FIGURE 26.7. (A) Common diseases might be influenced by common variants that are maintained by balancing selection. In that case, it is likely that a small number of causal alleles would be involved. The diagram shows two alternative alleles that are maintained by balancing selection (open and closed circles) and that influence disease risk. Other neutral variation will also be present (colored dots) and, at tightly linked sites, will be in strong linkage disequilibrium with the causal allele (red and blue dots). However, for long-standing balanced polymorphisms only a very small region of genome will be influenced in this way ($r \sim \mu \ [p. 541]$). (B) In contrast, common diseases might be influenced by many different deleterious mutations at each gene (filled circles): There are many ways to disrupt gene function, and so we might expect this to be typical.