Supplementary figures

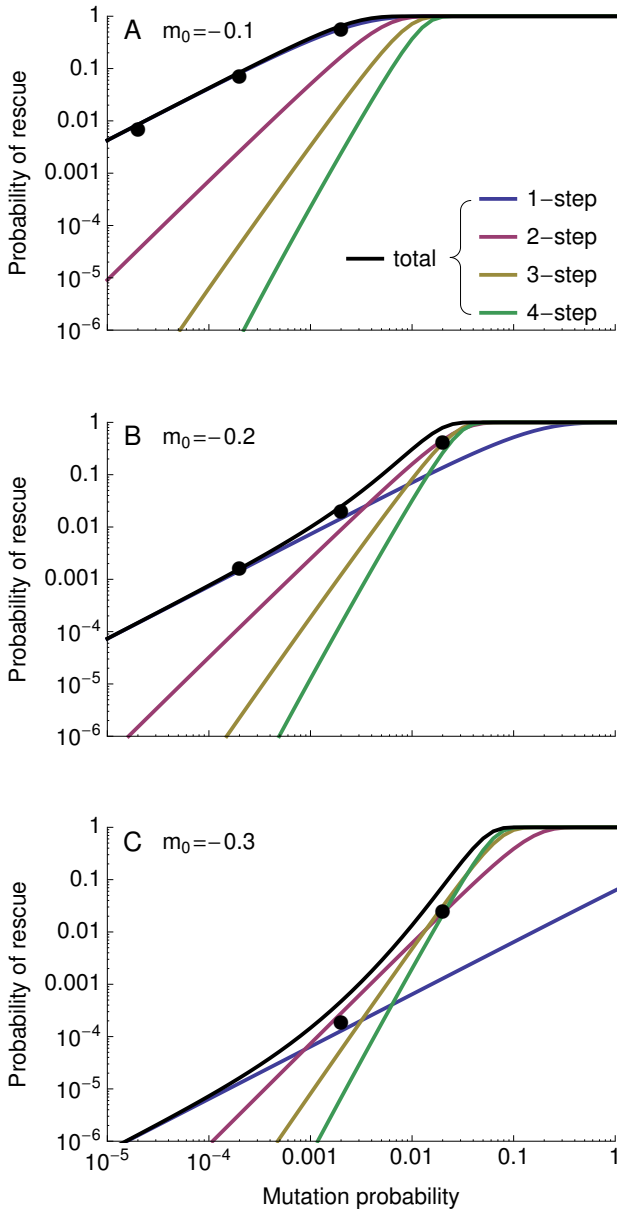

Figure S1 The probability of rescue as a function of mutation rate for three different levels of initial maladaptation. See Figure 3 for details. Other parameters: $n = 4$, $\lambda = 0.005$, $m_{max} = 0.5$, $N_0 = 10^4$.

