticholinergics and sedatives
4. Recognition of subtle signs of drug-induced functional impairment: unusual fatigue, instability, delayed motor learning, or non-linear recovery curves.

Some may argue that rehabilitation professionals should ‘stay in their lane.’ But when that lane is influenced by unseen pharmacological variables, staying in it becomes counterproductive. Functional outcomes depend on addressing all factors—not just those that can be stretched or strengthened.

## DEPRESCRIBING AS REHABILITATION

The field of geriatric medicine has long advocated for deprescribing when the burden of treatment outweighs the benefit. In rehabilitation, deprescribing becomes a functional intervention: the act of withdrawing or adjusting medications to optimise motor performance and recovery. Coordinated deprescribing, supported by tools such as the Beers Criteria or screening tool of older persons’ prescriptions (STOPP)/screening tool to alert to right treatment (START), can yield not just fewer pills, but better balance, cognition and endurance.<sup>[5,6]</sup>

Importantly, this does not mean that rehabilitation professionals take on the role of prescribers. Rather, it means recognising when a drug may be a hidden antagonist and bringing that observation to the broader care team.

## REHABILITATION IS MULTIDIMENSIONAL—SO SHOULD BE OUR THINKING

Modern rehabilitation is no longer confined to physical therapy gyms or stroke units. It now operates across home

health, telemedicine, sports clinics and private practices.<sup>[7-9]</sup> With this expansion comes the responsibility to think beyond muscles and joints. A patient who fails to improve may not need more exercise or imaging, but a medication review.

Incorporating pharmacology into rehabilitation is not about increasing professional scope. It is about enhancing patient outcomes through smarter, more integrated care. As medicine moves toward holistic models, rehabilitation must do the same. Because sometimes, the key to recovery is not in the body, but in the bottle.

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