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Ben Knudsen* (knudsen@math.harvard.edu), Department of Mathematics, Harvard University,
1 Oxford St, Cambridge, MA 02138. *Higher enveloping algebras.*

We provide Lie algebras with enveloping algebras over the operad of little n -dimensional disks for any choice of n , and we give two complementary descriptions of these objects. The first description is an abstract characterization by a universal mapping property, which witnesses the higher enveloping algebra as the value of a left adjoint in an adjunction, while the second is a result analogous to the classical Poincare-Birkhoff-Witt theorem, giving a concrete identification of this algebra in terms of Lie algebra homology. Our construction draws inspiration from the work of Beilinson-Drinfeld on chiral algebras and has applications to the study of configuration spaces. (Received August 19, 2016)