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Genetic Screening in the Workplace: A "Fit" for Consumers?

by Roberto Pulver

INTRODUCTION

Recent developments in genetic research suggest that it is possible to decipher the complete sequence of human deoxyribonucleic acid ("DNA"), the carrier of genetic information, which will solve the puzzle of what makes each individual human.¹ It is estimated that 100,000 genes, discrete segments of DNA, are found in the nucleus of each human cell.² The knowledge derived from genetic research in discovering genetic abnormalities and possible cures will influence our lives from fetus to the grave. The impact of genetic research upon society is evident considering that nearly 4,000 diseases have a genetic component and approximately one out of ten individuals will suffer from an inherited disease during his lifetime.³

One of the applications of this genetic research is genetic testing in the workplace. Employers and employees will be consumers of a technology which can benefit the workplace by reducing occupational illness,⁴ maintaining a safe workplace,⁵ protecting public safety,⁶ reducing insurance and pension costs,⁷ and encouraging health awareness among employees.⁸ Certainly, employers and employees will want to avail themselves of these benefits — or will they?

Usually the controversy over any new technology facing consumers is not its benefits, but the application of that technology to achieve those benefits. For example, how will employers use an employee's genetic test results? Will the employer dismiss an employee summarily or refuse to hire a job applicant because of a latent genetic abnormality? Once an employer receives information about an individual's genetic make-up, will other third par-

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ties be privy to that information? What legal remedies are available to an employee if he is genetically discriminated against? To further complicate things, will it matter that many genetic abnormalities tend to fall along racial and ethnic lines? These are just some of the complex social, ethical, and legal questions that consumers, employers, and employees will face with genetic testing in the workplace.

This article will focus on genetic screening and how employers and employees, as consumers, will be affected by this dynamic technology. Part I will discuss basic genetic principles and the market forces that invite consumers to use genetic screening. Part II will present the arguments why genetic screening, as of yet, is not a viable technology for the workplace. Part III presents the circumstances under which genetic screening is beneficial to consumers. Part IV will discuss the government's role in regulation of screening. Finally, Part V will review what legal relief exists to remedy genetic discrimination.

I. GENES AND GENETIC TESTING

Individuals have twenty-three pairs of chromosomes.⁹ Each chromosome is composed of DNA. Segments of DNA are the ultimate units of inheritance. A gene contains the code for the production of proteins. A mutant gene produces a defective corresponding

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protein. Whether a protein is present, absent, or abnormally synthesized determines an individual's genetic make-up, including a genetic disease.¹⁰

Genetic testing is a scientific technique that detects genetic traits, including changes in chromosomes or changes

identifying individuals with particular inherited traits or disorders. Monitoring, on the other hand, involves multiple tests of an individual over time to determine whether workplace exposure has induced changes in the individual's genetic make-up.¹⁷

A. Evolution of Genetic Testing Techniques

Before the development of recombinant DNA research, which is just over a decade old, an individual's genetic composition could only be determined by his clinical appearance, family inheritance patterns, or indirect genetic tests.¹⁸ Indirect genetic tests rely upon detecting abnormal gene products which can be found in accessible body fluid or tissue. The indirect tests are ineffectual in determining genetic abnormalities if no accessible fluid or tissue is present to perform the tests.¹⁹

Due to the development of recombinant DNA technology, we now have tests that do not depend on either the function or the product of the gene because the tests examine the DNA directly. Since DNA-based testing examines an individual's DNA directly, any accessible tissue on that person will contain all the necessary genes to allow the testing.²⁰ Furthermore, DNA-based testing will diagnose an abnormal gene without knowledge of the gene's protein product.²¹ Clearly, recombinant DNA technology offers a much greater opportunity to identify and diagnose diseases with a genetic component than do indirect genetic tests.

