



Editor's Corner

Trial to Reduce IDDM in the Genetically at Risk

Aims

The overall objective of the TRIGR study is to determine whether weaning to a highly hydrolyzed formula in infancy reduces the risk of Type 1 diabetes in children with increased genetic risk of developing the disease during the first 10 years of life.



We have recently reached a very important milestone, thanks to all study families. Altogether 2161 families are in the study and that will be enough to give us the answers we are looking for.

Country	Families within the Study
Australia	101
Canada	529
Czech Republic	164
Estonia	34
Finland	424
Germany	112
Hungary	23
Italy	54
Luxembourg	7
Netherlands	53
Poland	95
Spain	60
Sweden	97
Switzerland	13
United States	395
Total	2161

The most important issue for the study is now in your hands. Please make your study follow-up visits as planned, and be active at your visits. Our study centers are very willing to give you all the support and to answer all questions related to the study.

Matti Koski
 Chief Editor
 TRIGR International Coordinating Center

Behind the Scenes with TRIGR's Data Management Unit

Everyday, medical researchers and families like yours, work together to collect key clinical data for significant investigations to advance type 1 diabetes research. This vital collection of data in studies such as ours broadens the resources available to researchers who are working constantly to uncover the mysteries of this disease.

There are three primary groups that comprise the data collection team of our international TRIGR Study. The two most noticeable are the participants and their families (you) who volunteer their time and efforts to take part in the study, and the physician-investigators and staff – the nurses, dieticians and support staff – in TRIGR's clinical study centers.



David Cuthbertson, biostatistician; Jeffrey Krischer, P.I.; Linda Shanker, project coordinator; Bruce Gainer, computer applications developer; Rob Gowing, systems administrator

The team is not complete, however, without a third essential component: the TRIGR Data Management Unit, or DMU. TRIGR's DMU is located at the Pediatrics Epidemiology Center (PEC) of the University of South Florida in Tampa, Florida, USA. It is headed by Jeffrey Krischer, Ph.D., who is the director of the PEC as well as professor and chief of the Division of Bioinformatics and Biostatistics in the university's medical school. Dr. Krischer and his PEC team have significant experience providing data management, statistical analysis and other coordinating and supporting services to numerous multi-site and international clinical studies, such as DPT-1 (Diabetes Prevention Trial of Type 1 Diabetes) and TEDDY (The Environmental Determinants of Diabetes in the Young Study), among others.

Put simply, the DMU stores and safeguards TRIGR's

centralized bank of the dietary, physical (height, weight, etc.), blood draw data and other study information from or about your child and the other children participating in TRIGR. DMU also furnishes tools to our TRIGR researchers to make it easy for them to input and review vital study information. Besides maintaining on-line forms that facilitate data-entry efficiency while reducing risk of errors, the DMU provides compliance and statistical reports and other support to the study – and generally helps TRIGR to be as effective as possible.

Yesterday vs. Today

Prior to TRIGR, data collected by researchers in multi-site clinical trials typically were recorded by hand, then faxed or mailed to a data managing group, where the data would be entered into a database. Accessing participant data often meant manually preparing, printing and mailing reports to researchers for review. In such an environment, especially with sites at great distances, working with clinical data was frequently tedious, inefficient and expensive.

Since our start in May 2002, TRIGR has led the way with easier and more efficient data storage, access and reporting through use of innovative, customized computer programs and centralized data management – including the maintenance of a secure and confidential study-wide database and a private internal website for use solely by authorized TRIGR researchers.



Maintaining a Secure and Confidential Website for Data Entry

By its nature, the Internet provides flexibility for people to communicate quickly, regardless of location, be it country, continent or time zone. TRIGR takes advantage of this flexible medium by having an encrypted, password-protected website through which our clinical researchers around the world enter and retrieve participant data and general study information at their convenience, wherever they are. This saves our researchers substantial time, while protecting our participants' privacy. It also reduces excessive use of paper and other expenses.

