CHEM 261 September 28, 2020

**Conformation** Different 3D shapes of a single (the same) molecule obtained by rotation about single bonds

**Cycloalkane Conformations:**

**Cyclopropane** –bond angle 60o – relatively rigid structure, very reactive

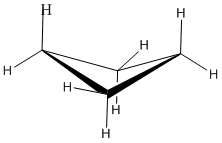


Eclipsing interactions

**Cyclobutane** – bond angle close to 90o – does have some flexibility



3D structure of cyclobutane:



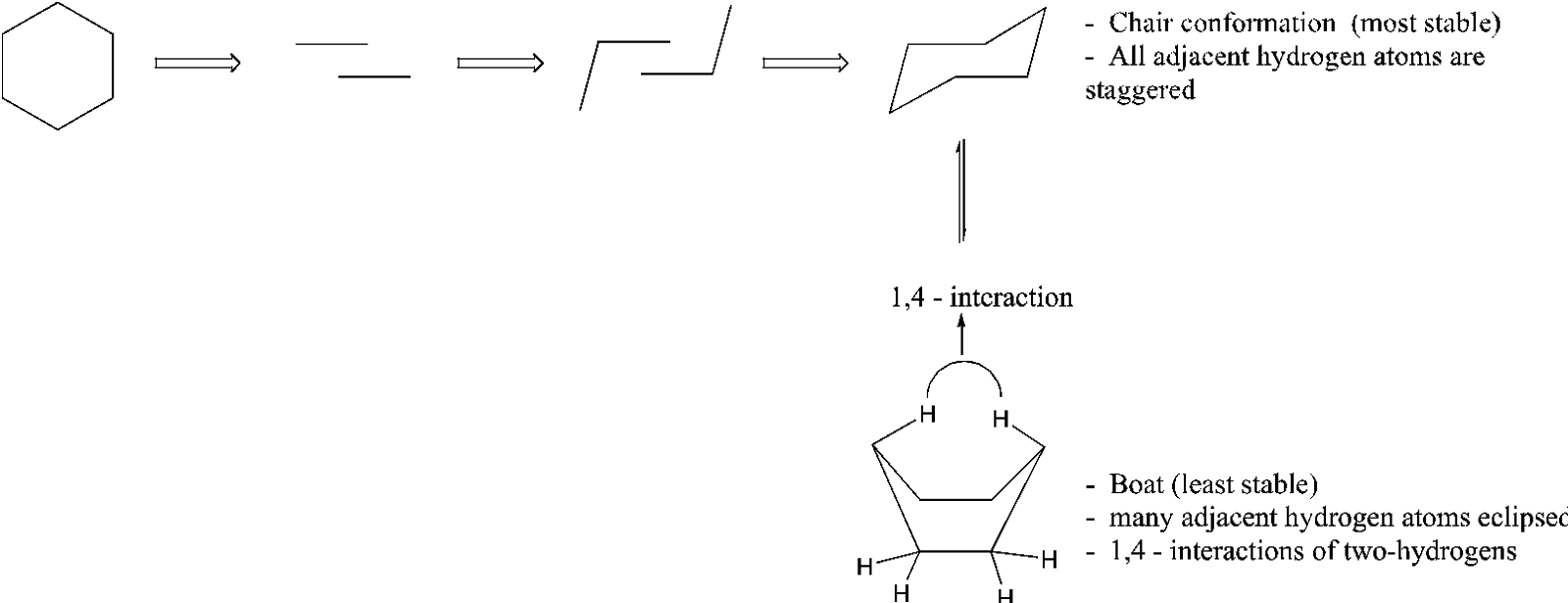
**Cyclopentane** – bond angles nominally 108o – more flexible than cyclobutane



