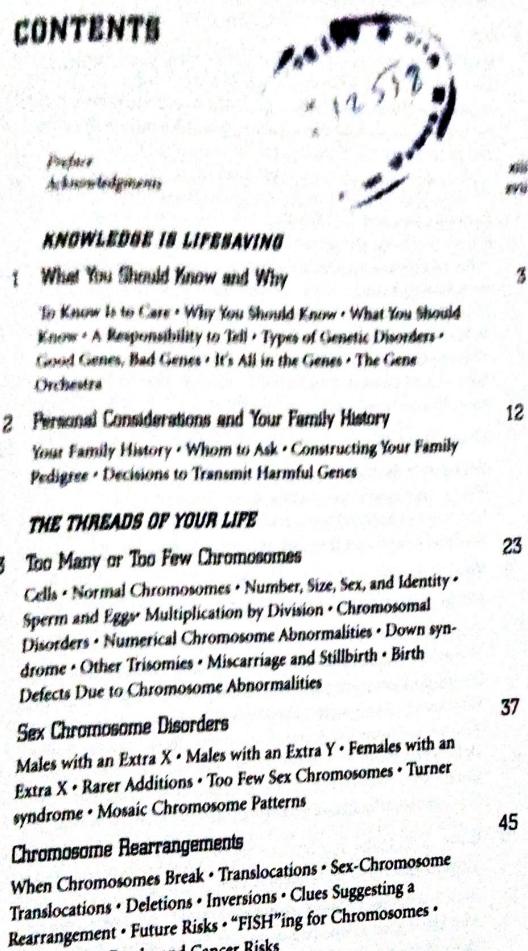
KNOW YOUR GENES, SECURE YOUR HEALTH, SAVE YOUR LIFE

CONTENTS

d'extrace

Orefamotra

5



Chromosome Breaks and Cancer Risks

9

10

BLUEPRINTS FOR LIFE

THE BLUEPRINTS FOR LIFE	
6 Genes What Is a Gene? • How Do Genes Function? • Errors in the Chair What Is a Gene? • How Do Genes Function? • Errors in the Chair The Gene Team • Gene Families • Designer Genes • Gene The Gene Team • Gene Families • Clock Genes • Gene that Programs • Programmed Cell Suicide • Clock Genes • Imprinted Distinguish Left from Right • The Power of Silence • Imprinted Genes	
7 You and Your Genes Harmful Genes from One Parent • Characteristics of Dominant Inheritance • Gene Mutations • Harmful Genes from Both Parents Inheritance • Gene Mutations • Harmful Genes Passed • Characteristics of Recessive Inheritance • Harmful Genes Passed from Mothers to Sons • Symptoms and Signs in Carriers • from Mothers to Sons • Symptoms and Signs in Carriers • Characteristics of X-linked Recessive Inheritance • Mosaic Ovaries or Testes • Harmful Genes from Mothers to Their Children • or Testes • Harmful Genes from Mothers to Their Children • Characteristics of Maternal Inheritance • Genes from Fathers to	66
Fingerprints • Incest • Rape and Murder Ethnic Genes and the Disorders They Cause Coping with the Risks of Being a Carrier • Who Needs Testing? • The Gene Screen • Common Mutations • Testing Prior to Conception • Ancestral Founders • Signs in Carriers • Marrying in the Family • Avoiding Tragedies: What Should You Do?	85
9 When Threads or Blueprints Go Awry: Mental Retardation and Birth Defects Extent of the Problem • Major and Minor Birth Defects • When Normal Development Goes Awry • Syndromes • Deformation • Dysplasia • Disruption • Causes of Birth Defects and Mental Retardation • The Fragile X Syndrome • Drugs that Cause Defects • Vitamin Supplements • Maternal Illness and Birth Defects • Birth Defects and Multifactorial Influences • Risks of Having a Second Child with a Birth Defect or Mental Retardation • Common Superstitions • Avoidance and Prevention	98
Various Disorders or Compucations	19
Born Susceptible · Blood Groups and Disease · ABO blood groups	

· Rh blood groups · the HLA system · Allergy, Asthma, and

Emphysema • A Predisposition to Clot • Genes and Drugs • Genes,

HARMPUL GENER

11 George and Heart Disease

143

The Extent of the Problem • Causes and Risk Factors • Smoking • Some Facts about Fats • Coronary Artery Disease and Inflammation • Hypertension • Clots in the Coronaries • Diabetes Mellitus • Obesity and CAD • Miscellaneous Risk Considerations • Fetal-Infant Programming and Adult Consequences • Directly Inherited Coronary Artery Disease • Familial Combined Hyperlipidemia • Familial Hypercholesterolemia • Familial Hypertriglyceridemia • Familial Defective Apolipoprotein B-100 • Familial Dysbetalipoproteinemia • Other Genetic Lipid Disorders • Are You at Risk of a Heart Attack? • What Should You Do?

