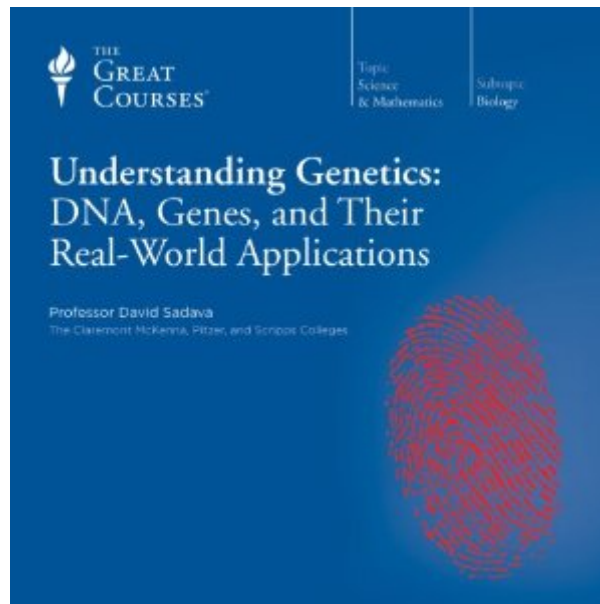


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# Understanding Genetics: DNA, Genes, And Their Real-World Applications



## Synopsis

We use DNA routinely - to cure diseases, solve crimes, and reunite families. Yet we've known about it for only 60 years. And what we're continuing to learn about it every day has the potential to transform our health, our nutrition, our society, and our future. But what, exactly, is DNA, the self-replicating material present in nearly all living organisms? You'll learn the answer - and much more - in this briskly paced series of 24 easily understood lectures from an award-winning teacher, author, and scientist. Professor Sadava unlocks DNA's mysteries as he explains what the science of genetics is and guides you through decades of cutting-edge research, scientific discovery, and genetics' weighty implications for us as individuals and as a society. Professor Sadava draws on examples from his own research to show how understanding genetics allows us to improve medical treatment and nutrition, vastly improving our health and quality of life. You'll also learn how understanding genetics is a critical step toward understanding human identity, itself. For examining our DNA - how it works and what happens when something goes wrong - enables us to see the roots of how our bodies work, why we get sick, and how traits are passed through families. Enjoy this rare opportunity to peer over the shoulder of a working scientist, learning how he puzzles through the problems of genetics to find meaningful, real-world solutions that can not only save an individual life but also enhance the quality of life for everyone.

## Book Information

Audible Audio Edition

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## Customer Reviews

These are 24 lectures about genetics, an area of science that has advanced much in recent years with the acquiring of knowledge about genes, chromosomes, and DNA. This is an area of science that I'm probably least informed, so I should have learned much from the listening to these lectures.

But I still don't feel prepared to take a test on the subject. There were many esoteric terms used in these lectures that sort of floated in my one ear and out the other. Nevertheless, the lecturer, David Sadava, made each lecture interesting and engaging by beginning each lecture with a human interest story. That story then lead into a field of genetics that was the subject of that lecture. In the first lectures Sadava describes what genetics is, how Mendel and other early scientists described the rules of inheritance. This led to the identification of what a gene is, DNA, and how it works expressing itself usually as protein in the cell. With these basics of descriptive genetics in hand he described how this knowledge has been applied to human use in the biotechnology industry from making products to solving crimes including cleaning up the environment. Modern genetics is finding out more about the amazing array of organisms and how they are related to one another and even how we as humans may have evolved over time. Genetics and DNA are having a growing impact on medicine with precise molecular descriptions of genetic causes of disease in hand we're now able to diagnose and screen for people with these particular diseases. And we are just beginning to design specific treatments. Things like gene therapy, cloning and stem cells are at the leading edge of modern medicine and hold great promise for the future.

" The DNA double helix, discovered in 1953, is one of the great icons of science in our society, rivaling the atom in its pervasiveness in our culture. "These 24 half hour lectures given by Professor David E. Sadava retired from Claremont McKenna College and City of Hope Medical Center in Duarte, California were very engaging and eye opening to me. I never attended college so this year as part of my audible membership I have decided to buy several of the Great Courses programs they offer. This was the first of my new subscription and I can tell I am already getting my credits worth! Prof. Sadava explains DNA, genes and chromosomes so a layperson like me can understand them. He also helps us to understand how the knowledge of how they work will enrich life here on planet earth.

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