Color avoidance for monotone paths

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In 2014, Moshkovitz and Shapira determined the tower height for hypergraph Ramsey numbers of tight monotone paths. We address the color-avoiding version of this problem in which one no longer necessarily seeks a monochromatic subgraph, but rather one which avoids some colors. This problem was previously studied in uniformity two by Loh and by Gowers and Long. We show, in general, that the tower height for such Ramsey numbers requires one less exponential than in the usual setting. The transition occurs at uniformity three, where the usual Ramsey numbers of monotone paths of length n are exponential in n, but the color-avoiding Ramsey numbers turn out to be polynomial. This is based on joint work with Cosmin Pohoata and Dmitrii Zakharov.