

# New Psychoactive Substances (NPS): Are We in Times of A Crisis or Between Crises?

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Under dictatorship pharmacists would be instructed to tune with every change of circumstances. In times of crisis, to push the sale of stimulants, between crises tranquillizers and vision-producers. Under the influence of these soothing syrups they could be relied upon to give their master no trouble.

Aldous Huxley: Brave New World Revisited [1958]

## INTRODUCTION

Mankind has been experimenting with substances since time immemorial. Betel nuts from Timor, ancient Inca coca leaves, the Pharaohs "brewed alcohol" are only few ancient examples. More recently experimentation led the same species to concentrate on the qualities of some "blockbusters" like Tobacco, Cannabis, opium and cocaine. This success led to mass production and profiteering with shipping lines established between continents, wars waged between nations and criminal gangs terrorizing neighborhoods to secure delivery of these substances to afflicted members of the species with dire consequences.

Fast forward to the past 10 years and you shall discover that what took our ancestors hundreds and thousands of years to accomplish, only takes us days to achieve. These new chemical compounds or "New Psychoactive Substances" are produced at the rate of 2 per week. Last year alone, many agencies reported that anything from 75 to 100 such new substances were produced, at a rate of 2 per week. Of these 21 substances were structurally diverse and do not fit to any of the above mentioned groups (Australian Drug Foundation, 2016).

The seriousness of this issue is reflected in this statement in the World Drug Report 2015 "By December 2014, a total of 541 NPS had been reported by 95 countries and territories to the UNODC early warning advisory. Synthetic cannabinoids continued to account for the majority of NPS reported in 2014 (39 per cent); they were followed by phenethylamines (18 per cent) and synthetic cathinones (15 per cent). The growing number of NPS available worldwide indicates that the market for synthetic drugs is becoming even more diversified (UNODC, 2015). As of December 2015 the number has increased to 643 and counting. So what are these substances anyway?

## Terminology and Related Issues

The definition of NPS is "any new narcotic or psychotropic drug, in pure form or in a preparation that is not scheduled under the Single Convention on Narcotic Drugs of 1961 or the Convention on Psychotropic Substances of 1971, but which may pose a public health threat comparable to that posed by substances listed in those conventions."

**Synonyms include:** "Legal" Highs, herbal highs bath salts Synthetic drugs, legal highs, party pills, synthetic cocaine, herbal ecstasy, Loaded, Hyper-Drive and Neuro-Blaster, plant fertiliser, herbal incense, room deodorisers, aphrodisiac tea, social tonics, new and emerging drugs (NEDs), drug analogues and research

chemicals. These products can sometimes be marked 'not for human consumption'.

These substances are created by slightly tweaking the molecular structure of existing illegal drugs. They were used recreationally, in sports, as surrogates for hard drugs and were not controlled under the Misuse of Drugs laws, not licensed for legal use, and not regulated as medicines. This is changing now as most countries are applying an umbrella ban on their production, supply, import or export. These legislations have a wider reach internationally in many fields and can re-examine samples collected many years in the past, when the substances were not known or not "scheduled". An interesting example is the one from the Rio Olympics (2016) when the International Olympic Committee (IOC) asked the World Anti-Doping Agency (WADA) to re-examine urine samples collected from Beijing Olympics (2008) leading to banning 31 athletes. This was made possible by some revolutionary toxicology tests London Olympics (2012) and Sochi winter games (2014) samples are being tested (Telegraph, 05/2016).

## Risks of use and Complications

A Euro barometer survey conducted across the European Union in 2011 revealed 4.8% of the population between 15 and 24 years of age had experimented on NPS. This is an alarming trend when you consider that this percentage is about half the total number of people of the same age who had used illicit drugs other than cannabis in 2004 (Eurobarometer, 2011).

These substances can be hallucinogens, depressants, Stimulants, empathogens, dissociatives, opioids or cannabinoids. At the rate they are produced, it is impossible to predict the complications that users should expect. They are unregulated and untested and the same product may have different constituents from patch to patch. Suffices to say they are dangerous, have resulted in mortality from overdoses, suicide and complications in all system domains (renal, hepatic, cardiovascular, neuropsychiatric & respiratory). They have also been implicated, through Intravenous injections and sharing needles, in Tetanus, hepatitis B & C and HIV/AIDS.

## CONCLUSION

At the rate they are produced, the New Psychoactive Substances pose a serious public health crisis. International agencies are raising the alarm, spearheaded by the UNODC. Recent advances in addiction medicine especially neurobiology are directing service planners and developers to concentrate more on awareness and prevention in adolescents and youth (Compton, 2007). Brain development is at a critical period throughout adolescence and any insult, especially from

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such substances, may have lifelong consequences. The onus is on both demand and supply reduction services to tune their priorities according to the circumstances, accumulating knowledge and evidence and delivers the desired response.

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