B. Genetic Testing in the Near Future

Currently, there are few DNA-based tests available on the market, with the exceptions of the sickle cell anemia and cystic fibrosis tests.²² However, recombinant DNA research has uncovered an ever greater number of genes capable of producing disease and has identified genetic-environmental interactions which can cause predisposed individuals to express a genetic illness.²³ The remarkable pace of discov-

ery in the genetic field has led some to joke about "the gene of the week."²⁴

Because of the advances in genetic research, researchers are confident that achieving the isolation of genetic mechanisms responsible for disease causation or susceptibility will allow for more genetic testing of individuals.²⁵ Government funding and commercial development will propel the explosion of continued genetic research, leading to more genetic testing.²⁶

1. Government funding

The United States Government has approved and partially funded a fifteen year study to chart the complete DNA sequence of the human genome. The human genome is "the chromosomal collection each of us carries where almost all human genes reside."²⁷ This study, *The Human Genome Initiative* ("HGI"), will map the 100,000 genes that comprise the human genome²⁸ and is expected to use 30,000 years of labor and to exceed a budget of \$2 billion to create genomic libraries encouraging exchange of information between researchers.²⁹ This expected expenditure of resources certainly places the project among the most ambitious science undertakings of the past century.³⁰

2. Commercial development

Market forecasting predicts that by 1992 there will be a \$950-\$1,000 million market for genetic testing.³¹ The rivalry among biotechnology firms to produce marketable diagnostic genetic tests will be fierce due to the enormous financial stakes.

An example that illustrates how biotechnology companies are in competition to produce diagnostic genetic tests is the discovery of the cystic fibrosis

"... The remarkable pace of discovery in the genetic field has led some to joke about "the gene of the week."

in DNA.¹¹ Currently, genetic testing is capable of identifying individuals with three types of genetic conditions: (1) individuals who, due to genetic defects; have or will develop a genetic disease; (2) individuals who carry, but do not possess, a genetic disease; and (3) individuals genetically predisposed to disease in the future.¹² The first category includes those who, for example, inherit the gene for cystic fibrosis, Huntington's disease, or Duchenne muscular dystrophy. In each of these examples, an individual with the defective gene cannot prevent the onset of the disease by either preventive health measures or a change of environment.¹³

Individuals in the second category carry, but do not have, a genetic disease. However, these carriers can pass the defective gene on to their children. When both parents are carriers of the defective gene, there is a high probability that their children will develop the disease.¹⁴

Individuals in the third category are susceptible to a genetic disease. The genetic disease will not necessarily develop or even be likely to develop; rather, if the individual leads a certain lifestyle or exposes himself to a certain environment, then the disease will or will likely be expressed.¹⁵

In the context of the workplace, two types of genetic testing can occur: screening and monitoring.¹⁶ Genetic screening is a one time test directed at

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gene. Researchers discovered the genetic marker for cystic fibrosis in 1985.³² Later, in 1989, researchers uncovered the actual cystic fibrosis gene.³³ As a result of the discovery, several companies offered a genetic

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test to screen for cystic fibrosis. Controversy and concern over the reliability of the test caused the American Society for Human Genetics to ask for a voluntary moratorium of the test. The companies that produced the test agreed to the moratorium.³⁴

These companies did not agree to the moratorium for altruistic reasons. Rather, they agreed because of unpleasant memories surrounding genetic testing for sickle cell anemia. When these companies generated their test for sickle cell anemia they miscounseled tested individuals and mishandled test results which caused confusion and anxiety among the consumers. Many individuals were wrongfully identified as carriers of sickle cell or identified as being affected by the disease. Because of the unfavorable handling of this genetic test, many companies now want to get a favorable public response to genetic testing to preserve the future profits that the tests will generate.³⁵

It is only a matter of time before companies develop a media campaign to create a favorable impression upon consumers about genetic testing. The issue then centers around whether the interests of employers, persuaded to use the tests, will be congruent with the interests of employees. One significant problem that employers and employees will have with genetic screening is its

reliability and validity. It is not uncommon for scientists to proclaim that there is a consensus in their field about the validity or reliability of a test, only to discover new evidence demonstrating the unreliability of the test. Such are the happenings of science, particularly in genetics, that cause consumers to be skeptical about scientists and their work.

II. ARGUMENTS OPPOSING THE USE OF GENETIC SCREENING

A. Scientific Uncertainty

The common belief among the consumers is that genetic screening is very reliable, highly accurate, and capable of identifying an individual's predestined genetic future. The truth is that the facts about genetic screening are diametrically opposed to the common perception. The results of genetic screening are uncertain for many reasons.

