

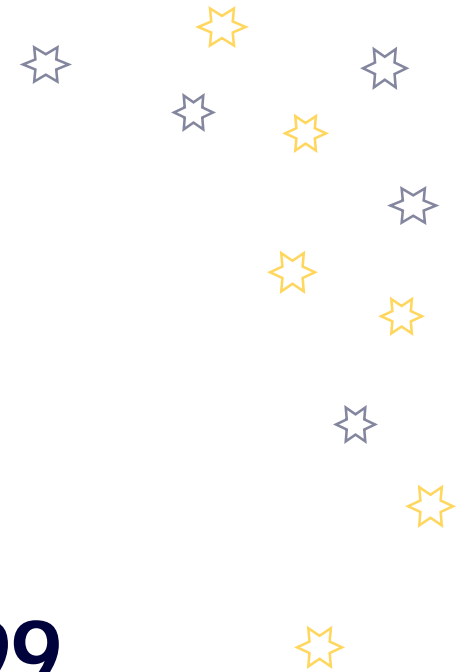
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Kids Count Alaska 1998-99 Data Book

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When the Kids Count Alaska program began in 1995, we established an advisory council made up of people familiar with the problems Alaska's children face. The council has helped guide the program and select indicators specific to Alaska.

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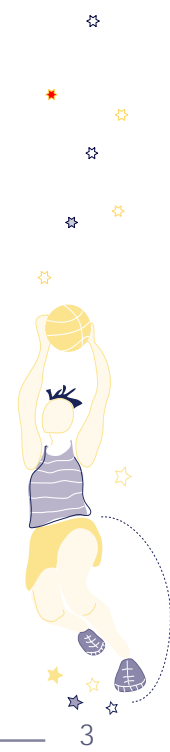
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The pressures of being a parent are equal to any pressure on earth.

*John Lennon
British rock musician*

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Introduction

Overview
Early Brain Development





*The outside world shapes the brain's architecture. . .teaching
the brain what to become.*

*Ronald Kotulak
Science writer, Chicago Tribune*

Overview

Why Read This Data Book?

How are Alaska's children doing at the end of the twentieth century? Many are doing just fine—growing up healthy and safe. But others are not so fortunate. They live in poverty; they grow up without their fathers; they drop out of school; they have babies when they are children themselves. Too many—and even one is too many—die accidentally or intentionally. To help Alaska's children, policymakers and others need reliable information about conditions affecting children.

The **Kids Count Alaska** program is part of a nationwide effort, sponsored by the Annie E. Casey Foundation, to collect and publicize information about children's health, safety, and economic status, as measured by indicators that cover all the stages from birth through the late teens. The adjacent table shows how the well-being of children in Alaska and throughout the U.S. compare under the national **Kids Count** indicators. This book examines how Alaska's children are faring, as measured by those national indicators and other indicators we chose specifically for Alaska. **Kids Count Alaska's** goals are to:

- Develop regional figures for indicators
- Select indicators specific to Alaska
- Distribute information about the status of Alaska's children to policymakers,

program administrators, teachers, and others whose work involves children

- Create an informed public, motivated to help improve children's lives
- Enhance efforts to improve the well-being of children and families

We hope the information **Kids Count Alaska** compiles and disseminates will become an important tool for Alaskans to use in developing policies and programs to help children and families.

Alaska And U.S. Average, 1996 National Kids Count Indicators

	Alaska	U.S.
Alaska Better Than National Average		
Percentage of babies with low birth weight	5.5%	7.4%
Percentage of children living in poverty ^a	10%	20%
Juvenile arrest rate for violent crime (per 100,000 youths 10-17) ^b	377	507
Births to teens (per 1,000 females 15-17) ^c	26	34
Alaska At or Near National Average		
Infant mortality rate (per 1,000 live births)	7.3	7.3
Percentage of single-parent families	26	27
Percentage of teens (ages 16-19) who drop out of school	9%	10%
Percentage of teens not in school and not working	10%	9%
Percentage of children whose parents don't work full time ^d	29%	30%
Alaska Worse Than National Average		
Child death rate (per 100,000 children 1-14) ^e	30	26
Teen violent death rate (per 100,000 teens 15-19) ^e	113	62

^a Based on the U.S. census bureau's poverty threshold figures, which are not adjusted for Alaska's higher living costs and may underestimate poverty in Alaska.

