Stigmatization of NPS addicts in society, marginalization and rejection consumer in social contacts, The problem of the so-called recreational use. Medical problems: Gradual destruction of health, sometimes up to the complete degradation of the person, the development of other diseases, including mental disorders, the phenomenon of tolerance, Politoxicomania, Risky behavior, loss of control over the behawior, Addiction treatment costs, the need to expand NPS treatment facilities (and methods), Difficulties in treating people after taking NPS (unknown ingredients). Legal problems: Development of drug-related crime and other forms of crime (e.g. theft, robbery), Criminalization, stigmatization of perpetrators, preventing them from returning to life in society (e.g. recording a conviction in the National Criminal Register makes it difficult to navigate the labor market), Legislative problems, constitutional doubts what really means “NPS”. Solving problems related to NPS addiction: Development of harm reduction system Addiction treatment centers Therapies/psychotherapies Prevention (e.g. phone apps) Supervision and control over NPS Criminalizing NPS possession (good idea?).

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Detection and Determination of Gabapentin- an Anticonvulsant, from Body Fluids for Forensic Analysis Purpose

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Gabapentin, chemically 2- {1- (amino methyl) cyclohexyl] acetic acid is a gamma-amino acid, a cyclohexane in which the amino methyl group and the carboxyl group are substituted at position one. The drug is extensively used as adjuvant therapy in treating neurotic pains, epilepsy, and seizures. The drug is available under brand names such as Neurontin, Gaborone, gralise, etc. It has been reported to be abused by opioid addicts in addition to its therapeutic use due to its anxiolytic and euphoric-like properties and easy availability in the market as a prescription drug. Scant research is available on the forensic examination of the drug under reference in body fluids. The present presents a method for the detection and determination of gabapentin from urine. The drug is not significantly metabolized in the human body and is excreted in the urine in its unchanged form allowing its qualitative and quantitative detection for forensic purposes. A weighed amount of the drug was spiked in the urine and extraction was performed using SPE cartridges. The extracted drug was detected using Thin Layer chromatography, Ultraviolet spectrophotometry and Triple quad LC-MS/MS.ICH Guidelines were used for the validation of the method. The reported method is sensitive and can be used for forensic detection and determination of gabapentin from urine in microlevels.

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The Articulation of Masculinities amongst Men who Use(d) Image and Performance Enhancing Drugs

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The motivations for consumption of Image and Performance Enhancement Drugs (IPEDs) have been widely explored in recent years, particularly due to the identification of wide-ranging associated public health concerns. The majority demographic of those consuming these substances are men, primarily utilising these substances in pursuit of physical appearance and/or performance goals. Historically, consumers of IPEDs were understood to be those predominantly intent on athletic pursuits, for sporting performance or bodybuilding. More recently, though, there has been greater diffusion of these substances, with growing non-sporting populations consuming them in pursuit of increased muscularity or other body image goals. A novel mixed-methodologies approach consisting of two studies was utilised, consisting of a netnography investigating posts across four major online fitness forums, and a cross-sectional survey investigation, involving an in-depth qualitative analysis utilising images and original data. Results suggest that societal contemporary ideals of the masculine body, particularly as they are presented online and, in the media, are increasingly sexualised. This objectification then fosters the internalisation of body image concerns, ultimately influencing the motivation for the consumption of IPEDs. Hence, it becomes imperative to recognise masculinities as a pivotal focal point for the facilitation of efficient harm reduction strategies and the development of educational resources pertaining to IPEDs.

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When a Prophecy comes True: Ethyleneoxynitazene as a ‘Prophetic’ Member of the Emerging Class of 2-Benzylbenzimidazole ‘Nitazene’ Synthetic Opioids

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Introduction: 2-Benzylbenzimidazole opioids (‘nitazenes’) have become increasingly prevalent on the recreational drug market. We performed pharmacological characterization of various ’prophetic’ nitazenes, allowing risk prioritization based on structure-activity relationships. Ethyleneoxynitazene, which we predicted to emerge and which was first found in January 2023, is presented as a case example.
Methods: In vitro pharmacological characterization encompassed radioligand binding assays in rat brain tissue and a cell-based μ-opioid receptor activation (MOR-β-arrestin2) assay. Antinociception (hot plate assay), locomotor activity, and thermic effects were evaluated after subcutaneous administration in C57BL/6J mice.
Results: Binding assays revealed a Ki of 57.9 nM; only slightly higher than that of etonitazene (38.4 nM). However, ethyleneoxynitazene had a >100-fold lower potency in the MOR-β-arrestin2 assay (EC50, ethyleneoxynitazene=70.0 nM; EC50, etonitazene=0.588 nM). Its efficacy (relative to the reference hydromorphone) was also lower (Emax,ethyleneoxynitazene=187% vs. Emax,etonitazene=254%). The strongly reduced activity was reflected in vivo, with an ED50, antinociception of 11.1 mg/kg and 0.0223 mg/kg for ethyleneoxynitazene and etonitazene, respectively. Hypothermia and locomotor assays revealed the same pattern.
Conclusions: The a priori availability of pharmacological data upon the first emergence of ethyleneoxynitazene allowed to rapidly communicate that (compared to other nitazenes) this is likely not the opioid of highest concern. Similarly, pharmacological data for other anticipated nitazenes are readily available.

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Detection, Chemical Analysis and Pharmacological Characterization of Dipyanone and other New Synthetic Opioids Related to Prescription Drugs

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Introduction: New synthetic opioids (NSOs) continue to emerge on recreational drug markets. We performed in vitro pharmacological characterization of dipyanone, desmethylmoramide and acetoxymethylketobemidone (O-AMKD) – recent NSOs that are structurally related to