Genetic screening assumes that, with the exception of genetics, the workplace is the only other source for possible disease.³⁶ In fact, nutrition, leisure time, and lifestyle activities may well contribute to the expression of a genetic disease in a predisposed individual. Therefore, genetic screening is not wholly reliable in preventing or controlling disease at the workplace since other factors may influence the disease.³⁷

Genetic screening is deficient in determining penetrance; that is, individuals who carry the gene may never express the gene. Penetrance refers to the frequency with which a gene expresses itself.³⁸ When the gene does express itself, its expression is variable; the degree of the gene's expression will vary from individual to individual.³⁹ Because many genes, including defective genes, are characterized by incomplete penetrance and variable expression, there will be no basis for knowing when the gene will express itself and to what extent it will be expressed. For example, Alzheimer's disease may express itself early in a person's life or much later in life.

To further compound the weaknesses in the prediction of disease through genetic screening, many individuals who have a genetic disease can limit the expression of the disease by behavioral modification.⁴⁰ For example, modification of diet for those at risk of getting diabetes or coronary heart disease can prevent or significantly delay the disease's occurrence.⁴¹

Since genetic screening tests have poor predictive value in identifying employees who may have a disabling disease, genetic screening will have a high false-positive rate. Due to its inaccuracy, genetic screening should not be used to determine if an employee will be a threat to public safety. A more

It is only a matter of time before companies develop a media campaign to create a favorable impression upon consumers about genetic testing.

effective method of protecting the public is the use of routine examinations to measure an employee's capacity to function in a job which poses a risk to public safety.⁴² Further, routine functional testing can detect an incapacity caused by something other than the alleged genetic disease.⁴³

Arguably, genetic screening tests are inaccurate, unreliable, and unpredictable in ascertaining the predetermined genetic future of an employee. Presently, any employment decision made by an employer on the basis of inaccurate testing may be deemed an irrational and arbitrary act.⁴⁴

B. Genetic Screening and Confidentiality

Genetic information about an individual is highly sensitive because it is generally unchangeable. Therefore, if a "flawed" gene is discovered using

genetic screening, it "provides an in-eradlicable marker of deviance with potentially lifelong social consequences to the affected individual."⁴⁵ Such genetic information, if publicized, could serve as the modern day scarlet letter, stigmatizing an individual for life.

It is significant to note that many employers have access to the medical records of their employees through the Medical Information Bureau ("MIB").⁴⁶ The MIB serves as a clearinghouse that

The use of genetic screening in the workplace should only occur under unusual circumstances and then only with empirical data to support the claim that genetic abnormalities are occurring as a result of the workplace.

allows insurers to exchange applicants' medical history and test findings. Inadvertently, many employees disclose their entire medical histories to the MIB; when the employer requests medical information regarding an employee's insurance claim, the employee discloses an unnecessary amount of medical information to process the claim.⁴⁷ Once an employee allows any portion of his medical history to be disclosed to an employer who subscribes to the MIB, the MIB and other insurers will have access to the employee's medical history.

Obviously, an employee must be very careful in providing medical information, especially genetic information, to an employer. Having an agency like the MIB gather medical information about individuals and provide that information to insurers is discomfoting. Even more discomfoting is the fact that the MIB computerizes its data, making the information susceptible to computer piracy.⁴⁸ Piracy of computer data has occurred in several private and public institutions. It has been suggested that mandatory

disclosures of genetic information to third parties be made illegal because of the various problems in maintaining confidentiality.⁴⁹ It appears that more stringent legal measures must be developed to protect the confidentiality of an employee's genetic status.

III. APPROPRIATE GENETIC SCREENING

Generally speaking, genetic screening is an unreliable diagnostic and prognostic indicator in determining which workers are at an increased risk of contracting a genetic disease. However, the validity and reliability of genetic screening tests will improve as more research is conducted by HGI and private industry.⁵⁰ Employers, as consumers, are motivated to use genetic screening tests to help achieve the most optimal "fit" in placing job applicants and employees in those positions for which they are best suited. In evaluating a "fit," employers may be motivated by concerns involving liability to employees who are hypersusceptible to certain workplace toxins, training costs incurred on behalf of employees who are unsuitable for a particular task, costs resulting from sick leave, and the protection of other employees from an employee who may threaten their safety.⁵¹ The purpose of finding a "fit" with an employee is to increase the employer's economic efficiency. As a result, employers are rationally drawn to tests that identify individuals who would provide the greatest economic gains to the employer. However, use of genetic testing in this manner must operate within certain parameters or the potential for abuse can be devastating to both employer and employee.