12 Genetic Disorders of Heart Structure Rhythm, and of the Arteries

158

Genetic Disorders of the Heart Muscle • "Large Muscle"
Cardiomyopathy • "Floppy Muscle" Cardiomyopathy • Genetic
Disorders of the Blood Vessels • Marfan syndrome • the EhlersDanlos syndromes • Genes and Abnormalities of Heart Rhythm •
The Long QT syndrome • other Familial Heart Rhythm Disorders
• Mitral Valve Prolapse • Structural Heart Defects • Chromosomes
and Heart Defects • Multifactorial Heart Defects • Syndromes and
Heart Defects • Environmental Causes of Heart Defects

13 Is High (or Low) Blood Pressure Inherited?

172

What Is High Blood Pressure? • Is Hypertension Inherited? • Not Genetic, But Still Important • Does Hypertension in the Adult Originate in the Womb? • Ethnic Aspects • Screening and Prevention • Is Low Blood Pressure Inherited?

14 Genes and Diabetes

178

Diagnosing Diabetes • Types of Diabetes • Insulin-Dependent
Diabetes • Non-Insulin Dependent Diabetes • Diabetes Associated
with Other Disorders • A Common Disorder • Culprit Genes and
Environmental Factors • Diabetes and the Single Gene • MaturityOnset Diabetes of the Young • Diabetes, Multiple Genes and
Environment • Genes and Non-Insulin-Dependent Diabetes •
Genes and Insulin-Dependent Diabetes • Fetal Origins of Diabetes
• Diabetes and Genetic Syndromes • Pregnancy and Diabetes •

	ec e		м.	7	ю.	14	٠,
- 1	ю	91	ry .	1	No.		٠.

Gestational Diabetes A Predisposition to Diabete Complications . Heart Disease: kya Complications . Kidney Complications . Heart Disease: bya Complications . Hypertension . Suseptability to Infection . Nerve Damage . Hypertension . Chesity and Diabetes . Dietary Guidelines Chesity in and Diabetes . Dietary Guidelines The Chesity Epidemic . Obesity and Associated Disorders . With the Chesity Epidemic . Obesity and More Signals . Genes and and How People Get Fat . Signals and More Signals . Genes and and How People Get Fat . Signals and Obesity . Risks of Obesity . Chesity . Genetic Disorders and Obesity and Birth Defects . Maternal Obesity . Maternal Obesity and Birth Defects . Maternal Obesity . Maternal Obesity and Birth Defects .	193 d 200
16 Genes and Cancer? · How Widespreas Is It? · How Does a Normal What Is Cancer? · How Widespreas Is It? · How Does a Normal Cell Become a Cancer Cell? · Genes at Checkpoints · Cells with Gell Become a Cancer Cell? · Genes at Checkpoints · Cells with Cell Become a Cancer Cell? · Genes at Checkpoints · Cells with Cell Become a Cancer Cell? · Genes at Checkpoints · Cells with Cell Become a Cancer Cell? · Genes at Checkpoints · Cells with Cell Become a Cancer? · Cell Suicide · DNA Repair Systems · Brakes · Gene Silencing · Cell Suicide · DNA Repair Systems · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes of Means to an End · Imprinted Genes · Broken Threads · Causes ·	144
Is There a History of Cancer in Your Family? Is There a History of Cancer in Your Family? Is There a History of Cancer in Your Family? Genetic Causes · Prenatal Risk Factors for Cancer · Cancer and Genetic Origin · Birth Defects and Cancer · Cancers of the Breast, Ovary, Colon, and Prostate · Breast Cancer · Ovarian Cancer · Gene Tests Treatment Options · Colon Cancer · Prostate Cancer · Gene Tests Treatment Options · Other Cancers · Cancer and Pamily Cancer Syndromes · Other Cancers · Cancer and Childbearing · Should Children Be Tested? · Privacy and Confidentiality · What You Should Know Before Having a Cancer Gene Test · Gene Therapy for Cancer	211
Is Schizophrenia Inherited? • The Diagnosis • Family Studies • Twins and Schizophrenia • Adoption and Schizophrenia • Early Signs • Eye Movements and Susceptibility to schizophrenia • Genes and Schizophrenia • Treatment • Predicting the Outcome • What Happens Over Time? • Costs	240
19 Genes, Depression and other Mood Disorders Mood Disorders • Depression (Unipolar Disorder) • Manic Depression (Bipolar Disorder) • How Common a Problem • Suicide • ADHD and Bipolar Disorder • Genes or Environment • Family Studies • Patterns of Inheritance • Genes and Anxiety Disorders • Alcoholism	250

