

Maternal Hypoglycemia - How Sweet it Isn't!

Noah Lubowsky, MD, FACE

Endocrinologist at Premier Medical Associates

In 2008, the results of the Hyperglycemia and Pregnancy Outcomes (HAPO) study were published in the *New England Journal of Medicine*. This study enrolled more than 23,000 women without known diabetes to undergo a glucose tolerance test between 24 and 32 weeks gestation. Results were blinded to the participants unless they had overt diabetes. The primary outcomes measured were birth weight above the 90th percentile for gestational age, primary cesarean section, neonatal hypoglycemia, and cord-blood serum C-peptide levels above the 90th percentile. Secondary outcomes included delivery before 37 weeks gestation, shoulder dystocia and birth injury, need for intensive neonatal care, hyperbilirubinemia, and preeclampsia. Results showed that all primary outcomes, and most secondary outcomes, showed a statistically significant increase in poor outcomes, even without clinically overt diabetes. This is likely unsurprising to us 12 years later, given our more current knowledge.

Since then, there has been a long-term follow up study called the HAPO FUS. This study has focused on the outcomes of those children born to

continued on page 2

The Greater Pittsburgh Diabetes Club – Membership Benefits

Jacqueline Wesche-Thobaben, RN, BSN, CDCES,
CCRC, President GPDC

*Project Coordinator, Look AHEAD Study,
University of Pittsburgh*

*Due to the Pandemic, the GPDC will extend
membership through 12-31-21 to all current members.*

Who would have ever thought we would have the experience of living through a pandemic? Probably none of us ever gave a thought to this idea, until it arrived. It is a very difficult time for everyone being isolated, not to mention the burden of limited access to the medication and testing supplies necessary to control one's diabetes and possible food insecurities. In this issue, we are including some resources that you and your staff may find useful in referring your patients that might need some assistance during this 'new coronavirus world.'

For the second year, the GPDC has made a charitable donation. This year a donation of \$1000 was made to the Catholic Charities of Pittsburgh. The donation is earmarked for helping people with diabetes. Catholic Charities operates a free clinic in downtown Pittsburgh, open to all people regardless of race, religion or ethnic origin. If you know a of a charity that you would like us to consider in the future, please contact the GPDC at our phone or e-mail listed elsewhere in the newsletter.

Our speaker for April 2020 was rescheduled to the Spring of 2021, cancelling our Spring 2020 meeting and your opportunity for 1 CME/CEU and the ability to network with your fellow colleagues. For that reason, the Board of the GPDC voted to waive membership fees for the coming year, January 2021 through December 2021, for all 2020 members.

Therefore, if you are a member now, you will automatically be a member for next year.

continued on page 4

INSIDE THIS ISSUE

- 1** Dr William Lowe
- 1** The Greater Pittsburgh Diabetes Club – Membership benefits
- 2** Resources for care and supplies
- 3** Obesity initiatives
- 4** Community events, GPDC Contact info

the women enrolled in the original study. In 2019 in *Diabetes Care*, some of the results were published, showing that maternal hyperglycemia was associated with childhood hyperglycemia among the 10 to 14 year-olds that were enrolled, independent of BMI.

Dr. William Lowe is a primary investigator on the HAPO and HAPO FUS study. He is a Professor of Medicine and the Vice Dean of Academic Affairs at Northwestern University Feinberg School of Medicine. He completed his internship and residency at Beth Israel Hospital in Boston, Massachusetts, and his endocrinology fellowship at the NIH in Bethesda, Maryland. His major research interest is in the genetics, genomics, and metabolomics of maternal metabolism during pregnancy and fetal growth and long-term metabolic outcomes in mothers and offspring. He has published more than 100 peer-reviewed journal articles in this field. At Northwestern, he has won several Outstanding Teacher Awards for his lectures.

Although we can't have Dr. Lowe speak to us in person, due to the COVID-19 pandemic, we are pleased to have him speak to us virtually on November 18, 2020. The topic of his talk is "Maternal Glycemia During Pregnancy: Long-Term Implications for Mother and Offspring." Some of the talk will expound on the results of HAPO and HAPO FUS, as well as discuss new information related to the mother's health. We hope you will join in November for what is sure to be a dynamic presentation. ■



William Lowe, MD

Resources - Donations of supplies

Birmingham Clinic - South Side

2100 Jane Street
Pittsburgh, PA - 15203
Phone: [412-481-7900](tel:412-481-7900)

Contact: Mary Herbert MS, MPH, Clinical Director herbertmi@upmc.edu

The Birmingham Free Clinic serves uninsured and other medically vulnerable groups through an exclusively volunteer group of health care providers

Accepting donations of diabetes supplies (syringes and pen needles).

Staff available Mon – Fri from 9am-4pm to accept donations.

Note: the clinic prescribes the SureTrack meter/strips/lancets to the patients they serve.

Catholic Charities Free Health Care Center – Cultural District

212 9th Street
Pittsburgh, PA 15222

Contact: Carolyn, RN Manager [412-456-6911](tel:412-456-6911)

The CCFHCC provides completely free care medical and dental care to uninsured and under-insured individuals 19 years-old and older.

