

# 2015 REGISTRY REPORT

A report on birth defects and developmental disabilities in 4529 children reported to the National Birth Defect Registry founded and operated by Birth Defect Research for Children



From the National  
Birth Defect Registry



BIRTH DEFECT RESEARCH  
FOR CHILDREN, INC

**Report**  
**National Birth Defect Registry**  
**October 2015**

The National Birth Defect Registry was started in 1990 to collect information on all kinds of birth defects, both structural and functional, as well as information on the preconceptional and prenatal health, genetic and exposure histories of both parents. The project was designed and evaluated by an advisory board of seven prominent scientists working in fields ranging from obstetrics and genetics to epidemiology and the effects of toxic exposures on reproduction. The original questionnaire for the project was a 16-page booklet that parents filled out and mailed to Birth Defect Research for Children. Data from the questionnaire were then manually entered into an interrelational data base. Approximately 4,000 case reports were collected in this version of the registry.

In April of 2004, BDRC converted the registry to an on-line project so that parents could fill out the questionnaire at any convenient time of the day or night. The on-line project also allowed for the addition of new sections to the registry questionnaire without the cost of reprinting thousands of questionnaire booklets and mailing them to parents. The quality of data collected is more accurate as well, since the parent enters information directly into the on-line questionnaire and then BDRC staff imports the questionnaire into the main registry taking the completed questionnaire off the internet.

The registry is designed to identify patterns of similar birth defects that may have similar conditions or exposures in common in the pregnancy or pre-conceptual history. This slide presentation made to the National Institute of Environmental Health Sciences explains the operation of the registry and some of the birth defect issues we have worked on using registry data.

<http://www.birthdefects.org/NIEHS/3510.html>

Since October of 2015, parents have completed 3983 questionnaires with case reports for 4529 children (more than one child in a family can be reported on a questionnaire) in the on-line National Birth Defect Registry. We have reports for 2372 males, 2144 females and 13 cases where the sex was not entered. This is a first report of these data. Distribution of Disabilities with a Minimum of 1 Case Reports.

<b>Birth Defect Name</b>	<b>Count</b>
Allergies	1048
Motor Skills Delay	938
Speech Delay	858
Reflux	850
Speech	765
Frequent Ear Infections	660
Depression	644
Asthma	633

Anxiety Disorder	627
Anger	595
Mood Swings	592
Frequent Upper Respiratory Infections	574
Frequent Headaches	565
Comprehension	555
Joint Pain	553
Spelling/Writing	533
Math	530
Eczema	505
Sleep Disorder	494
Muscle Pain/Weakness	486
Attention Deficit With Hyperactivity	484
Colic As Baby	479
Memory Problems	477
Chronic Stomach Problems	475
Food Sensitivity	468
Drug Reaction	460
Distractibility	455
Scoliosis	444
Jaundice At Birth	434
Heart Murmur	432
Language Processing	425
Heat/Cold Sensitivity	372
Menstrual Problems	358
Obsessive/Compulsive	346
Hay Fever (Allergic Rhinitus)	340
Abnormal Teeth	331
Sensory Integration Dysfunction	323
Attention Deficit Without Hyperactivity	320
Retardation	319
Dyslexia/Reading	311
Gastroschisis	307
Seizure Disorder	294
Vision Defect	291
Malformed Fingers, Hands Or Arms	289
Chronic Fatigue Syndrome	289
Frequent Urinary Tract Infections	288
Partial Hearing Loss	275
Astigmatism	270
Acne-Like Rash	263

Light Sensitivity	262
Cleft Palate	257
Hypotonia (Floppy Muscles)	247
Anemia	240
Strawberry Birth Mark	237
Muscle (Absent Or Underdeveloped)	232
Auditory Processing Deficit	231
Malformed Toes, Feet Or Legs	229
Undescended Testicles	220
Hives	220
Arthritis	220
Clubfoot	213
Latex	213
Unexplained Fevers	213
Apnea	213
Thyroid Defect	211
Amblyopia (Lazy Eye)	210
High Arched Palate	209
Unexplained Fevers	209
Ovarian Cyst	207
Bi-Polar	201
Ventricular Septal Defect	190
Malformations Of Vertebrae	187
Frequent Nose Bleeds	187
Autism	185
Walks On Tiptoes	185
Visual Memory Deficits	182
Hydrocephalus	174
Frequent Pneumonia	174
Facial Asymmetry	173
Atrial Septal Defect	171
Hair Loss	169
Low Set Ears	166
Lung (Absent Or Underdeveloped)	164
Cleft Lip	164
External Ear Or Ears (Absent of Malformed)	162
Oppositional Defiant Disorder	158
Spina Bifida	152
Tethered Spinal Cord	151
Hypertension	140
Immune Deficiency	140