It has been suggested that the free-market will prevent employers from conducting genetic screening tests on employees in an irrational manner.⁵² Because of the threat of product liability suits against the manufacturers, the free market will insure reliable and accurate genetic screening tests. Placing confidence in the free-market to protect workers from irrational genetic

testing by employers is tenuous at best. Some critics claim that if genetic screening tests are accessible to employers at minimal cost, employers will use them regardless of their reliability or validity. Currently, some employers use employment tests that have not been validated.⁵³

Many employers believe that genetic screening should be used in connection with the evaluation of a potential employee's job performance. For example, an employer may use genetic screening to determine if an employee's genetic make-up will make him more susceptible to dying young. If the employee tests positive and a promotion involves high training expenditures on the employer's part, it makes economic sense for the employer to seek another for the promotion.⁵⁴ Obviously, society must decide whether this is an appropriate use of genetic screening in the workplace. The use of genetic screening for such purposes undermines one of society's core values that individuals should be judged on their merits.

There is a limited role for genetic screening in the workplace provided that such testing is conducted under specific circumstances guaranteed to prevent arbitrary discrimination against workers. The American Medical Association ("AMA") has proposed the "minimum" criteria that would allow genetic screening to be beneficial to both employer and employee as consumers. Criteria include the informed consent of the employee and the use of highly accurate, sensitive, and specific tests. The abnormalities tested for must occur with high frequency in the occupational setting. Further, the disease must be so serious, irreversible, and develop so rapidly that other examinations would not be effective in its prevention.⁵⁵

The proposed criteria for genetic screening provide a basic framework to protect employees from unnecessary genetic screening. The use of genetic screening in the workplace should only occur under unusual circumstances and

then only with empirical data to support the claim that genetic abnormalities are occurring as a result of the workplace.

The criteria focus on placing a duty upon the employers to provide a safe workplace for employees. Employers currently have a duty under common law to provide safe working conditions to employees.⁵⁶ More importantly, focusing on workplace safety not only protects the genetically susceptible employee but protects the employer from employee liability. The criteria mandate that a genetic screening test be an accurate diagnostic and prognostic indicator for a specific type of genetic abnormality. Currently, genetic technology cannot produce a reliable and accurate genetic screening test, which fortuitously will prevent many employers from using genetic screening.

Although, the criteria only allows genetic screening when an employee has been fully informed of the purpose of the screening, the AMA's criteria do not indicate what constitutes informed consent in this context. For example, when is an employee fully informed of the risks and consequences of taking a genetic screening test? Does the employee's informed consent apply to his children and heirs who may be affected by the screening? The AMA's guidelines on genetic screening in the workplace provide a rudimentary foundation from which legislators can draft legislation to protect employers and employees from unnecessary genetic screening.

IV. THE ROLE OF GOVERNMENT IN GENETIC SCREENING

The introduction of a new technology to society usually outpaces the ability of federal, state, and local governments to create legal rules and policies to address the issues generated by the technology. Currently, there is a very limited body of law and policy dealing specifically with genetic screening in the workplace. However, there is a substantial body of law that has

developed regarding medical testing in the workplace. Most likely, the law will continue to develop in the area of genetic screening as it grows out of established rules and policies.⁵⁷ For now, the question is whether those rules and policies that regulate genetic screening drawn from medical testing laws are appropriate.

Some analogies from medical testing in the workplace will be helpful in creating policies regulating genetic

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screening; however, relying primarily on this body of law to regulate genetic screening is unwise. Since genetic screening is such a new and dynamic technology, with incredible benefits and drawbacks, legislators must solicit public participation in the form of public forums and town hall meetings. These public forums would allow government to address the concerns of the public but would also assist in educating the public about the use and interpretation of genetic screening.⁵⁸

Government will experience difficulties in implementing a clear policy on genetic screening due to continuous sharp debate over the best method of implementation. Additionally, the information base for making policy decisions will be in a constant state of change due to continual genetic advances.⁵⁹ For these reasons, a uniform national policy may not be the best first step in regulating genetic screening. Furthermore, it would be difficult to monitor a national uniform policy since there exists no other policy standard for comparison purposes.⁶⁰

It is suggested that the federal gov-

ernment allow state and local governments to first implement their policies concerning genetic screening. These diverse policy experiments would allow the federal government to compare and choose which policies provide optimal results in regulating genetic screening.⁶¹ Of course, there may be negative implications associated with a delay in the implementation of a uniform national policy on genetic screening. Nevertheless, too often the federal government hastily implements policies which later prove to be ineffective and inefficient.