Assuring Data Integrity

For TRIGR ultimately to reach reliable conclusions, it is crucial that our researchers collect accurate and complete information from and about our TRIGR children and their families – and then record the data accurately and completely. You and your TRIGR child help by having timely follow-up visits, allowing periodic blood draws,

and giving honest responses to your local study center's inquiries. Without your cooperation, we will not have sufficient and reliable data to analyze. But with your involvement, the study can be a success.

Similarly, the study centers and laboratories must record data correctly and promptly. In this regard, the DMU, working closely with local sites, study laboratories, regional monitors and oversight committees, produces a variety of monitoring reports and reminders on an ongoing basis. To ensure data quality and integrity, the DMU alerts the monitors, sites, laboratories and committees about such matters as missing or incomplete data, possible data-entry discrepancies, or similar compliance items to be verified or corrected.



The DMU is committed to ensuring the confidentiality of the data submitted to the study database. Participants are identified in the study database by special codes -- not by name, address or other direct identifiers. Moreover, access to particular participant data is restricted to TRIGR researchers who have been specifically authorized.

Providing Study Tools and Resources

In addition to creating the on-line data-entry forms, the DMU disseminates internal policies, news and study materials to help TRIGR researchers be aware of study requirements and procedures. Analysis of clinical data is a vital aspect of any study, and the DMU also provides statistical support to the study. Among other things, compliance and similar reports are provided to study centers, oversight committees and monitors. In addition, the DMU may provide certain generalized, preliminary information, such as growth or dietary summaries, vaccination information, or health events, to appropriate TRIGR researchers, study monitors, and oversight committees for review. Over time, as the study progresses toward completion, the DMU will perform in-depth data analyses.

Tomorrow and the Years Ahead

The TRIGR Study expects to continue collecting data into the year 2017, when our youngest participants reach 10 years of age. Throughout this time, the DMU will continue to support our important clinical trial by providing TRIGR researchers with useful study forms and tools, safeguarding participant information, monitoring the recording and accuracy of the data, and producing significant reports and analyses.

Although the DMU works “behind the scenes”, it is an essential part of the international TRIGR team. We are proud of the vital service that the DMU performs in our efforts to answer the significant TRIGR questions and to advance research in the fight against diabetes.

Linda Shanker, Project Coordinator, DMU and Jennifer Lloyd, Information & Publication Services Coordinator, Pediatrics Epidemiology Center

Nutrition Corner

The transition from breastfeeding to family foods typically covers the period from 4 to 18-24 months of age. The eating patterns in early childhood are influenced by parental eating habits. Healthy eating patterns should start in infancy. Choosing healthy foods for your child, including nutritious snacks and meals, avoiding sugar and soft drinks, and maintaining a consistent feeding pattern helps to create healthy eating habits. Offering a wide variety of healthy foods and motivating your child to taste them teaches the child to get used to different tastes and new foods. Add variation of foods step by step in order to get your child used to different tastes.

Three major meals (breakfast, lunch and dinner) and two-three snacks between the meals are recommended. Children cannot eat big portions and therefore small but frequent meals are adequate to avoid tiredness between the meals. However, eating constantly during the day is not recommended. When offering the meal, try to set the table nicely and try to create a positive and peaceful moment for eating. It is good to remember that the parents decide the food to be taken and the child decides the amount of food to be taken. Children have a good regulatory system for food intake and they have ability to express their satiety. If a child does not eat well at lunch, perhaps she/he eats better at dinner, or on the following day. A healthy child does not suffer if she/he sometimes eats less.

When your child gets older, she/he will have her/his friends' birthday parties or other parties to join. And most probably you also have to arrange some parties for your child. We have collected for you some easy and healthy foods that can be served at children's parties.

Roasted pumpkin seeds

Roast the pumpkin seeds in a dry frying pan or in the oven until they are golden brown. Sprinkle with your choice of seasonings, for example garlic powder or cinnamon.