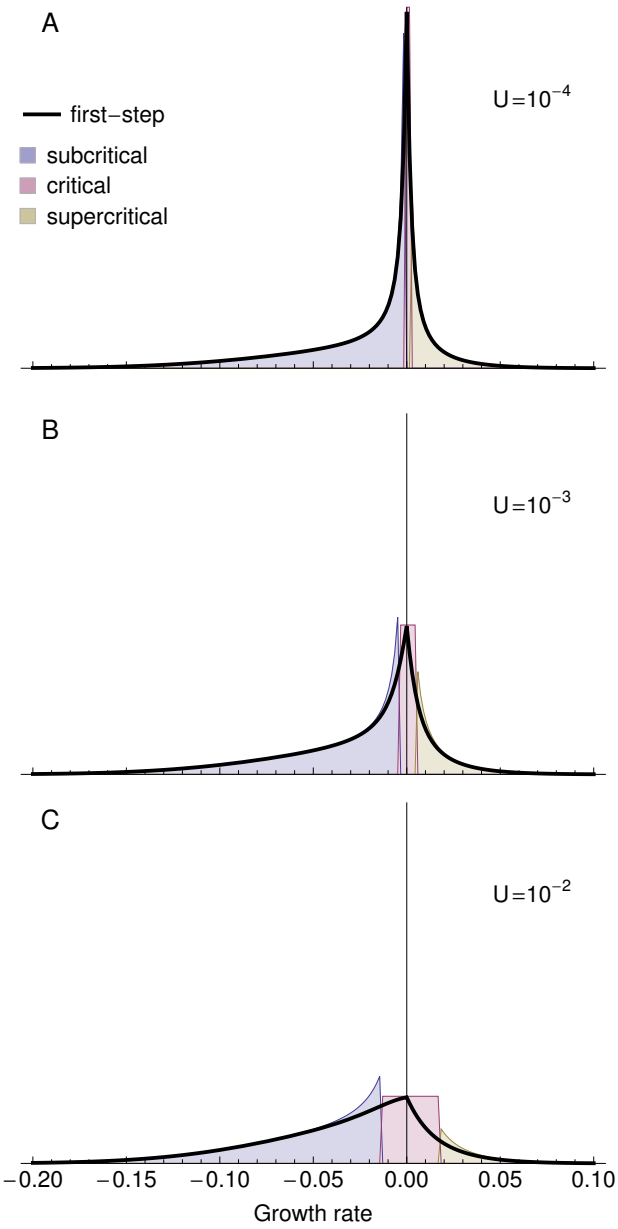

Figure S2 The distribution of first-step mutant growth rates given 2-step rescue under three mutation rates. See Figure 7 for details. Parameters: $n = 4$, $\lambda = 0.005$, $m_{max} = 0.5$, $m_0 = -0.2$.

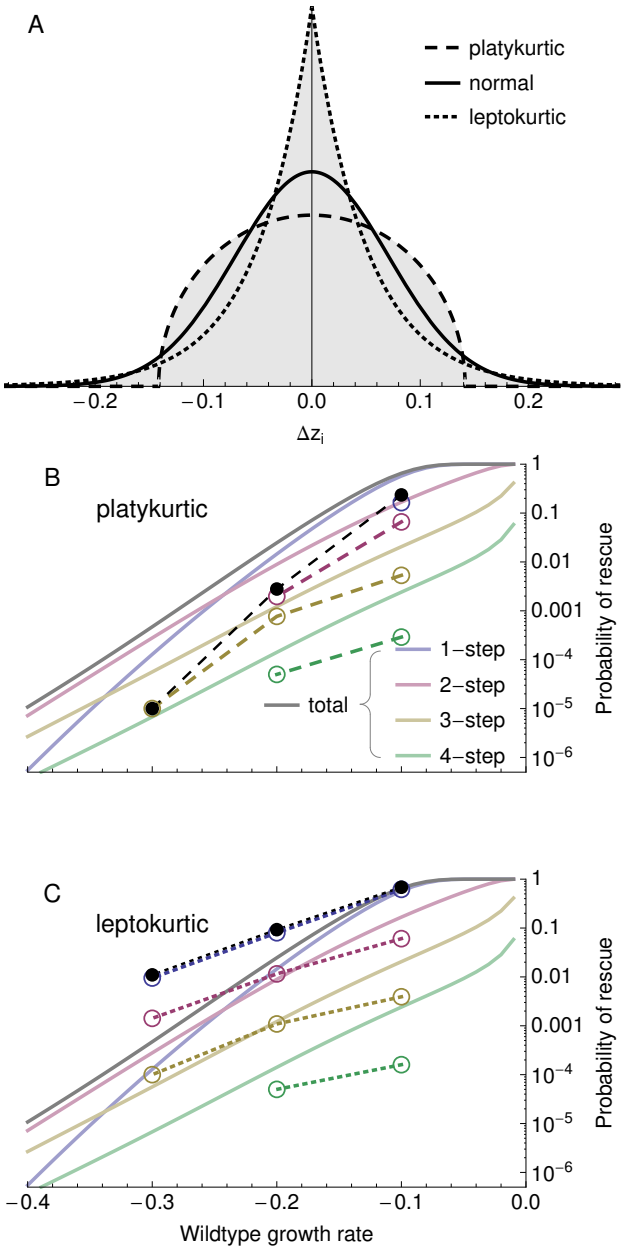

Figure S3 (**A**) One-dimensional slices of multidimensional platykurtic (dashed; semicircle), normal (solid; as used in main text), and leptokurtic (dotted; Laplace) mutational distributions with the same (co)variance but varying kurtosis. (**B**,**C**) The probability of 1-, 2-, 3-, or 4-step rescue with platykurtic and leptokurtic mutational distributions, respectively. The dots and broken lines represent simulation results (10^5 replicates for each wildtype growth rate). The solid lines are the numerical results for the normal mutational distribution (as in Figure 3). Parameters: $N_0 = 10^4$, $U = 2 \times 10^{-3}$, $n = 4$, $\lambda = 0.005$, $m_{max} = 0.5$.