The formation of a governmental commission assigned to the task of proposing a model uniform code would assist state and local governments significantly in their implementation of genetic screening policies. Within the legal profession, there are several model codes for such subjects as criminal, probate, and tort law. These model codes have influenced legislation on a local and national basis. The use of such a commission along with a comparison of the various governmental genetic screening policies could lead to the development of a uniform national policy providing beneficial regulation for consumers.

V. LEGAL REMEDIES FOR GENETIC DISCRIMINATION

Genetic discrimination is as damaging and unjust as discrimination based on race, gender, religion, or disability. Genetic discrimination is harmful not merely because it violates the basic societal tenets of equality and justice, treating an individual inequitably solely because of predetermined characteristics, but because it also hinders an individual's productivity and ingenuity. Genetic discrimination not only hurts the excluded individual, but it steals from the marketplace necessary skills, energy, and imagination to promote a vital economy. Excluding individuals from society based on their genetics causes physical, emotional, and economic dependency, draining rather than enriching society as a

whole.⁶² Allowing genetic discrimination to exclude any individual from society is too costly a price for this nation.

Three sources of disability law have emerged as the principal weapons against genetic discrimination: (1) Title VII of the Civil Rights Act of 1964; (2) the Rehabilitation Act of 1973; and (3) the Americans with Disabilities Act of 1990.⁶³ The key to determining the merit of a legal defense against genetic discrimination is whether the classification based upon genetic characteristics falls into the categories of race, gender, or disability, or the categories of sexual orientation, personality, and intelligence.⁶⁴ A brief review of each act will show the possible defenses against genetic discrimination.

A. Title VII of the Civil Rights Act of 1964

Title VII prohibits discrimination in hiring on the basis of an individual's race, sex, color, religion, or national origin.⁶⁵ Many genetic abnormalities are tied to race, national origin, and sex; thus, if an employer denies an applicant employment due to genetic factors that fall within these protected categories, the applicant may raise a Title VII claim.⁶⁶ The applicant must show that the use of genetic screening was merely a pretext for discrimination against a protected class.⁶⁷

Employers subject to the Act are those with fifteen or more employees, labor organizations, employment agencies, and state or municipal governments.⁶⁸ If an applicant can clear the threshold requirements of the Act, a plaintiff can bring discrimination claims under disparate treatment and disparate impact theories. In a disparate treatment suit, the plaintiff must allege that the employer discriminated against him because of race, sex, or some other immutable characteristic.⁶⁹ Additionally, the plaintiff must show the employer's discriminatory intent; if the plaintiff cannot, he loses.⁷⁰ In a disparate impact case, the plaintiff must prove that a facially neutral test (ge-

netic screening) disproportionately disqualified a protected class from employment. The plaintiff is not required to prove that the employer had discriminatory motives.⁷¹

After a plaintiff has shown disparate impact, the employer has the burden of justifying the genetic screening process as a legitimate job requirement or business necessity.⁷² The employer must demonstrate that: (1) the business purpose for genetic screening is suffi-

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ciently compelling to override any discriminatory effect; (2) the genetic screening is necessary to carry out the employer's business purpose; and (3) genetic screening is the least discriminatory alternative to accomplish the business purpose without increased cost.⁷³

A successful disparate defense allows an employer to lawfully discriminate against an individual due to his immutable characteristics because the immutable characteristics truly prevent the individual from properly doing the job. The determination of whether genetic screening in the workplace is a business necessity is left to the courts, due to the complex legal issues of genetic screening in the workplace. Moreover, a shortcoming of Title VII is that it is not an effective defense against genetic discrimination when an individual's atypical make-up does not fall into one of Title VII's protected classes.

B. The Rehabilitation Act of 1973

The Rehabilitation Act specifically prohibits discrimination against handicapped individuals regardless of membership in any protected racial, religious, or ethnic group.⁷⁴ The purpose of the Act is to allow individuals with disabilities to "maximize their employability, independence, and integration into the workplace and the community."⁷⁵ The Act is limited in its application to those entities and institutions that receive federal assistance or government contracts.