^b 1995 data. The national **Kids Count** program has now dropped this indicator.

^c Before 1993, this indicator measured the rate of births to teenage girls 15 to 19. The Alaska regional figures later in this book are based on that previous definition.

^d The national **Kids Count** program added this indicator in its 1999 data book. We have not calculated regional breakdowns for Alaska because the definition of full-time employment does not take into account different employment patterns in rural Alaska.

^e Remember that these rates are based on small numbers of deaths and can therefore fluctuate sharply from year to year. The 1996 Alaska teen violent death rate is a revised figure from the Alaska Bureau of Vital Statistics.

Note: Alaska figures in this table may differ from later figures in the regional graphs. The figures above are from the national **Kids Count** program; our regional figures may be based on different years and are sometimes measured differently.

Source: Annie E. Casey Foundation, **Kids Count Data Book**, 1999



Introduction (continued)

Criteria and Regions

The table below shows how the number of children in Alaska (by age, sex, and race) and their place in the total population changed in the 1990s. The map on the facing page shows **Kids Count Alaska** regions.

The Annie E. Casey Foundation has a set of criteria for selecting the statistical indicators used in the national **Kids Count Data Book**. In choosing additional indicators for **Kids Count Alaska**, we used similar criteria. The data and indicators share some characteristics:

- **Reliability.** All the data come from government agencies and have been previously released in other forms.
- **Availability and consistency over time.** Comparability of data must not be affected by changes over time in methods or policies.
- **Availability and consistency across regions.** This essentially means data collected by governments or national organizations, so the statistics are comparable across regions.

- **Continuing availability.** We want a series of indicators tracking changes in the well-being of children year after year. Data collected only once or sporadically don't serve this purpose.
- **Measurement of outcomes or well-being.** We focus on *outcomes*. Dollars spent on education or welfare do not reflect the actual well-being of children.
- **Clarity.** We want to reach the American public, not academic scholars or researchers.
- **Unambiguous interpretation.** If the value of an indicator changes, we want to be sure there is widespread agreement about how the change affects kids.

Alaska's Children by Age, Sex, and Race, 1990 and 1998

	1990				1998			
	Total	Male	Female	Total	Male	Female		
Total Alaska Population	550,043	289,868	260,175	621,400	323,094	298,306		
Children By Age	Number	% of Pop^a		Number	% of Pop^a			
Under 1	11,963	2.2%	6,109	5,854	9,968	1.6%	5,080	4,888
1-4	44,014	8.0%	22,616	21,398	43,064	6.9%	21,424	20,640
5-9	51,508	9.4%	26,543	24,965	57,820	9.3%	29,577	28,243
10-14	42,939	7.8%	22,333	20,606	55,753	9.0%	28,562	27,191
15	7,652	1.4%	4,021	3,631	10,809	1.7%	5,647	5,162
16	7,341	1.3%	3,786	3,555	10,273	1.7%	5,439	4,834
17	7,453	1.4%	3,887	3,566	10,112	1.6%	5,293	4,819
18	7,069	1.3%	3,834	3,235	8,240	1.3%	4,824	4,416
Total 18 and under	179,939	32.7%	93,129	86,810	206,039	33.2%	105,846	100,193
Children 18 and Under By Race								
White	128,522	23.4%	66,877	61,645	141,393	22.8%	72,829	68,564
Alaska Native	36,337	6.6%	18,497	17,840	45,151	7.3%	23,071	22,080
Black	8,389	1.5%	4,336	4,053	9,538	1.5%	4,935	4,603
Asian/Pac. Isl.	6,691	1.2%	3,419	3,272	9,957	1.6%	5,011	4,946