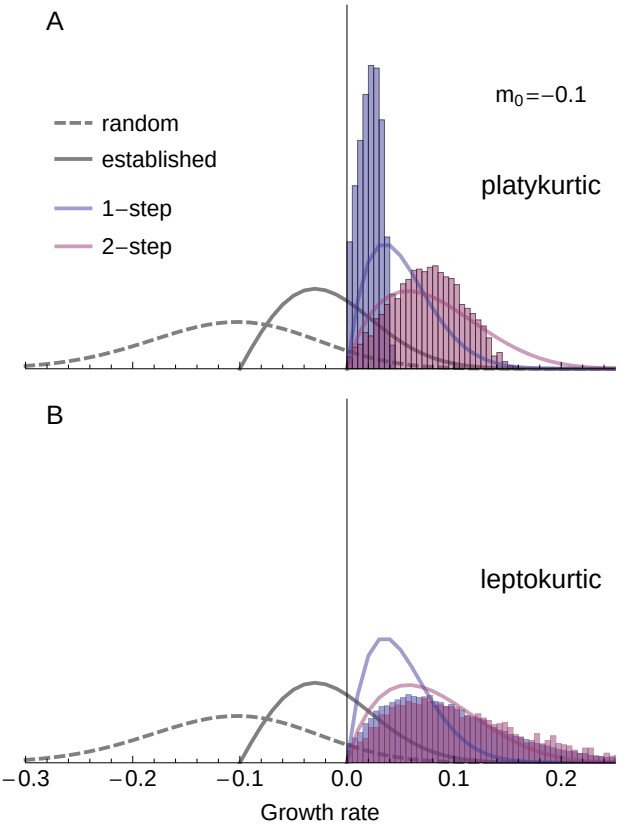

Figure S4 The distribution of growth rates among rescue genotypes under 1-step (blue) and 2-step (red) rescue with (**A**) platykurtic and (**B**) leptokurtic mutational distributions (see Figure S3A). The solid lines are predictions for a normal mutational distribution (as in Figure 6). The histograms show the distribution of growth rates among rescue genotypes observed across 10^5 replicate simulations. Parameters: $N_0 = 10^4$, $U = 2 \times 10^{-3}$, $n = 4$, $\lambda = 0.005$, $m_{max} = 0.5$, $m_0 = -0.1$.