For the Rehabilitation Act to apply to genetic screening, the courts would first have to determine whether a genetic abnormality or predisposition to a genetic illness is a disability. A disabled person is defined as: "any person who (i) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (ii) has a record of such impairment, or (iii) is regarded as having such an impairment."⁷⁶

The Supreme Court in *School Board of Nassau County v. Arline*⁷⁷ defined a "handicapped" person as one not only physically impaired, but also one perceived to be impaired and who, as a result, is substantially limited in a major life activity. It can be concluded from *Arline* that individuals who possess genetic abnormalities or are perceived to possess genetic abnormalities can be considered handicapped or disabled.

After determining that an individual is susceptible to a genetic illness and is considered disabled under the Act, a court must determine if the individual is qualified to perform the essential functions of the job in question. Generally, a determination of whether a person is qualified for a job requires a separate investigation based on reasonable medical judgments.⁷⁸

Finally, the disabled person could be qualified for the job in question if the employer makes reasonable accommodations for the individual. The courts will determine the extent to which an employer must make accom-

modations for a disabled individual to perform his job. Notably, undue financial burden on the employer relieves the employer from accommodating the disabled individual.⁷⁹

There are several shortcomings in the application of the Rehabilitation Act to genetic discrimination. The Act is limited to only those institutions that receive federal monies. Potential plaintiffs cannot sue their employers directly under the Act.⁸⁰ Moreover, the Act requires that a court determine first if a genetic predisposition is a disability and second, if the disabled individual is qualified for the job. These types of determinations are best made by Congress and not the courts because courts have great difficulty in resolving technological issues and implementing those resolutions into public policy.⁸¹

C. The Americans With Disabilities Act of 1990

The Americans with Disabilities Act of 1990⁸² (ADA) is the most sweeping civil rights reform since the Civil Rights Act of 1964.⁸³ The ADA, in contrast to the Rehabilitation Act of 1973, provides comprehensive anti-discrimination protection to individuals with disabilities in private sector employment, public services, public accommodations, and telecommunications.⁸⁴

The definition of disability under the ADA is broadly defined to mean: (A) "a physical or mental impairment that substantially limits one or more major life activities, . . . (B) a record of such impairment, or (C) being perceived as having such an impairment."⁸⁵ Congress purposely adopted a broad definition that protects individuals from discrimination who are perceived as disabled because of society's myths, fears, or stereotypes.⁸⁶ Therefore, most genetic defects and perceived susceptibility to genetic disease are covered under the ADA's definition of disability.

The ADA parallels the Rehabilitation Act of 1973 regarding the elements required to establish a prima facie case of discrimination.⁸⁷ The

individual must show that he: (1) comes under the disability definition; (2) is qualified for the questioned position; or (3) would be qualified if the employer makes reasonable accommodations. The ADA defines "qualified" as the individual's ability to perform the essential tasks of employment at the time of the application.⁸⁸ The possibility that an individual may become unqualified at some future point does not justify discrimination. It should be noted that the ADA allows each individual employer to determine what operations of a job are essential.⁸⁹

Reasonable accommodation under the ADA imposes an affirmative duty upon employers to make the workplace environment accessible and reduce any significant risks to the health and safety of the disabled individual.⁹⁰ However, an employer is not required to make reasonable accommodations if it would impose an undue financial hardship on the operations of the business. More-

Many genetic abnormalities are tied to race, national origin, and sex.

over, the reasonable accommodations do not include changes that fundamentally alter the nature of the business.

The ADA also prohibits employers from conducting pre-offer medical examinations to determine a job applicant's disabilities.⁹¹ However, an employer can conduct a medical examination of job applicants if a conditional offer of employment has been extended and the examination is strictly related to the applicant's ability to perform the job.⁹² If a job applicant fails the medical examination, then the employer may exclude the applicant from employment. Therefore, employers must have a compelling job-related reason to use genetic screening in the workplace.

Under the ADA, employers are allowed to discriminate against disabled individuals if there is a direct threat to the health and safety of other employees in the workplace.⁹³ The employer must identify the specific risk the disabled individual poses to others in the workplace. Risks based upon irrational fears, generalizations, or patronizing attitudes are not acceptable.

For many reasons, the ADA provides the most powerful weapon, to date, for the prevention of genetic discrimination. First, there is a broad definition for disability which includes perceived disabilities. Second, employers must provide reasonable accommodations to the disabled. Third, employers using the available ADA defenses have several factual and legal hurdles to clear before these defenses are viable. Finally, genetic screening is restricted to employers who can show a substantial job-related reason for its use.