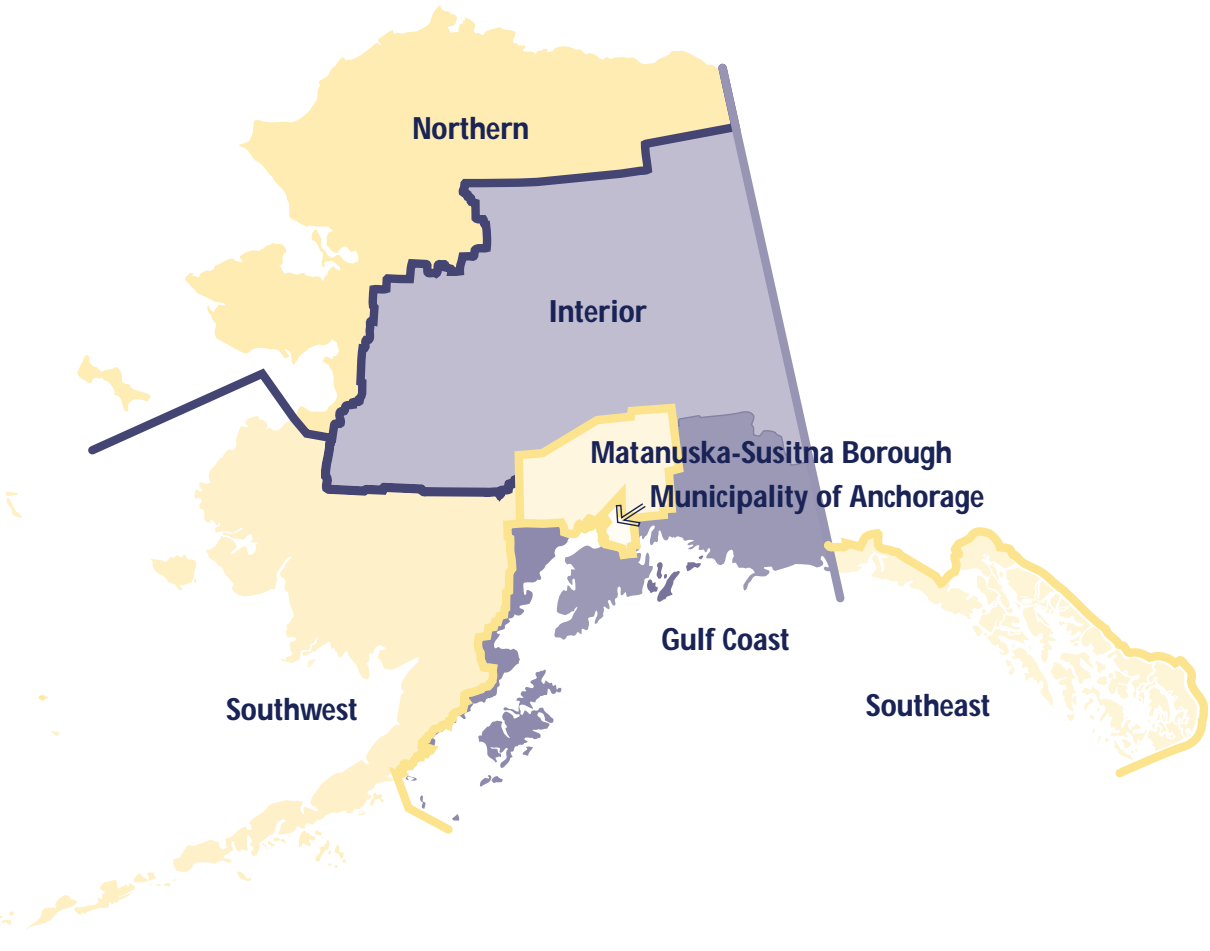
^aPercentage of total Alaska population

Note: The racial breakdowns used throughout this publication are those of the Alaska Department of Labor and the U.S. Bureau of the Census. Persons of Hispanic origin can be of any race. The Alaska Native category also includes other Native Americans, but numbers of other Native Americans in Alaska are small.



Kids Count Alaska Regions

- Boroughs and Census Areas, by Region**
- **Municipality of Anchorage**
 - **Matanuska-Susitna Borough**
 - **Gulf Coast Region**
Kenai Peninsula Borough
Kodiak Island Borough
Valdez-Cordova Census Area
 - **Interior Region**
Denali Borough
Fairbanks North Star Borough
Southeast Fairbanks Census Area
Yukon-Koyukuk Census Area
 - **Northern Region**
Nome Census Area
North Slope Borough
Northwest Arctic Borough
 - **Southeast Region**
Haines Borough
City and Borough of Juneau
Ketchikan Gateway Borough
Prince of Wales/Outer Ketchikan Census Area
City and Borough of Sitka
Skagway-Hoonah-Angoon Census Area
Yakutat Borough
Wrangell-Petersburg Census Area
 - **Southwest Region**
Aleutians East Borough
Aleutians West Census Area
Bethel Census Area
Bristol Bay Borough
Dillingham Census Area
Lake and Peninsula Borough
Wade Hampton Census Area



Note: These regions are the same as those the Alaska Department of Labor uses for reporting population and employment.