20 Genes and Alzheimer's Disease

259

Alzheimer's Disease • Telltale Features • How Common a Problem?
• Is It Aging or Alzheimer's? • Trouble in the Brain Cells: Plaques and Tangles • Is Alzheimer's Disease Inherited? • Culprit Genes • risks • Ethnicity and Familial Alzheimer's disease • Acquired or Environmental Factors • Should You Have a Predictive Test or Not?• Predictive or Susceptibility Tests • Ethical Considerations

21 Genes, Aging, and Longevity

270

Lessons from Other Species • Why and How Do We Age? • Death Clocks • Body Clocks and Programmed Aging • Chromosome Tips • Cell suicide • Immune System and Aging • Aging Due to Wear and Tear • Problems in the Power Plants • The Protein-Sugar Mix • The Molecular Defense Against Aging • Aging and Cancer • Aging Sperm and Eggs • Premature Aging Syndromes • Is Longevity Inherited? • Postponing Aging

AVOIDANCE AND PREVENTION OF GENETIC DISORDERS

22 Prenatal Diagnosis of Genetic Disorders

283

Early warning • Preconception Planning • Screening in Early
Pregnancy • Prenatal Diagnosis • How are the Studies Done?•
Procedural Risks • Diagnostic Accuracy • Ultrasound Imaging •
Very Early Pregnancy Prenatal Diagnosis • Procedures • Accuracy •
Risks • Preimplantation Diagnosis • Procedure • Limitations •
Indications for Prenatal Genetic Studies • Chromosome Defects •
single gene disorders • prenatal studies for physical defects in the
Fetus • Pitfalls and Problems • Diagnostic Errors • Aberrant, but
Normal • An Extra Fragment • Disputed Paternity • Multiple
Pregnancy • Culture Failures • Diagnoses of the Unexpected • The
Future Is Now

23 Genetic Disorders and Pregnancy

300

What You Don't Know Can Hurt You • Preconception Genetic
Counseling • Genetic Disorders That Pregnancy May Aggravate •
Maternal Genetic Disorders That May Threaten Fetal Health and
Survival • Genetic Disorders That May Complicate Pregnancy

	PERSONAL MATTERS, PREDICTIVE AND TREATMENT SENETH COUNSELING, AND TREATMENT SENETH COUNSELING, AND TREATMENT SENETH COUNSELING, AND TREATMENT	
	Predictive Genetic Diagnosis	
	Presymptomatic Testing • Familial Cancers • Testing for Adult	
	Genetic Counseling What Is Genetic Counseling? • Who Needs Genetic Counseling? • What Is Genetic Counseling? • What Should You Expect from Genetic Counselor • Marriage and Stillbirth • Expect from a Genetic Counselor • Marriage and Stillbirth • Expect from a Genetic Counseling Bad News • Who Provides Genetic Infertility • Communicating Bad News • Who Memory • Contact Counseling? • Risks and Odds • Chance Has No Memory • Contact Recontact	1,59
	and Recontact	ct
	Genes, Ethics, Law, and Public Policy Goals and Ethical Principles • Informed Consent for Genetic Testing • Confidentiality • DNA Banking • Ethical Guidelines • Ethical and Legal Issues • Forensic DNA Data Banks • DNA Testing of Children • Genetic Tests in Adoption • The child • Adoptive of Children • Genetic Tests in Adoption Agency • The State • Parents • Birth Parents • Adoption Agency • The State • Professional Guidelines • Law and Ethics • Patenting Human Professional Guidelines • Law and Insurance • Litigation in Genes • Genetic Discrimination in Insurance • Litigation in Medical Genetics • Future Litigation	3.
I T K	Treatment of Genetic Disorders Modifications of the Diet • Restriction and Substitution • Augmentation and Exclusion • Supplementation and Replacement • Treatment with Medications • Depletion • Avoiding Harmful Factors • Repair and Reconstruction • Transplantation • Stem Cell Fransplantation • Genetic Engineering • Gene Knock-Outs and Finock-Ins • Cloning for Health • Gene Therapy • Gene Delivery • Therapy • Gene Therap	349
D	isease Candidates for Gene Therapy • Gene Therapy Before Birth	37.7
• • •	Germline Gene Therapy • A Challenge for the Future	
App	pendix A Some Frequently Asked Questions pendix B Genetics Resource Organizations pendix C Genetics and Health-Related Internet Sites	371 376 383
Appe	endix D Reference Books x	388 392
	요 그렇게 하는 게 되었다. 이 생각을 하는 것이 되었다면 하는 것이 되었다면 하는 것이 되었다면 하는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다면 하는 것이다.	