An Adoption Study of Human Obesity

We examined the contributions of genetic factors and the family environment to human fatness in a sample of 540 adult Danish adoptees who were selected from a population of 3580 and divided into four weight classes: thin, median weight, overweight, and obese. There was a strong relation between the weight class of the adoptees and the body-mass index of their biologic parents — for the mothers, $P<0.0001$; for the fathers, $P<0.02$. There was no relation between the weight class of the adoptees and the body-mass index of their adoptive parents. Cumulative distributions of the body-mass index of parents showed similar results; there was a strong relation between the body-mass index of biologic parents and adoptee weight class and no relation between the index of adoptive parents and adoptee weight class. Furthermore, the relation between biologic parents and adoptees was not confined to the obesity weight class, but was present across the whole range of body fatness — from very thin to very fat. We conclude that genetic influences have an important role in determining human fatness in adults, whereas the family environment alone has no apparent effect. (N Engl J Med 1986; 314:193–8.)

Given that the study was from Denmark in 1986, I’d bet that the environment in each home didn’t vary much. Therefore of course genes rule.