Mini Pizzas

Slices of bread or bagels
Tomato sauce
Mozzarella cheese
Vegetables (broccoli, zucchini, onions, etc.)
Preheat the oven 200 °C/350 F
Spread tomato sauce on each bread/bagel half, top with cheese and vegetables
Place on baking sheet.
Bake for about 10 minutes or until the cheese has melted.

Vegetable skewers

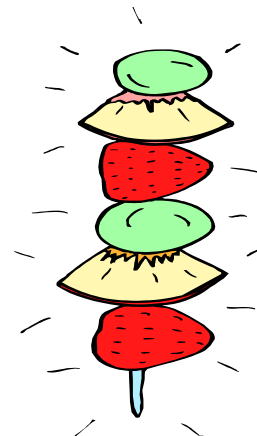
Cherry tomatoes, pineapple bites, sweet pepper, zucchini, broccoli

Serve with light dip sauce (natural yoghurt mixed with spices and herbs)

Fruit skewers

Strawberries, watermelon, bananas, kiwi, apple, cherries (remove the stone), plums, pears

Serve with ice cream or with vanilla custard.



Katriina Koski, European Study Monitor; Eeva Pajakkala, European Study Monitor; Susa Sorkio, Research Fellow

TRIGR in the United States

Helping Young Children Cope with the Blood Draw Blues

Distraction Techniques for Young Children
Breinne Regan, MS, CCLS

It is very common for young children to have a fear of needles. For some children, even the thought of having a “poke” upsets them. Many children may experience anxiety during blood draws which can cause them to kick, scream and sometimes bite. When children are upset, it can make the blood draw difficult for the health care professional, the parents and the child. A difficult blood draw can produce negative memories for the child, and these memories can remain with the child for many years. Blood draws can be an unpleasant experience for children, their parents and health care professionals.

Although blood draws can be difficult for children, there are various ways to help them cope with the experience. Here are some tips that may help when a child is having his or her blood drawn.



- Bring familiar objects from home such as a blanket or favorite toy. These items help provide a sense of comfort and security for the child.
- Ask the child if he or she wants to watch. Some children want to watch; others would rather look away. If the child does not want to watch, have an alternate focus in mind, such as looking at an interesting book or pictures on the wall.
- Let the child know what is going to happen. Let the child know who may be in the room, what he or she may see, hear, smell and feel. Preparing the child for the experience can decrease anxiety.
- Parents are strongly encouraged to stay and help their child during a blood draw. Parents can help provide physical comfort, distraction, and assistance.
- Provide positive reinforcement and praise during and after the blood draw. Using phrases like “you’re holding so still, what a great helper you are” or “Great job, I’m so proud of you!” can prove to be quite helpful.



- **Use distraction.** Distraction can be anything from talking with the child to blowing bubbles and singing songs. Distraction techniques vary based on the child’s age as well as interests. When distracting a child be sure to remain at his or her eye level and to talk in a calm and soothing voice. Here are some distraction suggestions for the various age groups.
 - **Infant:** bubbles, mirrors, musical and chime toys, rattles, squeak toys, stacking toys, pop up toys, tub toys and picture books.

- **Toddler:** bubbles, blocks, music, pinwheels, puppets, pop up books, sound toys, paper party blowers and magic wands.
- **Preschooler:** bubbles, puppets, pop up books, music, magic wands, wheeled toys, play dough, pinwheels, story books and stickers.

There are many ways to distract a child. If you do not have any toys with you, be creative. A couple of cotton balls can easily become snowballs, or a tourniquet can become a snake. Use your imagination and the possibilities are endless.

These techniques prove to be quite helpful in reducing anxiety and fear in children who are having their blood drawn. Just remember to remain calm, talk in a quiet, soothing voice and use various distraction techniques.

Breinne Regan is a Certified Child Life Specialist. For more information on coping and distraction or the Child Life profession, visit the Child Life Council at <http://www.childlife.org>

TRIGR in Australia

The Williams family

Our family lives in the Illawarra area on the South Coast of New South Wales. It is a beautiful part of Australia with plenty of things to do. We are only a short drive away from the ocean and an even shorter walk to Lake Illawarra.

