

anxiety), recent life events and developmental vulnerabilities from childhood and adolescence. Treatment approaches for young men with psychogenic ED should consider all of these possible factors.⁹ If left untreated, the impact of ED could extend beyond sexual functioning—potentially resulting in substantial emotional disruption and relationship difficulties. It is widely accepted that male sexuality comprises more than an erect penis, and this should be taken into account during the management of ED.⁹ Further studies are needed; not only to determine the prevalence of recreational PDE5 inhibitor use, but also to evaluate the psychosocial determinants for predicting such use. In addition, the long-term safety of the drug (especially in relation to misuse and abuse) should be investigated further, with particular emphasis on its association with psychogenic ED. We must continue to educate healthcare providers on the medical and psychological impact of sexual problems, especially at the onset of sexual activity. ED is a multifactorial condition and, as such, prevention and treatment demand a multidisciplinary approach.

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Competing interests

The author declares no competing interests.

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SEXUAL MEDICINE

Online risks to health—the problem of counterfeit drugs

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Counterfeit medicines sold online are a global scourge. Although erectile dysfunction drugs are well known to be heavily counterfeited, illicit vendors are rapidly expanding to other drugs and devices in the sexual health arena. International multidisciplinary cooperation is needed to address key patient safety concerns resulting from such markets.

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In their survey of counterfeit drugs, Gaudio *et al.*¹ recently reported that phosphodiesterase-5 (PDE5) inhibitors for erectile dysfunction are extensively available online without need for a prescription. Their work follows numerous studies documenting the global risks of purchasing PDE5 medicines and a host of other drug types, such as pain and weight-loss medications, online.^{2–5} Although tremendously popular, the ease of accessing these purportedly authentic drugs without a prescription or adequate clinical oversight presents innumerable safety risks to patients.^{2,3}

The online sale of imitation drugs is not a theoretical problem. Globally, patients who have purchased and used counterfeit PDE5 inhibitors as well as other drugs have died or suffered severe adverse events.^{2,4} For example, the deaths have been reported of a man in Singapore from glyburide-tainted counterfeit erectile dysfunction drugs; of a young boy in the USA who used pain medication purchased online; of a senior in Canada from heavy metal poisoning from drugs purchased online; and of patients around the world who have used adulterated heparin.^{2,4} These are only the detected events that likely represent just the tip of the iceberg. Beyond patient mortality, counterfeit medicines have disastrous public health consequences, including patient injury, patient nontreatment and extensive antimicrobial resistance.⁴ These outcomes can be costly to health-care systems because of the increased frequency of adverse

events as well as through increased disease burden and mortality from ineffective drug treatments.

“...the problem must be cooperatively seen and targeted as a global patient safety and criminal enterprise issue by all stakeholders...”

Gaudio and co-workers' findings reinforce those of previous studies regarding the threats of counterfeit PDE5 medications online, but also provide new and disturbing information.¹ For example, 24% of all seized internet-procured drugs were identified as counterfeit, 30% did not contain the correct range of active substances and 84% were missing important labelling or instructional information.¹ Furthermore, the unregulated distribution system of these medicines is potentially being accessed by 6 million European men—with up to 15,000 sites offering PDE5 drugs—which indicates the pervasiveness and severity of the problem.¹ As virtually all classes of drugs have some downstream effects on sexual health, the survey by Gaudio *et al.*¹ indicates that, if anything, the problem is getting worse. Although the study seems to corroborate findings of various other studies (including surveys reporting up to 53% of antimalarials sold in Southeast Asia are counterfeit and global counterfeit seizures are increasing