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Laura K. Plunkett* (plunkett@hnu.edu), Holy Names University, 3500 Mountain Blvd., Oakland, CA 94619. *Size and knotting results for open chains, generated ergodically, with arbitrarily large excluded volume.* Preliminary report.

We will briefly describe a new algorithm, the reflection method, to generate off-lattice random walks of specified, though arbitrarily large, thickness in \mathbb{R}^3 . We will describing the complex relationship between the presence and nature of knotting and size, thickness and shape of the random walk. We will extend the current understanding of excluded volume by expanding the range of analysis of how the squared radius of gyration scales with length and thickness. We will also show the profound effect of increasing thickness on the probability of knot formation. (Received August 12, 2016)