

DNA fingerprinting is a chemical test that shows the genetic makeup of a person or other living things. It's used as evidence in courts, to identify bodies, track down blood relatives, and to look for cures for disease.

DNA is short for deoxyribonucleic acid, which is inside of every cell in the body. It's a chain of chemical compounds that join together to form permanent blueprints for life.

These compounds are called bases, and there are 4 of them. They pair up with another to form what are called base pairs. The DNA has about 3 billion of these couples. The way they're strung together tells the cells how to make copies of each other. DNA technology and

gene cloning are essential to the pharmaceutical industry and medicine. DNA technology is being used to help diagnose genetic diseases, such as sickle-cell disease and Huntington's disease. Since these diseases are transferred genetically from one generation to the next, those who have such diseases can be identified (sometimes even before birth) and be treated before symptoms appear.

DNA technology is also critical to developing vaccines.

Vaccines are harmless versions of a pathogen, such as a bacterium or virus. Vaccines can be used to 'trick' your body into fighting the harmless version so that if you are exposed to a harmful version of the pathogen, you have already built up defenses. There are many ways that DNA

technology is used to make vaccines, such as altering the pathogen's genes and mimicking surface proteins of harmful pathogens.

Therapeutic hormones, such as insulin and human growth hormone, are also the result of DNA technology in medicine.

Millions of people with diabetes depend on insulin treatments, and human growth hormone is used to help children who suffer from dwarfism, because they produce inadequate amounts of the hormone in their body.