Introduction (continued)

Interpreting the Indicators

(Adapted from Utah Kids Count 1999
Data Book)

The indicators are presented as either percentages or rates per 1,000 or per 100,000. Using rates—and percentages are simply rates per 100—allows us to compare groups or track trends over time.

But keep in mind that the base rates differ among indicators. Generally we use a smaller base (the rate per 100) for the most common events and a larger base (the rate per 1,000 or 100,000) for less common events. That's mostly so we can present the rates in whole numbers, which are easier to understand than fractions of numbers.

For instance, because poverty among children is (unfortunately) so common, we present the poverty indicator as a percentage. By contrast, the numbers of children who die each year are (mercifully) much smaller, so we present the child death indicator as a rate per 100,000.

We calculate rates by taking the number of incidents in any given category (for example, the number of high-school dropouts), dividing it by the total number of children in the category (all teenagers 16-19), and multiplying by 100, 1,000, 10,000, or 100,000.

So, for example, say 5 teenagers out of a total of 500 dropped out of school:

$$\frac{\text{Number of Dropouts}}{\text{Total teenagers 16-19}} \times \text{Multiplier}$$

$$\frac{5 \text{ dropouts}}{500 \text{ teenagers}} \times 1,000 = 10 \text{ dropouts per } 1,000 \text{ teenagers}$$

$$\frac{5 \text{ dropouts}}{500 \text{ teenagers}} \times 100 = 1 \text{ percent of teenagers drop out}$$

When the population we're studying is small—as it is in many regions of Alaska—small changes in numbers can sharply affect rates. For example, say 2 of 75 children in a region die in a given year. That would be a child death rate of 26 per 1,000 for that region.

But if in the next year only 1 child of 75 dies, the child death rate would be 13 per 1,000. This seemingly large drop is a result of statistical variation, and the magnitude of the drop is exaggerated because the denominator (75) is so small.

To minimize chance variations, we use 5-year averages for most of the Alaska indicators. This allows us to use larger denominators in those regions where the populations are small, enhancing the reliability of the resulting figures.

When appropriate, we also talk about the actual numbers of deaths or other events in a given period, to keep the rates in perspective. While rates are useful for

making comparisons and following trends, policymakers rely on actual numbers to determine caseloads or measure other service requirements.

Statistics alone clearly won't improve the well-being of Alaska's children. But they can help Alaskans make informed decisions about how to improve children's lives. To help data book users take the next step—action to help children—we also include, in the final section of the book, information about programs and services available for Alaska's children and families.

Words of Caution

A few important points about the indicators presented in this data book are worth emphasizing at the outset:

- **Indicators don't measure the effectiveness of particular programs.** They are broad indications of social conditions rather than specific measures of program performance.
- **Regional indicators are mostly averages for the period 1992-1996.** Some regional information is collected only once every 10 years, during the national census. Some is collected annually, allowing us to calculate 5-year averages. In small populations like Alaska's, indicators can fluctuate sharply from year to year—so averages over several years give a more accurate picture.



- **Not all areas or communities** within a region have the same indicator levels as the region as a whole.

Finally, we've tried to compile the latest and most accurate figures available on children's well-being at the state and regional levels. However, there are limits on the accuracy of these figures. Some of the indicators are based on samples of the population—and although the samples are chosen to represent characteristics of the entire population, samples are subject to error. For other indicators, regional data weren't available, or we couldn't present the data, because the numbers were so small we couldn't calculate meaningful rates.

Organization of the Data Book

Before we begin presenting the indicators, we finish this introductory section by talking about recent research on early brain development. That research essentially tells us that whatever happens early in life will strongly influence what happens later in life. This discussion provides the context for understanding the **Kids Count Alaska** indicators: strong brain development at the start of life can make all the difference as children grow up and as they become adults.

We then present the indicators in six sections: Infancy, Economic Well-Being, Education, Children in Danger, Juvenile Crime in Alaska, and Health Risks. Notes for the indicators are at the end of each section.

