RESEARCH REPORT #79

National
Organization of
Mothers
Of
Twins
Clubs, Inc.

SUBJECT: **Multiple Multiples**

RESEARCHER: National Organization of Mothers of Twins Clubs, Inc.

DATE: December 2005 – May 2006

PURPOSE: The purpose of this survey was to investigate the number of families with more than one set of multiple birth children to determine if there has been an increase in this number and to look for patterns correlating with the occurrence of multiple sets of multiple birth children in families.

METHOD: A survey consisting of 32 questions was printed in the January/February 2006 **NOMOTC's *Notebook*** and distributed in a National Mailing. The survey was to be completed by a biological parent of two or more sets of multiple birth children.

BACKGROUND INFORMATION

1. Fifty two surveys consisting of 32 multiple-choice questions were tabulated.
2. One hundred percent of respondents of the tabulated surveys indicated having two sets of multiple birth children. All respondents confirmed having twins and 5.8% had triplets.
3. Thirty surveys were not tabulated due to respondents not having two or more sets of multiples and not meeting survey criteria.

RESULTS

1. Most of the respondents (98.1%) had twins for their first set of multiples. A small percentage of parents, 1.9%, had triplets for their first set of multiples.
2. The zygosity of the first set of multiples was reported as 71.2% dizygotic (fraternal), 26.9% monozygotic (identical), and 1.9% unknown. Gender results for first multiple sets yielded 48.1% boys, 25.0% girls, and 26.9% both.
3. When asked if they were undergoing fertility treatment when becoming pregnant with their first set of multiples, the largest percentage of parents (61.5%) indicated that they were not, while 38.5% confirmed that they were.
4. Maternal age with the birth of the first set of multiples varied with the largest percentage (57.7%) in the 21-30 age group, followed by the 31-35 age group @ 34.6%, 36-40 age group @ 3.9%, and under 20 age group @ 3.9%.
5. Twins represented the largest portion of multiple type for the second multiples sets @ 96.2%. Triplets represented 3.9% of second set multiple type. Dizygotic (fraternal) multiples were the largest percentage reported for zygosity of the second set of multiples @ 78.9%, followed by 19.2% monozygotic (identical) multiples, and 1.9% unknown. Gender results for second multiple sets yielded 40.4% boys, 26.9% girls, and 28.9% both.
6. Most respondents (63.5%) reported that they were not undergoing fertility treatment when they became pregnant with their second set of multiples. Just over one third of respondents (36.5%) confirmed that they were undergoing fertility treatment.
7. Maternal age with the birth of the second set of multiples ranged from the largest percentage (48.1%) in the 31-35 age group, 26.9% in the 36-40 age group, 23.1% in the 21-30 age group, and 1.9% over 40.
8. Two years was the most commonly reported age difference between the first set of multiples and the second set of multiples @ 33.3%. The next most commonly reported age difference was 7+ years @ 17.7%, followed by 3 years @ 15.7%, 5 years @15.7%, 4 years @ 9.8%, and 6 years @ 7.8%.
9. No parents reported having more than two sets of multiples for this survey.
10. When asked if either the biological mother or father was a twin, all respondents (100%) indicated that the father was not. Most respondents (98.1%) reported that the mother was not a twin, and only 1.9% confirmed that the mother was a fraternal twin. The results varied slightly when reporting if either the biological mother or father was a higher order multiple (HOM), with all parents (100%) indicating that the mother was not a HOM, 97.9% indicating that the father was not a HOM, and only 2.1% reporting that the father was a fraternal HOM.