CONCLUSION

Presently, genetic screening in the workplace is an unreliable and inaccurate technology for diagnosis and prognosis of individuals susceptible to genetic disease. However, as the Human Genome Initiative and private industry continue to unravel the secrets of genetics, genetic screening will become a reliable tool and allow consumers to make valid decisions concerning employment.

Consumers must be actively involved with government to determine the underlying policies which will regulate genetic screening in the workplace. At first, a uniform national policy to regulate genetic screening in the workplace will not benefit consumers. Allowing local and state governments to institute their genetic screening policies before the federal government's national policy will allow the federal government and consumers to decide which policies are best at regulating screening in the workplace. This comparison approach will provide a sound basis for society, as a whole, to pick a uniform national policy

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on genetic screening, if one is required.

Unfortunately, genetic screening in the workplace will unfairly discriminate against some. Of particular concern are the issues of informed consent and confidentiality surrounding genetic screening in the workplace. Comprehensive discussion among consumers will serve to determine the requirements of informed consent and how confidentiality will be protected in the workplace. It is hoped that the AMA's guidelines for genetic screening in the workplace will provide a basis from which consumers can discuss these issues. Finally, consumers need to realize that genetic screening in the workplace will provide unprecedented benefits. Though genetic screening today may be considered unfit, it is likely that such testing will become fit to solve workplace problems in the future that currently plague consumers. ♦

ENDNOTES

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- 51 *Id.* at 184.
- 52 *Id.*
- 53 *Id.* at 185. Some very large companies use handwriting analysis to make employment decisions; the validity of handwriting analysis has not been proven. *Id.* at 187.
- 54 *Id.* at 186.
- 55 Council on Ethics, *supra* note 40, at 1830.
- 56 Diamond, *supra* note 36, at 248.
- 57 *OTA REPORT*, *supra* note 5, at 103.
- 58 Karjala, *supra* note 50, at 157.
- 59 *Id.*
- 60 *Id.*
- 61 *Id.*
- 62 Gostin, *supra* note 31, at 112.
- 63 Zeitz, *supra* note 2, at 230.
- 64 Gostin, *supra* note 31, at 119-120.
- 65 Civil Rights Act of 1964, 42 U.S.C. § 2000e-2 (1981 & Supp. 1992).
- 66 Zeitz, *supra* note 2, at 231.
- 67 *Id.* at 232.
- 68 Civil Rights Act of 1964, 42 U.S.C. § 2000e(b),(e) (1981 & Supp. 1992).
- 69 Williams, *supra* note 4, at 196.
- 70 *Id.*
- 71 *Id.*
- 72 *Id.* at 197.
- 73 Zeitz, *supra* note 2, at 233.
- 74 Rehabilitation Act, 29 U.S.C. § 701-96 (1985 & Supp. 1992).
- 75 Zeitz, *supra* note 2, at 234.
- 76 Williams, *supra* note 4, at 198. Although the statute does not define impairment, the Department of Health and Human Services regulation defines physical impairment under Section 504 as: ". . . any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genito-urinary; hemic and lymphatic; skin; and endocrine." Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving Federal Financial Assistance, 45 C.F.R. § 84.3(j)(2)(i)(A) (1991).
- 77 School Board of Nassau County v. Arline, 480 U.S. 273, 283 (1987).
- 78 Williams, *supra* note 4, at 199.
- 79 Zeitz, *supra* note 2, at 234-5.
- 80 Williams, *supra* note 4, at 200. A potential plaintiff is required to file a complaint with the Office of Federal Contract Compliance Programs in the Department of Labor, which subsequently investigates the claim. *Id.*
- 81 *Id.*
- 82 Americans with Disabilities Act, 42 U.S.C. §§ 12101-12213 (Supp. 1992).
- 83 Gostin, *supra* note 31, at 120.
- 84 *Id.*
- 85 Americans with Disabilities Act, 42 U.S.C. § 12102(2) (Supp. 1992). This part of the ADA parallels the regulations concerning impairment under The Rehabilitation Act of 1973. See *supra* note 76.
- 86 Zeitz, *supra* note 2, at 235.
- 87 *Id.*
- 88 *Id.* at 236.
- 89 *Id.*
- 90 Gostin, *supra* note 31, at 131.
- 91 Council on Ethics, *supra* note 40, at 1828.
- 92 *Id.* at 1828.
- 93 Gostin, *supra* note 31, at 128-9.