Autoimmune Disorder	140
Cerebral Palsy	138
Infertility	134
Rib Abnormality	131
Tracheoesophageal Fistula	131
Dislocated Hip	130
Syndactyly (Webbed Fingers Or Toes)	129
Micrognathia (Small Jaw)	129
Diabetes	128
Microcephaly	127
Chiari Malformation	127
Strabismus	123
Imperforate Anus	121
Breaks Law/Rules Of Society	119
Umbilical Hernia	117
Early Puberty	117
Cafe Au Lait Birth Mark	115
Psoriasis	112
Hypoactivity	112
Delayed Puberty	110
Diaphragmatic Hernia	109
Neurogenic Bladder	109
Early Tooth Eruption	108
Chronic Tinnitus (Ringing In Ears)	107
Reduction Deformity Upper Limb	105
Manic Depression	103
Swollen/Or Bleeding Gums	102
Changes In Skin Color	102
In Utero Growth Retardation	101
Endometriosis	99
Thrush/Chronic Candida	98
Borderline Personality Disorder	97
Internal Ear Or Ears (Absent or Malformed)	96
Dysmorphic Features	96
Perseveration	95
Absence Corpus Callosum	93
Chromosome Disorder	93
Deafness	92
Hiatal Hernia	89
Bony Defect Of Skull	89
Absent Kidney	88

Small Sex Organs	88
Hypoglycemia	86
Ear Tag(S)	85
PDD (Pervasive Development Disorder)	84
Goldenhar (Hemifacial Microsomia)	83
Anencephaly	82
Malformed Ureter	82
Vater (Vacterl)	81
Reduction Deformity Lower Limb	79
Malformed Kidney	79
Skin Fungus	79
Apraxia	79
Craniosynostosis	76
Asperger	75
Patent Ductus Arteriosus	75
Cardiac Arrhythmia	73
Pectus Excavatum	72
Spina Bifida Occulta	71
Chronic Virus	71
Hypospadias	69
Blind	68
Sensorineural Hearing Loss	68
Facial Bone Deformity	67
Hemangioma	66
Prune Belly	66
Rheumatoid Arthritis	66
Contractures Of Elbows/Knees/Joints	65
Growth Hormone Deficiency	65
Constitutional Short Stature	65
Ganglion Cyst	63
Nystagmus	62
Clubfoot With Bone Deformity	61
Inguinal Hernia	60
Malformed Sex Organs	60
Mitral Valve Prolapse	59
Aortic Valve Stenosis/Atresia	56
Neurogenic Bowel	55
Hypoplastic Left Heart Syndrome	54
Amniotic Band	54
Poland's	53
Pectoralis (Absent Or Underdeveloped)	52

Brain Cyst	52
Cataract	51
Port Wine Stain	51
Pituitary Defect	51
Tetralogy Of Fallot	50
Pulmonary Hypertension	50
Broncho-pulmonary Dysplasia	49
Pulmonary Valve Stenosis/Atresia	49
Lipoma	49
Polydactyly (Extra Digits)	48
Facial Nerve Paralysis	48
Coarctation Of Aorta	47
Rectal And/Or Intestinal Atresia	47
Pierre Robin	47
Liver Function Disorder	46
Single Umbilical Artery	44
Pyloric Stenosis	43
Twisted Lower Limb	42
Pigeon Chest	42
Aphasia	42
Coloboma	41
Cortical Blindness	40
Encephalocele	40
Clubbed Hands	40
Transposition Great Arteries	40
Optic Nerve Atrophy	39
Thin Corpus Callosum	38
Polycystic Kidney	38
Macrocephaly	37
Bicuspid Aortic Valve	37
Hepatomegaly (Enlarged Liver)	37
Anorexia Or Bulimia	37
Down	36
Schizophrenia	36
Bradycardia	34
Horseshoe Kidney	34
Holoprosencephaly	33
Spondylolisthesis	33
Ptosis	33
Mitral Valve Regurgitation	32
Dermoid Cysts	31

Bladder Exstrophy	31
Glaucoma	30
Diabetes Insipidus	29
Hirschsprung's Disease	28
Crohn's Disease	28
Spinal Muscular Atrophy	27
Microphthalmia	27
Exotropia	27
Splenomegaly (Enlarged Spleen)	27
Trisomy	27
Sacral Agenesis	26
Hypertelorism	26
Hydrocele	26
Ataxia	25
Syringomyelia	25
Omphalocele	25
Cystic Hygroma	25
Short Bowel	25
Thyroid	25
MCS (Multiple Chemical Sensitivity)	25
Intrauterine Stroke	24
Arthrogryposis	24
Absent Gallbladder	24
Ehlers-Danlos	22
Clinodactyly	21
Septo-Optic Dysplasia	21
Preauricular Pits	21
Pulmonary Atresia/Hypoplasia	21
Leukemia	21
Dandy Walker Malformation	20
Cerebellar Hypoplasia	20
Muscular Dystrophy	19
Cardiomyopathy	19
Double Outlet Right Ventricle	19
Overgrowth Of Lower Limb	18
Choanal Atresia	18
Ambiguous Genitalia	18
Schizencephaly	17
Neurofibromatosis	17
Potter	17
Pilonidal Cyst	17