11. Fifty three point nine percent of respondents confirmed that there were twins on the maternal side of the family, followed by 42.3% on the paternal side of the family. Over one third of parents, 34.6%, indicated that neither side of the family had twins.
12. Higher order multiples on either parent's side of the family were much less prevalent with 88.2% of respondents reporting that they had none on either side. Nine point eight percent confirmed HOM on the maternal side of the family, while 3.9% had HOM on the paternal side.
13. Just over half of the respondents (55.1%) denied having single birth children, while 44.9% confirmed that they did. The birth order of singleton children was reported as follows: 54.6% were born before the first set of multiples, 54.6% after the first set of multiples, and 22.7% after the second set of multiples.
14. Most parents (94.4%) confirmed that they were members of NOMOTC, and 5.6% indicated that they were not.
15. A detailed analysis of the 38.5% respondents who confirmed undergoing fertility treatment for their first set of multiples showed the largest percentage (45%) underwent IVF (In vitro fertilization), followed by 25% clomid, 15% injectable medications, 10% IVF/ICSI ( ), and 5% unknown. Fertility treatment with the second set of multiples varied slightly with IVF remaining the largest percentage @ 35%, 15% clomid, 15% injectable medications, 10% IVF/ICSI, 10% unknown, and 5% natural frozen cycle. Ten percent of respondents who underwent IVF procedures with their first set of multiples did not have fertility treatment with their second set of multiples. One respondent progressed to IVF treatment with their second set of multiples after using clomid with their first set.
16. When looking at patterns in fertility treatment, one emerged with multiple type. All respondents confirmed having twins regardless of fertility treatment. The incidence of triplets however, more than tripled to 10% in those who underwent fertility treatment from a 3% occurrence in those who did not.
17. When comparing the familial incidence of multiples with the occurrence of fertility treatment, more patterns emerged. Respondents who did not undergo fertility treatment had a consistently higher incidence overall of multiples in their families with 65.6% (versus 35% with fertility treatment) confirming twins on the maternal side, 46.9% (versus 35% with treatment) verifying twins on the paternal side, 12.5% (versus 5.3% with fertility treatment) HOM on the maternal side, and 6.3% (versus 0% with treatment) HOM on the paternal side. Three percent (versus 0% with fertility treatment) of biological mothers who did not undergo fertility treatment were fraternal twins themselves.
18. Patterns in maternal age with the birth of multiples were evident when comparing respondents who underwent fertility treatment with those who did not. The largest percentage of respondents (68.8%) who did not undergo fertility treatment had their first set of multiples when they were 21-30 years old, while the largest percentage (50%) of those who did undergo fertility treatment were 31-35 years old with the birth of their first set of multiples. The maternal age pattern remained the same with the birth of the second set of multiples with largest percentage of results showing a younger age range for respondents who did not undergo fertility treatment in the 31-35 age group (56.3%), compared to those who did have fertility treatment in the 36-40 age group (40%).

CONCLUSION

The effort to research the incidence of more than one set of multiple birth children in families yielded 52 completed surveys comprised of 32 questions each. All of the parents who completed this survey had two sets of multiples, with all families having twins and 5.8% having triplets.

Twins accounted for the majority of multiple type in both the first and second set of multiples with an occurrence of 98.1% and 96.2% respectively. Triplets accounted for 1.9% of multiples in the first set and 3.9% in the second set. Over two thirds of multiples were fraternal with an incidence of 71.2% in the first set and 78.9% in the second set.

Maternal age varied with the largest percentage (57.7%) in the 21-30 age group with the birth of the first set of multiples, and 48.1% in the 31-35 age group with the second set. When incorporating fertility treatment data with maternal age, certain patterns emerged. The age at which mothers delivered their multiples was consistently younger in those respondents who did not have fertility treatment with 68.8% in the 21-30 age group with their first set of multiples, and 56.3% in the 31-35 age group with their second set. Maternal age increased in respondents who confirmed undergoing fertility treatment with 50% of respondents in the 31-35 year age group with delivery of their first set of multiples, and 40% in the 36-40 age group with their second set.

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Of the 38.5% of respondents who confirmed undergoing fertility treatment, the largest percentage reported IVF as the treatment for both their first and second set of multiples. The next most commonly reported fertility treatments for both the first and second sets of multiples were clomid, injectable medications, and a combination of IVF/ICSI respectively.

Less than half of the respondents (44.9%) confirmed having singleton children. There was a tie for birth order of singletons with the largest majority reported being born before the first set of multiples (54.6%), and after the first set of multiples (54.6%). Twenty two point seven percent of singletons were born after the second set of multiples. Most parents (94.4%) confirmed that they were members of NOMOTC.