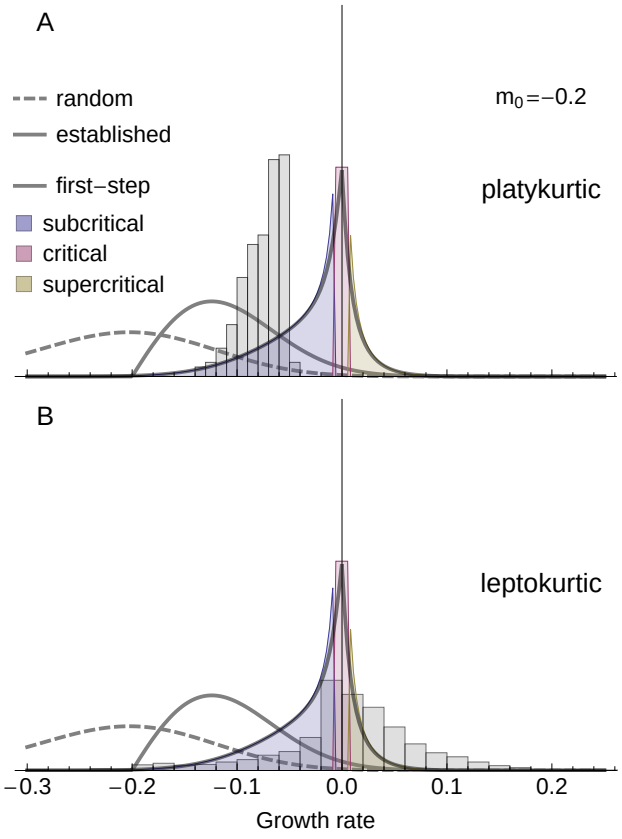

Figure S5 The distribution of growth rates among first-step mutations that lead to 2-step rescue with (**A**) platykurtic and (**B**) leptokurtic mutational distributions (see Figure S3A). The curves and shadings are predictions for a normal mutational distribution (as in Figure 7). The histograms show the distribution of growth rates observed across 10^5 replicate simulations. Parameters: $N_0 = 10^4$, $U = 2 \times 10^{-3}$, $n = 4$, $\lambda = 0.005$, $m_{max} = 0.5$, $m_0 = -0.2$.

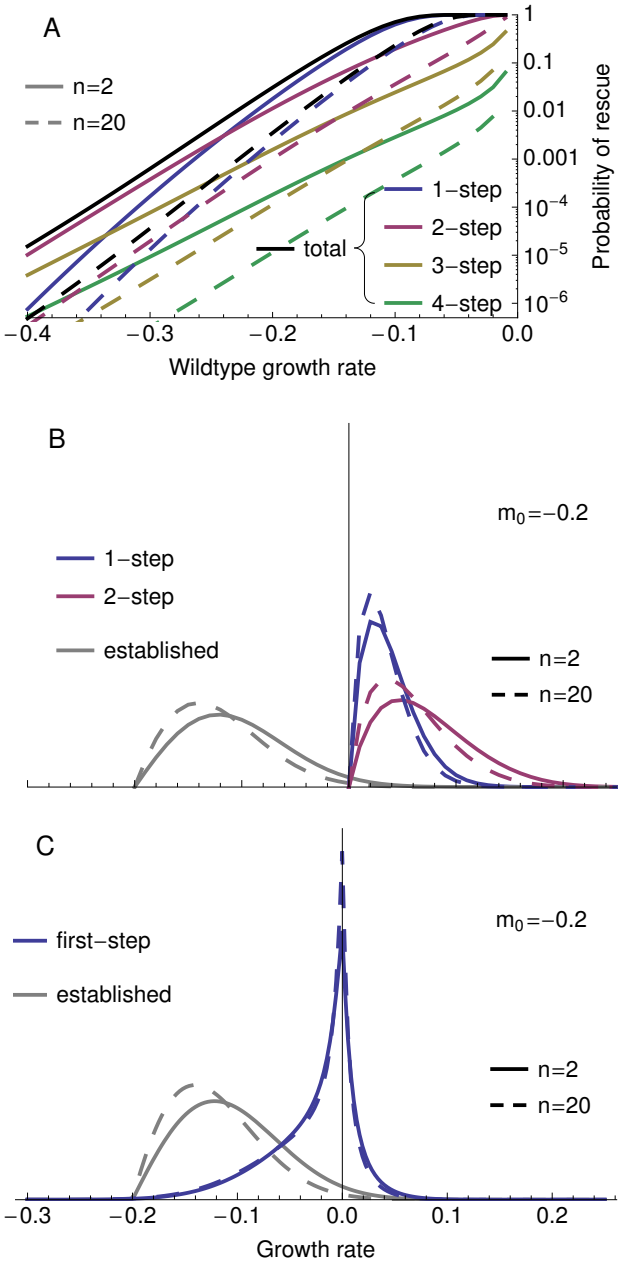

Figure S6 The effect of the number of phenotypic dimensions, n, on (**A**) the probability of k-step rescue, (**B**) the distribution of growth rates among rescue genotypes, and (**C**) the distribution of growth rates among first-step mutants that lead to 2-step rescue. Curves are numerical results, as in Figures 3, 6, and 7. Parameters: $N_0 = 10^4$, $U = 2 \times 10^{-3}$, $\lambda = 0.005$, $m_{max} = 0.5$.