Tricuspid Valve Stenosis/Atresia	16
Pulmonary Artery Anomaly	16
Dextrocardia	16
Bicornuate Uterus	16
Dysthymia	16
Primary Immune Defect	16
Delayed Myelination	15
Lipomyelomeningocele	15
Tourettes'	15
Turner's	15
Absence Of Septum Pellucidum	14
Hemihypertrophy	14
Sarcoma	14
Lissencephaly	13
Periventricular Leukomalacia	13
Overgrowth Of Upper Limb	13
Absent Bladder	13
Digeorge	13
Charge	13
Edwards	13
Overgrowth (Giant)	13
Hypogammaglobulinemia	13
Anophthalmia (Missing Eye)	12
Cardiomegaly	12
Mitral Valve Stenosis	12
Hypoplastic Right Heart Syndrome	12
Peripheral Pulmonary Stenosis	12
Epispadias	12
Teratomas	12
Twisted Upper Limb	11
Macrostomia	11
Vascular Ring	11
Cloacal Anomaly	11
Pseudotumor Cerebri	11
Caudal Regression	11
Spastic Paralysis	10
Static Encephalopathy	10
Klippel-Feil	10
Osteogenesis Imperfecta	10
Wolff-Parkinson-White	10
CMV Virus	10

Neuroblastoma	10
Endocardial Cushion Defect	9
Ebstein	9
Biliary Atresia	9
Lymphangioma	9
Achondroplastic Dwarfism	9
Hydranencephaly	8
Chondromalacia Patella	8
Noonan	8
Williams	8
Hodgkins Disease	8
Macroglossia	7
Truncus Arteriosus	7
Duane Refraction	7
Lymphoma	7
Polysplenia	6
Cloacal Exstrophy	6
Beckwith-Wiedemann	6
Cystic Fibrosis	6
Klippel-Trenaunay-Weber	6
Non-Hodgkins Lymphoma	6
Addison's	6
Hyperpigmentation Of Gums	5
Lamellar Ichthyosis	5
Cornelia De Lange	5
Treacher Collins	5
Moebius	5
Prader-Willi	5
Klinefelter	5
Cushing	5
Lennox-Gastaut	5
Stickler	5
Astrocytoma	5
Hemimegalencephaly	4
Leukodystrophy	4
Myoblastoma	4
Marfan	4
Crouzon	4
Albinism	4
Ectodermal Dysplasia	4
Porencephaly	3

Absent Spleen	3
Anorchia (Absence Of Testes)	3
Cavernous Hemangioma	3
Apert	3
Tar	3
Fragile X	3
Holt-Oram	3
Sids	3
Colon Cancer	3
Tuberous Sclerosis	2
PDD/NOS	2
Exophthalmos	2
Angelman	2
Fetal Hydantoin	2
Cri Du Chat	2
Aicardi	2
Alagille	2
Horner	2
Kabuki	2
Larsen	2
Rett	2
Sturge-Weber	2
Nail-Patella	1
Fetal Valproate	1
Fryns	1
Miller-Dieker	1
Orofacialdigital	1
Smith-Lemli-Opitz	1
Walker-Warburg	1
Wilms Tumor	1
Hepatoblastoma	1
Retinoblastoma	1

## Results by Category

Condition Category	Count
Learning Disabilities	4692
Allergy	3594
Emotional / Behavioral	3592

Gastrointestinal	2624
Immune Response Disorders	2563
Central Nervous System	2241
Developmental Delay	2202
Cranial/Facial	2162
Cardiovascular	1946
Skin	1734
Limb Defects	1723
Eye	1508
Muscle	1393
Attention Disorders	1371
Genitourinary	1197
Ear	1174
Spine	990
Endocrine	812
Liver/Bile Duct/Spleen	644
Cysts	429
Growth Disorders	353
Tumors-Benign	257
Cancer	145
Edwards	13

## Reports Submitted by Location

State / Country	Count
Non-US	296
FL	285
TX	260
CA	257
OH	198
IL	148
MI	148
PA	142
NY	138
NC	130
TN	104
VA	102
IN	100
GA	97

MO	91
NJ	84
MA	81
WI	77
MN	75
WA	73
AZ	72
KY	65
AL	64
AR	62
OK	61
SC	60
CO	58
MD	57
OR	54
LA	53
IA	49
KS	43
WV	42
NE	35
MT	29
NV	29
ID	28
MS	27
NH	27
CT	26
UT	24
NM	22
ME	20
SD	19
RI	14
DE	12
HI	12
ND	10
AK	7
VT	6
WY	6
Puerto Rico	4