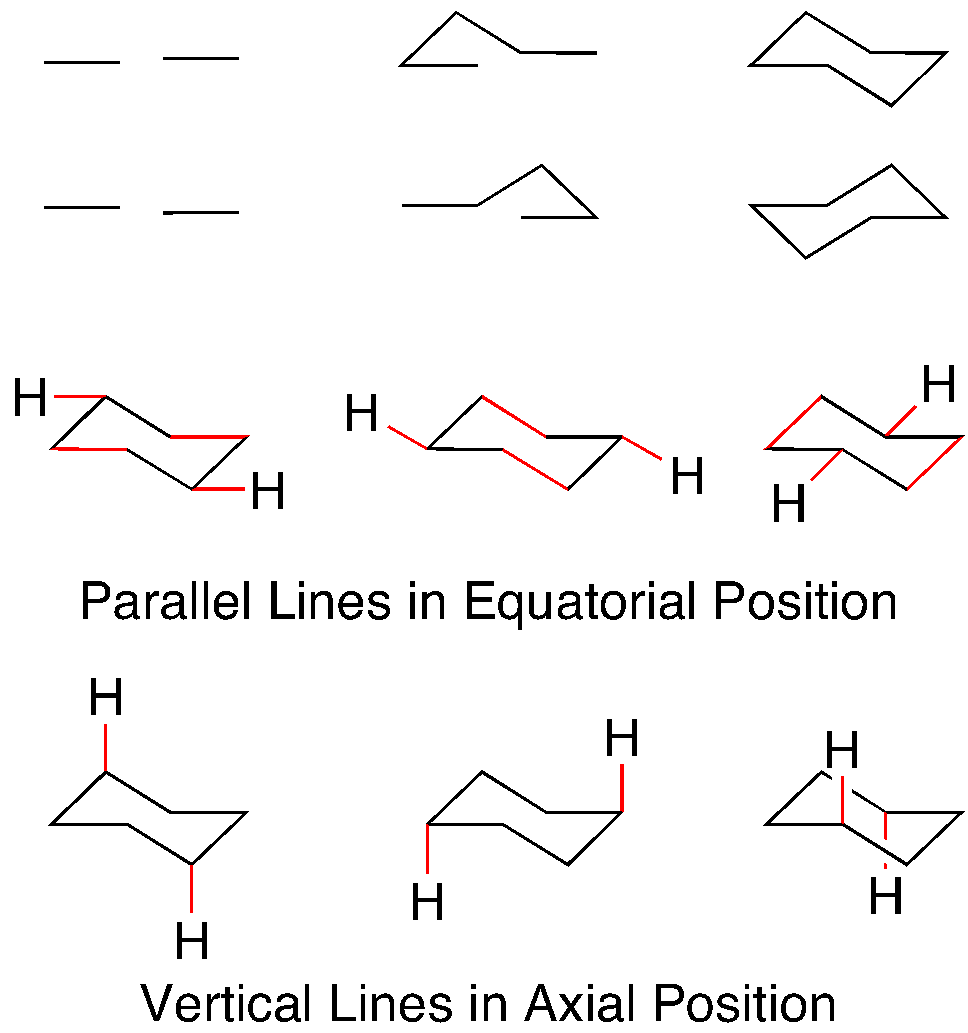
**Cyclohexane** – bond angles actually 109o, not 120o as in flat hexagon



**Cyclohexane Conformations** – How to draw:

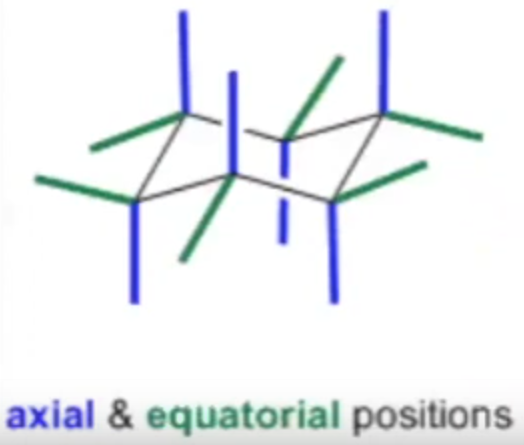
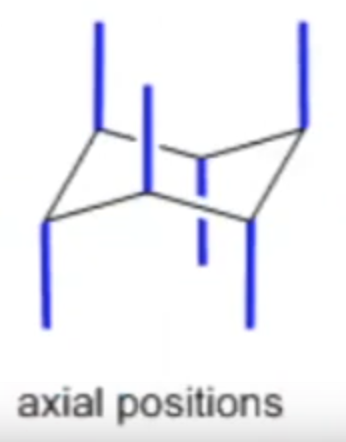


**Another way to draw cyclohexane**:



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**Cyclohexane Conformations Axial vs Equatorial Positions**

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