

LETTER TO THE EDITOR

Carvedilol inhibits the cardiostimulant and thermogenic effects of MDMA in humans

Linked Article

This letter is responded to by
Hysek *et al.*, pp. 1273–1275 of
this issue. To view the letter visit
<http://dx.doi.org/10.1111/bph.12398>

We read with interest the study by Hysek and colleagues that investigated the cardiostimulant and thermogenic effects of carvedilol on 3,4-methylenedioxymethamphetamine (MDMA) (Hysek *et al.*, 2012). Although we applaud the authors for performing a randomized placebo-controlled trial in humans, we have a concern about their study design.

The study uses a relatively low dose of MDMA compared with those used by patients arriving to most hospitals. The average MDMA user often consumes greater doses than those used in this study, ranging up to 280 mg, whereas the study participants received a single oral dose of 125 mg (Morefield *et al.*, 2011). Typical patients exhibit greater cardiostimulatory and thermogenic effects than the small changes noted in the study group. Additionally, it is unclear whether carvedilol would have an effect on severe hyperthermia as the temperature change reported in the placebo-MDMA group was no more than 0.5°C above baseline.

This study's applicability would have been strengthened by demonstrating a more significant effect of MDMA prior to use of carvedilol. Because ethical considerations most likely prevent the ability of changing these parameters to reflect real-life patient presentations, the true utility of a clinically

adequate dose of carvedilol given after a patient presents with significant MDMA toxicity remains unknown.

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References

- Hysek C, Schmid Y, Rickli A, Simmler L, Donzelli M, Grouzmann E *et al.* (2012). Carvedilol inhibits the cardiostimulant and thermogenic effects of MDMA in humans. *Br J Pharmacol* 166: 2277–2288.
- Morefield K, Keane M, Felgate P (2011). Pill content, dose and resulting plasma concentrations of 3,4-methylenedioxymethamphetamine (MDMA) in recreational 'ecstasy' users. *Addiction* 106: 1293–1300.