a. Normal diploid cell: both copies of HI gene present (one on each homologous chromosome)

Loss of chromosome III: only one copy of each Chr III HI gene present; cell fitness severely compromised

b. Mammalian/C.elegans sex chromosomes: X-inactivation in females means that HI loci reduce fitness in both males and females

D. melanogaster sex chromosomes: alternative dosage compensation mechanisms mean X-linked HI genes do not reduce fitness in either sex