When I was told about TRIGR by my Endocrinologist I was so happy to become part of the study, anything to help towards a cure for diabetes is well worth getting involved with. TRIGR has been fantastic, the whole team is so helpful and if I had it over again I would not change a thing. The study is well organized and Ros and Glenda are so knowledgeable.



Tiffany Williams

Life with diabetes has been a bit of a rollercoaster for me. I was diagnosed when I was about 12 and it took until I was about 19 to get it all under control. Since

then I have worked very hard to keep my blood glucose level (BGL) within a normal range but it has been a struggle. I have recently gone on an insulin pump and my BGL's have improved immensely.



The Williams family

One of the biggest challenges of my life was to have a baby. It was all a bit scary but it worked out pretty well, although there were some hiccups along the way. My daughter Tiffany is now 2 and she is as bright, bubbly and beautiful as can be. It has been such a blessing to have a healthy baby. I remember when I was first diagnosed I was told that I would never be able to have children, what a long way we have come yet we still have far to go. Hopefully with studies like this one the future will be much brighter for generations to come.

*The story edited by Glenda Fraser,
The Coordinator of Australia*

The Moriarty family

We joined the TRIGR study last year in Sydney, Australia following the birth of our second daughter Keira Grace. Both my husband and his brother have type 1 diabetes, diagnosed at 20 years and 5 years respectively. We appreciate being involved in this study because we hope that our small contribution (and Keira's!) will lead to more understanding of the causes of onset for this disease.



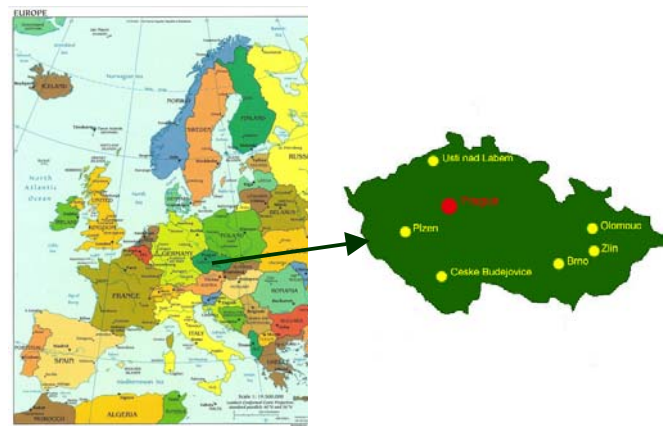
Keira 12 months

Keira had her 3 month visit at Sydney's Westmead Children's Hospital where she met the lovely TRIGR team – Dr Neville Howard, Glenda Fraser (Nurse Coordinator) and Ros Bongiorno (Nutrition Coordinator). I will never forget the lovely conversation that Dr Howard and Keira had, they cooed and chatted quite happily to each other for a few minutes, Dr Howard was a real natural and had a lovely rapport with our daughter. They were also very helpful on that visit as my husband managed to have a hypo while in their offices; it must have been the stress of Keira's first blood test! Since then we have moved back to my homeland of New Zealand, but have been fortunate enough to be able to continue with the TRIGR study, with Keira's blood being collected here and couriered back to Australia. When Keira gets old enough to understand the blood tests and what they are for, we plan to make the 'blood test day' a special one for her with lots of treats afterwards so that she looks forward to them instead of dreading them!