After the indicator sections, we provide information on programs and other resources available for Alaska's children and families—resources that are intended to help correct some of the problems the indicators show. We conclude with documentation of the indicators—sources, frequency, and availability of breakdowns by sex, age, and regions.



Introduction (continued)

Early Brain Development

How Young Brains Develop

In the past decade or so, scientists have discovered that babies are born with the raw materials for brain development—about 100 million brain cells—but that most brain development happens after birth. What babies see, hear, touch, smell, and taste causes connections to form between brain cells. These connections are the wiring of the brain, allowing children to learn.

Genetics of course also plays a very big role in how fast children learn and what their talents are. Not all children can become musical prodigies or mathematical geniuses. But recent research tells us that the world children grow up in affects brain development much more than we previously suspected.

These recent findings contrast with what scientists previously thought—that most brain connections were already in place at birth. Now research has shown that while brain *cells* develop rapidly during the first few months of pregnancy, the *connections* between those brain cells develop largely after children are born

At their fastest, brain connections in infants can form at the incomprehensible rate of three billion per second. By age three, children typically have one thousand trillion brain connections.¹ After that, the number of connections begins declining, so

that by age ten children have about half as many as at age three; the number of connections then stabilizes.

Scientists describe the brains of very young children as plastic, able to respond and learn so much so fast because their brain connections multiply explosively. Brain cells apparently adapt to do whatever is required of them. Every time one of the senses is stimulated in a new way, a connection is made in the brain. Each use strengthens that connection—but connections that aren't used can disappear.

Researchers have also found evidence of critical periods when very young children develop the foundations for future vocabulary, social attachments, emotional control, and much more. These researchers believe that children who don't develop the appropriate skills during those critical periods—mostly in the first three years of life—find it very hard to develop specific functions later.²

Some experts, however, disagree with this emphasis on very early childhood as the *only* period when children can learn certain skills. In a 1999 book, one author argues that while there are indeed critical early learning periods, learning should be seen as a lifelong process. He maintains that if parents believe the first three years offer their only opportunities to influence their children's development, they may neglect their long-term parental responsibilities and cost older children chances to learn.³

Stimulating the Young Brain

Scientists have known for years that pregnant women who smoke, drink, take drugs, or eat poorly hurt their unborn children. And after children are born, they can certainly be hurt if they go hungry, live in dangerous neighborhoods, or are not immunized against disease.

But in recent years, some researchers have also said that parents and other adults who don't provide warm, intellectually stimulating environments for very young children may be impairing their brain development. Some studies have found that children with attentive, nurturing parents are able to learn more, to deal better with stress, and to form stronger relations with other people.⁴

Other scientists have reported that providing intellectual stimulation for very young children whose parents are unable to provide such stimulation can improve the children's ability to learn.⁵ Researchers have also found that when premature infants in hospital neonatal units are held and massaged, they grow twice as fast.⁶



Still other researchers believe that the wrong kinds of stimulation—too much exposure to violence and hostility—can also affect brain development. The brains of young children who live with violence can, according to some, adapt by “rewiring trillions of connections that create the chemical pathways of aggression,” potentially setting them up to become violent adults.⁷

Overall, scientists point out that we still have much to learn about the brain. But there is strong evidence about both the potential and the vulnerability of young children’s minds. To give children the best chance at life, adults must try to create safe, loving, interesting worlds for them.

Principles of Brain Development

- The outside world shapes the brain’s wiring.
- What we see, hear, smell, touch, and taste enables the brain to create or modify connections.
- The brain operates on a “use it or lose it” principle, discarding unused connections.
- Relationships young children have with other people are the major source of emotional and social development of the brain.

Source: *I Am Your Child* series, Reiner Foundation, www.iamyourchild.org

Guidelines for Promoting Children’s Development and School Readiness

- Be warm, loving, and responsive.
- Respond to your children’s cues.
- Talk, read, and sing to your children.
- Establish routines.
- Encourage safe exploration and play.
- Monitor what your children watch on TV.
- Use discipline as an opportunity to teach.
- Recognize that each child is unique.
- Choose quality child care and stay involved.
- Take care of yourself.

