

[Cushny AR, Peebles AR \(1905\)](#). The action of optical isomers. II. Hyoscines. *J Physiology* 32:501-510.

### Key passages

## THE ACTION OF OPTICAL ISOMERS. II. HYOSCINES.

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As a general rule a tablet was given on each alternate evening, and the duration of sleep and other features noted and compared with those of the intervening control night on which no hypnotic was given. Hyoscyamine was thus used on three occasions, and then racemic hyoscine, and then lævo-hyoscine. Then a tablet was given each evening for a week or more, the different alkaloids following each other in succession. The results may be given shortly in tabular form, details being reserved for publication elsewhere.

TABLE I.

| Patient | Controls<br>(no hypnotic)   |                              | 0·6 mg. L-Hyoscyamine<br>HBr. |                              |                              | 0·6 mg. L-Hyoscine<br>HBr.  |                              |                              | 0·6 mg. R-Hyoscine<br>HBr.  |                              |                              |
|---------|-----------------------------|------------------------------|-------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------|
|         | No. of<br>obser-<br>vations | Average<br>hours of<br>sleep | No. of<br>obser-<br>vations   | Average<br>hours of<br>sleep | Increase<br>over<br>controls | No. of<br>obser-<br>vations | Average<br>hours of<br>sleep | Increase<br>over<br>controls | No. of<br>obser-<br>vations | Average<br>hours of<br>sleep | Increase<br>over<br>controls |
| 1       | 9                           | 0·6                          | 6                             | 1·3                          | 0·7                          | 6                           | 2·5                          | 1·9                          | 6                           | 2·1                          | 1·5                          |
| 2       | 9                           | 3·0                          | 6                             | 1·4                          | -1·6                         | 6                           | 3·8                          | 0·8                          | 6                           | 4·4                          | 1·4                          |
| 3       | 8                           | 4·7                          | 6                             | 4·5                          | -0·2                         | 6                           | 5·8                          | 1·1                          | 6                           | 4·7                          | 0·0                          |
| 4       | 9                           | 5·5                          | 3                             | 4·3                          | -1·2                         | 3                           | 5·6                          | 0·1                          | 3                           | 4·8                          | -0·7                         |
| 5       | 9                           | 6·2                          | 3                             | 6·1                          | -0·1                         | 3                           | 6·1                          | -0·1                         | 3                           | 6·7                          | 0·5                          |
| 6       | 8                           | 3·2                          | 4                             | 6·6                          | 3·4                          | 3                           | 7·6                          | 4·4                          | 3                           | 8·3                          | 5·1                          |
| 7       | 8                           | 2·5                          | 3                             | 6·2                          | 3·7                          | 3                           | 8·0                          | 5·5                          | 3                           | 8·2                          | 5·7                          |
| 8       | 7                           | 2·8                          | 6                             | 3·6                          | 0·8                          | 6                           | 4·4                          | 1·6                          | 5                           | 4·3                          | 1·5                          |
| 9       | 8                           | 1·1                          | 5                             | 1·1                          | 0·0                          | 6                           | 5·7                          | 4·6                          | 5                           | 5·8                          | 4·7                          |
| 10      | 9                           | 2·9                          | 5                             | 4·9                          | 2·0                          | 5                           | 6·3                          | 3·4                          | 6                           | 6·4                          | 3·5                          |
| 11      | —                           | —                            | 2                             | 6·3                          | —                            | 2                           | 6·8                          | —                            | 2                           | 7·3                          | —                            |

From these results it is evident that hyoscyamine is of no value in the dose given as a hypnotic, while the lævorotary and racemic forms of hyoscine have about the same influence in inducing sleep. In one or two cases the patient complained of thirst or dryness of the mouth. The pulse generally became slower, and slight dilation of the pupil appeared in some instances from each of the drugs. In other cases acceleration of the pulse was noted. It may be questioned whether these changes in the pulse and pupil were direct effects of the drug or merely accompanied drowsiness.

