Isomerism of the anaesthetic drugs

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Abstract
Isomers are two or more different substances with the same molecular formula (i.e., the same number of different types of atoms). 1) Structural isomerism. 2) Stereoisomerism. 1) Structural isomers: they have different molecular structures and usually behave like different drugs. Examples: Enflurane and isoflurane. Occasionally structural isomers are inter-convertible (i.e., they are tautomers or dynamic isomers) which occurs with barbiturates and midazolam. 2) Stereoisomers: They have identical structures but a different configuration or spatial arrangement. They are two types: a) Geometrical (cis-trans) isomers. b) Optical (dextro-levo) isomers. The essay is designed to cover the chemical background about the concept of isomerism in inhalation anaesthetics and intravenous anaesthetics isomers. It is also meant to cover the local anaesthetics isomers as well as modification of muscle relaxants effects by isomerism and safer anaesthesia using stereoselective anaesthetics.

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