Source: *I Am Your Child* series, Reiner Foundation, www.iamyourchild.org



Introduction (continued)

Risks to Brain Development

The figure on the facing page illustrates what research has found out about risks to the brain development of children before they are born and in their early years. Some of the risks result from what parents do—say a pregnant woman smokes or doesn't eat enough, or a father shakes an infant. Others grow out of what parents fail to do—like not getting their young children immunized against childhood diseases or neglecting them. Still other risks are due to the parents' circumstances—a mother who is a teenager, for instance, or parents who are so poor they can't provide what their children need.

Luckily, research also tells us there are ways to reduce or eliminate a number of these risks—and at the same time sharply reduce future medical, educational, welfare, and other costs by investing in preventive programs (as the table below shows).

Some recent findings about what promotes and what hinders brain development are summarized below.

- Mothers who breastfeed their infants provide essential nutrients for brain development and lower their risk of allergies, ear infections, and possibly sudden infant death syndrome (SIDS).⁸
- Children born to teenage mothers cost the nation about \$7 billion annually, through a combination of lost tax revenues and increased spending for public assistance, children's health care, foster care, and the criminal justice system.⁹
- Prenatal malnutrition is a prime non-genetic factor that can impair children's ability to learn.¹⁰
- As many as 400,000 babies born in the U.S. every year have been exposed to alcohol or other drugs. Of those, 5,000 are born with fetal alcohol syndrome (FAS) and another 36,000 with fetal alcohol effects (FAE). The cost of caring for drug-affected kids over the next ten years may be as high as \$1.5 billion.¹¹
- Babies exposed to crack or cocaine in the womb may have subtle deficits in IQ and language development. Special education for these children costs an estimated \$352 million annually.¹²
- Children with mothers who are either mentally retarded or have very low IQs are at risk of being retarded themselves. But researchers have found that providing mental stimulation to even very young infants with mentally retarded mothers can raise the infants' IQs substantially.¹³
- Intensive child development programs and home visits can substantially improve brain development in children who are either born prematurely (less than 37 weeks gestation) or with low birth weights (roughly between 5 and 5.5 pounds, or 2,000 to 2,500 grams). Researchers have found that these improvements are still evident when such children are 12 years old.¹⁴
- Premature infants are often in hospital neonatal intensive care units when their brains are growing more rapidly than they ever will again. Researchers have found that massaging these infants and promoting development in other ways makes the infants grow faster and allows them to

How \$1 Spent For Prevention Reduces Future Costs

Program	Investment	Savings
Family Planning	\$1 spent =	\$13 in medical, welfare, and nutritional services
Good Preschool	\$1 spent =	\$7.16 in later special education, crime, welfare and other costs
Home Visits for High-Risk Pregnant Women	\$1 spent =	\$5.63 in obstetrical, neonatal, and pediatric costs
Primary Health Care Coverage	\$1 spent =	\$3 in emergency room costs
Measles Immunization	\$1 spent =	\$29 in later health-related costs
School-Based Clinics	\$1 spent =	\$7 in later health-related cost

Source: Wil Blechman, M.D., courtesy of Michele Hansen, Municipality of Anchorage



Introduction (continued)

be released from the hospital earlier, as well as improving their brain functioning so it is much more similar to that of full-term babies.¹⁵

- Studies have shown that being hugged and feeling loved are vital to the development of healthy, happy children—making it more likely that they will grow up confident and optimistic. Such nurturing decreases production of the stress hormone cortisol—a hormone that kills large numbers of important immune cells.¹⁶
- Only half of infants and toddlers are routinely read to by their parents.¹⁷
- Children who are abused or neglected are more likely to produce stress hormones, even when exposed to minimal stress. Such hormones cause the emotional areas of the brain in abused children to be 20 to 30 percent smaller than in other children.¹⁸
- Hitting or shaking children can hurt them physically and mentally, both immediately and in the long term. And children who are hit or shaken are much more likely to think violence is acceptable.¹⁹
- Children under age one account for a third of reported physical-abuse cases, with head trauma the most frequent cause of disability or death.²⁰

- Shaken-baby syndrome can cause blindness, developmental delays, and permanent brain damage. In the worst case, shaking babies can kill them.²¹
- Children whose fathers help care for them are less likely to become violent. On average, they also have higher IQs, better impulse control, and better social adaptations.²²



Notes for Introduction Section

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²¹ See note 20.

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