

## Introduction

There are more than 125,000 multiple-birth children in Canada under age 13 and 50,000 multiple-birth children under age 6.<sup>2</sup>

- Each year more than 6,000 sets of twins are born in Canada.<sup>2</sup>
- Due to Statistics Canada reporting methods, we do not know exactly how many higher order multiples (triplets, quadruplets and quintuplets) are born each year. MBC estimates that approximately 100 sets of triplets, quadruplets and quintuplets (combined) are born each year.
- Over the last two decades there was a dramatic increase in the number of multiple births. The rate of multiple births increased from 2.2% in 1995 to 3.2% in 2008. It appears that in recent years the growth has slowed down due to improvements in assisted human reproduction techniques leading to lower incidence of multiple births.<sup>2, 3</sup>

Incidence of Multiples (without fertility treatment)<sup>19</sup>

Type	Incidence
Twins	1 in 82 births
Triplets	1 in 6,400 births
Quadruplets	1 in 512,000 births
Quintuplets	1 in 41 million births

- The current rate of multiple births is about 1 in 31, confirming that fertility treatments contribute to the growing frequency of multiple births in Canada.
- The risk of having twins increases 20 times with fertility treatments while the risk of having triplets or quadruplets increases 400 times.<sup>3</sup>

## Implications for Child and Family

### Child Health and Development

- Over half of multiple-birth babies are born weighing less than 2,500 grams (5.5 pounds).<sup>2</sup>
- Multiple births represent just over 3% of all Canadian births but account for 28% of the low birth weight infant population.<sup>2, 3</sup>
- About 58% of twins and 96% of higher order multiples (triplets or more) are born prematurely, accounting for 22% of all Canadian preterm births.<sup>2, 3</sup>
- The fetal death rate among multiples is 17.4 per 1,000. The national average is 6.0 per 1,000 births.<sup>2</sup>
- General development in twins is similar to singletons unless there are issues due to prematurity.
- Disabilities of most kinds are more common in multiples mainly, but not entirely, due to prematurity and low birth weight.
- Twins are 10 times, triplets 30 times, and quadruplets 110 times more likely to have Cerebral Palsy than a singleton.<sup>4</sup>

### Health Services Costs

- Women expecting multiples are at higher risk of pregnancy complications and Caesarean delivery. They are often admitted into hospitals for long periods, proving to be stressful to families and costly to the health care system.<sup>5</sup>
- Compared to singleton pregnancies, the average hospital costs for each baby in a multiple pregnancy was 4.8 times higher. Babies from multiple pregnancies were in the hospital 3.4 times as many days as singletons. The average cost of a hospital stay for a preterm multiple was 7 times higher than a full-term multiple.<sup>5</sup>
- Multiple-birth babies are more likely to be admitted to Neonatal Intensive Care Units (NICU) after birth. The more babies born

in the set, (i.e. twins, triplets, etc.) the lower the average birth weight of each child, and the higher frequency of admittance to NICU's.<sup>5, 6</sup>

## Family Costs

- Women expecting multiples can be admitted to hospital as early as 24 weeks into their pregnancies. If preschool children are at home, childcare arrangements must be made and if the family lives outside the community, travel and accommodation expenses will grow.
- Parents of multiples, especially first-time parents, are more likely to experience feelings of isolation, marital stress, financial difficulties and illness. This stress, in combination with lack of access to special information and support, puts multiple-birth families at an increased risk of family problems. However, there is no conclusive research that shows an increased occurrence of divorce for couples with multiple-birth children. Some couples report that the challenges of parenting multiple-birth children have made their relationship stronger and closer.<sup>14</sup>

## Postnatal Costs

The following is a Multiple Births Canada cost comparison between a family with one infant and families (two parents) with twins, triplets, quadruplets and quintuplets based on Manitoba Agriculture & Food's *Costs of Raising a Child* and updated for inflation to 2011 costs.<sup>7</sup>

Family Type	1 <sup>st</sup> Year Cost	Difference*
Singleton	\$35,000	-----
Twins	\$42,000	\$7,000
Triplets	\$49,000	\$14,000
Quadruplets	\$55,000	\$20,000
Quintuplets	\$63,000	\$28,000

\* Comparison allows for basic essentials of infants. It does not allow for 1) cost of diaper service or disposable diapers, 2) cost of transportation needs when a larger vehicle is

required to hold three, four or five car seats, 3) cost of moving to larger home or renovations to existing home, 4) cost of help for the family\*\*, 5) loss of second family income – since childcare for multiples is costly.

\*\* A 1983 study revealed that a mother of six-month-old-triplets expends an average of 197.5 hours per week (out of a possible 168) between herself and paid/volunteer assistance, on the care of her children and home. This did not include a time allowance for mother to bathe, dress, sleep, eat, relax or talk with partner.<sup>8</sup>

- Childcare costs (without subsidies) for one set of twins under the age of 2 is approximately \$10,000 per year.<sup>9</sup>
- Mothers of multiples are less likely to have returned to work by the time their children are 12 to 18 months of age.<sup>10, 11</sup>
- Parents will continue to face on-going additional costs for multiples, up to and including post-secondary education costs for multiple children.

## General Facts on Multiples

- Dizygotic (fraternal) twins are the result of two fertilized eggs. Triplets may be trizygotic, quadruplets may be quadrazygotic and so on.<sup>1</sup>
- Family history, mother's age, number of previous pregnancies and race are factors in the incidence of dizygotic multiples. Fertility treatments that cause multiple ovulation increase the chance of having dizygotic multiples.<sup>12</sup>
- Monozygotic (identical) twins are the same sex, have the same blood types, hair and eye colour and chromosomes. They are a result of a single embryo splitting in two after conception. Rarely, the embryo may split again to produce monozygotic triplets, quadruplets or quintuplets. Triplets or more may include a set of monozygotic twins and dizygotic siblings. The cause of embryo splitting is unknown. The incidence of monozygotic twinning is fairly similar around the world and over many generations (approximately 4 per 1,000 births).<sup>1, 12</sup>

- Environmental influences can determine that characteristics such as height, weight, ears, nose, and lips are somewhat different. Some monozygotic multiples are told they are dizygotic (fraternal) – only DNA testing provides conclusive results.<sup>1</sup>
- Dizygotic twins may run in the family from mother to daughters or granddaughters, if there is a tendency to ovulate more than one egg at a time.<sup>1, 12</sup>

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Created in 1992, reissued August 2001,  
revised September 2011.

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