

## GHB / GBL / 1,4-BD

**GBH, liquid ecstasy, one comma four, one four bee.**

### What are GHB / GBL / 1,4-BD?

GHB (Gamma hydroxybutyrate), is an anaesthetic with primarily sedating rather than painkilling properties. It is often sold as 'liquid ecstasy' because of its relaxant and euphoric effects, although it has no relation to ecstasy (MDMA). GBL (Gamma butyrolactone) and 1,4-BD (1,4-butanediol) are chemicals that are closely related to GHB. Once GBL or 1,4-BD enter the body, they convert to GHB very quickly.

GHB, GBL and 1,4-BD are clear, odourless, oily liquids that taste slightly salty. Users often swallow them mixed with water or other soft drinks. When intended for illicit use, GHB, GBL and 1,4-BD are sold in small bottles or capsules. However, as solvents, GBL and 1,4-BD do have legitimate uses, for example in some paint strippers and stain removers



### Prevalence

There is very little statistical evidence relating to the prevalence of GHB, GBL and 1,4-BD in the UK. The drugs do not feature in any of the major national surveys of recreational drug use, such as the British Crime Survey Drug Misuse Declared bulletin.

Anecdotal evidence suggests that use of the drugs is fairly widespread on the UK club scene, particularly in gay clubs, but have yet to become significant players among the general drug-taking population ([1](#)).

### The law

GHB, GBL and 1,4-BD are all Class C drugs under the Misuse of Drugs Act 1971. It is against the law to possess them or to sell them for human ingestion.

GHB was brought under the Misuse of Drugs Act as a Class C drug in 2003. Over time, it became apparent that dealers and users were switching to GBL and 1,4-BD as legal alternatives to GHB, so in 2009, GBL and 1,4-BD were also brought under the control of the Misuse of Drugs Act along with a number of other so-called 'legal highs'.

GBL and 1,4-BD both have legitimate industrial uses and are still available for these purposes to people with appropriate business registration. However, if someone sells or supplies them, either knowing or suspecting that they will be swallowed and ingested, then they are committing an offence.

## Effects/risks

Users of GHB/GBL and 1,4-BD report that the drugs make them feel euphoric, with a loss of inhibitions, increased confidence and higher libido. Some people liken the experience to taking ecstasy, although most users report that the experience is very similar to being drunk on alcohol.

GHB was developed in the USA as a pre-medication to help patients sleep before surgery. Some people who use the drug illicitly do so not for the euphoric effects, but rather use higher doses to help them sleep. As GHB/GBL and 1,4-BD help promote 'slow wave sleep', during which growth hormone is secreted, the substances have also been used by bodybuilders.

The sedative properties of GHB and its related compounds, as well as their neutral odour and taste have led some to link the drugs to instances of drug-facilitated sexual assault, although the extent of the drugs' use in these crimes remains unclear. A 2006 study by the Association of Chief Police Officers (ACPO) found that of 120 instances of alleged drug-facilitated sexual assault, only two victims had tested positive for GHB (3).

It is very easy to overdose on these drugs, both because the strength can vary from bottle to bottle and because the doses involved are measured in such small quantities – the difference between a recreational dose and overdose may only be a matter of millilitres.

Overdosing on GHB/GBL or 1,4-BD can be very dangerous. Nausea and vomiting, seizures, convulsions, disorientation and stiffening of muscles may occur, and coma and respiratory collapse may follow.

One south London hospital reported receiving at least 3 GBH or GBL overdose cases per week in 2009 (2) and in 2008, reports from coroners suggest that at least 3 people died from overdoses of GHB, and it was implicated in 13 further deaths with other drugs (4). The risks are significantly increased if the drugs are used at the same time as alcohol or other depressant drugs.

Evidence is emerging that shows it is possible to become physically dependent on GHB and GBL/1,4-BD. While this does seem to be quite rare, when someone develops a dependency it can be severe, with a rapid onset of unpleasant withdrawal symptoms which may include delirium, psychosis, tremor, insomnia and severe anxiety.

Dependence can develop fairly quickly, for example after a weekend of severe bingeing on GHB and its related compounds, or may result from regular use over a longer period. Doctors are currently treating withdrawal from GHB-type drugs with benzodiazepines, although further research is needed into other treatments (5).

## References

(1) Home Office *Impact assessment of new drug controls*, October 2009

(2) South London and Maudsley NHS Trust *Presentation on GHB/GBL*, December 2009

(3) ACPO *Results of Operation Matisse* November 2006

[http://www.acpo.police.uk/pressrelease.asp?PR\\_GUID={C943F915-230B-4EF0-936D-DB81AC27AFE1}](http://www.acpo.police.uk/pressrelease.asp?PR_GUID={C943F915-230B-4EF0-936D-DB81AC27AFE1})

(4) National Programme on Substance Abuse Deaths *Annual Report 2009*

(5) op. cit. South London and Maudsley

Other Sources of information		
<p>Local organisations that offer Assessment &amp; Treatment options for people with addictions:</p> <p><b>SMART</b> – Substance Misuse Assessment &amp; Referral Team Poole - Tel 01202 735777</p> <p><b>BEAT</b> – Bournemouth Engagement and Assessment Team - Tel 01202 558855</p> <p><b>YADAS</b> – Tel 01202 741414 <a href="http://www.edasuk.org/treatment/poole/poole-yadas/">www.edasuk.org/treatment/poole/poole-yadas/</a></p> <p><b>REACH YP</b> – Tel 0800 0434656 <a href="http://www.edasuk.org/treatment/dorset/sh/">www.edasuk.org/treatment/dorset/sh/</a></p> <p><b>ADDACTION</b> – Tel 01202 558855 <a href="http://www.addaction.org.uk">www.addaction.org.uk</a></p> <p><b>EDP</b> – Tel 01305 571264 - email <a href="mailto:info@edp.org.uk">info@edp.org.uk</a></p>		<p>National organisations that offer treatment, advice, information &amp; support for people with addictions:</p> <p><b>Alcohol Change</b> – Tel 020 3907 8480 <a href="http://www.alcoholchange.org.uk/">www.alcoholchange.org.uk/</a></p> <p><b>FRANK</b> – Tel 0300 1236600 Text 82111 <a href="http://www.talktofrank.com/">www.talktofrank.com/</a></p>

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ID: ED-DS-21112011v2

Literature search completed: Drugscope - October 2012

Sheet published: October 2012

Review Date: October 2013