Keira Moriarty

TRIGR in Czech Republic



Regional centers of Czech Republic

Once upon a time, the dreaded beast Diabetes ravaged the land and nothing could stop it. Audacious knights from Finland led by Professor Hans Åkerblom raised a trial to put the menace to an end and asked

their friends and fellows for help. Professor Jan Vavrinec was one of those answering their call and stepping to their side with a skilled army. In the very heart of the Europe, in a beautiful land of forests, mountains and historical cities with only the sea missing to call that piece of land the nature's paradise, in the Golden Town of Hundred Towers, the National coordinating center for the Czech branch of the TRIGR Study was established. Soon after, Czech knights joined the war, heart and hand (privately nicknaming the project „the reindeer milk miracle“ according to the heart of the project and because questions about reindeer meat in the Dietary Interviews sounded very exotic for Czech culture and were often talked about as a joke). Many families have allied with the study team to help in research on diabetes prevention and to make sure that their children will be carefully followed. All lived happily ever after... So far the fairy tale.

Our country joined the TRIGR study in Spring 2003 with just one study center residing in Prague. After meeting the necessary administrative preparations, our first TRIGR baby was born in August 2003. During the following 2 years, more cooperating teams were searched for throughout the whole country, and six new centers were established mostly in major regional cities, in Brno, Olomouc, Usti nad Labem, Pilsen (Plzen), Ceske Budejovice and Zlin. This allowed us to cover entire country for recruitment purposes and to miss as few as possible eligible families. Even more important, it made the follow-up more convenient for the families already enrolled, especially from the point of view of the distance to the closest study center.



Prague, venue of our national coordinating center

The Czech Republic was invited to join the TRIGR project to facilitate recruitment and that was what we considered to be our primary goal. A limited number of children born in the Czech Republic fulfil the inclusion criteria for the project (about 200 on an annual basis), so we developed a special recruitment hierarchy, consisting of several independent overlapping networks. The resulting structure we have named operationally "the multilayer snatching network". The different layers were related to specific individuals who learned to know of the child during the pregnancy: parents and their lay friends, gynecologists, diabetologists, neonatologists. All recruitment strategies were supported by a series of articles written in professional and public newspapers and magazines, by national web pages, a

direct e-mail contact to the national coordinating center and last but not least, by the hotline phone available for all local TRIGR teams as well as families throughout the study (more about this later).

To ensure the highest level of medical care available, the study center visits take place in the hospitals of the respective local centers, which mostly belong to universities. The families usually choose the center closest to their home for their follow-up visits. Some of them have chosen Prague because of personal ties there or because another diabetic family member is followed there. Also, on their request, some families living in distant mountain regions were granted the option of study visits to their family doctor and only annual visits at the local TRIGR center so they would not have to travel too far with small babies.

During the regular phone calls for dietary interviews, we discuss the child's health status, diet and development and anything else the parents are interested in. We offer also to our TRIGR families a "hotline": a 24/7 non-stop mobile phone operated by an experienced paediatrician to help with any acute issues emerging. The phone calls typically relate to "allowed" and "not allowed" food during the intervention period, infant colic, sudden fever or rash and acute illnesses in general. Sometimes, however, the requests are more challenging, as we encourage the families to contact the team every time they feel we could be of any assistance. The most curious call received was from a father asking for first aid advice for his 4-year old daughter, a sister of a TRIGR child, who had eaten a worm. We are happy that our families trust us so much that they share even small troubles.

To keep close contact with our families, we send not only the regular TRIGR newsletters but also Christmas cards with a small present. Of course we do not forget to wish every child a happy birthday with a gift. The most important thing, though, is the personal relationship we try to establish and develop with every family – the feeling of support, cooperation and availability we provide.

Thanks to the above mentioned strategies we are very proud that we enlisted 410 randomized and 164 eligible children to the TRIGR study by the end of the recruitment period, thus being the European country with the second highest recruitment, right after the place of birth of the TRIGR idea, Finland. Considering the rather small Czech population (about 10 million people) and lower type 1 diabetes incidence here, we are very happy that we reached our goal. That would never have been possible without the heroic effort of all our staff and, most important, the enthusiasm of all the recruited families, whom I thank very much on behalf of the entire Czech coordinating team. Our Czech families should feel proud of their substantial contribution to the success of our research on the possible primary prevention of the type 1 diabetes.

*Pavla Mendlova
Study Doctor
Coordinator of Czech Republic*