Under-insured adults are those who have some health insurance, but still cannot afford the medical and/or dental care they need and/or essential medicines (for instance, those that keep blood pressure or diabetes under control).

Patient eligibility contact: 412-456-6911 for eligibility requirements.

Accepting donations of diabetes supplies (lancets, BG strips, pen needles, syringes).

Brothers Brother Foundation - North Side

1200 Galveston Ave.
Pittsburgh PA, 15233

Contact: Krystal Campbell
kcampbell@brothersbrother.org

Serving global and local communities in need of medical supplies.

Due to COVID 19, they have had to suspend acceptance of donations from individuals.

Currently accepting hospital/clinic/pharmaceutical company donations of medical and diabetes supplies. (sterile equipment, OTC medications).

continued on page 4

Targeting Obesity to Treat Type 2 Diabetes

David Rometo, MD

Clinical Director, UPMC Center for Obesity Medicine

It has long been known that obesity is a risk factor for developing type 2 diabetes, and that younger age of onset and greater severity of obesity by BMI and/or waist circumference increase the risk further. Efforts to lose weight are recommended for those with overweight or obesity and pre-diabetes, as well as those with already-diagnosed type 2 diabetes spanning the entire spectrum of duration and severity of disease. The magnitude of intensity of weight loss interventions / efforts vary widely and correspond with the magnitude of weight lost and the improvements in diabetes control. On one end of the spectrum is a patient improving the content of their diet and decreasing sedentary time, decreasing their weight by < 5% yet improving the A1C without adding any new medications. On the other end of the spectrum is a patient getting Roux-en-Y gastric bypass surgery, achieving 35% weight loss and complete diabetes remission (A1C < 6, fasting BG < 100 mg/dL on no DM medications) despite poor control on insulin before surgery.

It is important that patients with pre-diabetes and T2DM, with overweight and obesity, be informed of the evidence-based and expert opinion guidelines by various medical organizations including the ADA, The Obesity Society, American College of Cardiology, American Heart Association, etc. But equally or more important is that what is recommended be also offered to the patients by the health care system, and that the patients' medical provider discuss these options as they would a medication; prescribing a plan after an informed discussion and shared decision making.

Over the last 8 years, UPMC Division of Endocrinology and Metabolism has strived to meet this standard. Prior to this, bariatric surgery was available at UPMC, as was seeing a single Obesity Medicine physician (Dr. Vicki March) for one-on-one visits and monthly RD visits in her practice for individualized care. The Endocrine Division then added several more board-certified Obesity Medicine physicians, and we started a medically-supervised Very Low Calorie Diet (VLCD) total meal-replacement program with group visits meeting twice a month for 6 months (now 16 visits in first 6 months per ADA guidelines), followed by monthly weight maintenance visits for 1 year. This type of program, using complete nutrition shakes for the first 3+ months, has been shown to achieve significant rates of diabetes remission in recent publications (DiRECT trial, M. Lean, R. Taylor, Lancet Diabetes Endocrinol. 2019), with more weight loss correlated with higher rates of

remission. We currently treat up to 160 patients a year in this program. A recently accepted abstract for the Obesity Society annual meeting shows our diabetes outcomes, with 80% of patients achieving an A1C < 6.5, 25% achieving diabetes remission, and 25% achieving A1C < 5.7 on DM medication after weight loss. Obesity Medicine physicians also prescribe anti-obesity medications (AOM) to assist with weight loss and long-term weight maintenance during and after lifestyle programs. Patients who complete the program achieve an average of 18% weight loss.

We then added a Mediterranean diet/lifestyle program, groups meeting monthly for 1 year. The Mediterranean diet has much evidence of its health benefits in diabetes and cardiovascular disease. This whole food and mostly plant-based diet, with good carbs and good fats and favoring fish over meat, is also considered more sustainable than diets that tightly restrict all fat or all carbohydrates. Diabetes remission rates and years off of medication are better on the Mediterranean diet than on a low-fat diet, with similar amounts of weight loss.

With the COVID-19 epidemic, our programs (collectively called DROP: Disease Remission in Obesity Programs) went 100% virtual. This has allowed for increased access to those who live far from our Oakland campus or those with work schedules that do not allow for travel time to and from group visits. Our next steps are to offer an intense Mediterranean diet program and a partial meal replacement diet (16 visits in the first 6 months aiming for 10% weight loss) that will continue to have an all-virtual option.

Lastly, the Endocrine Division will host the new UPMC Obesity Medicine Fellowship program, in which physicians will be trained by Obesity Medicine faculty from Endocrinology, Gastroenterology, Bariatric Surgery, and General Internal Medicine, as well as obesity experts in psychology, psychiatry, nutrition, pediatrics, and sleep medicine. Multidisciplinary conferences will allow us to learn from each other and co-manage complicated cases.

Offering a variety of diet options, and different intensities of programs, from multiple medical specialty providers, closes the treatment gap that previously existed for patients in our region. We are in a position to grow as needed to treat all patients with pre-diabetes and Type 2 diabetes that are motivated and ready to lose weight for their health. Patients can schedule a physician appointment or join a group program by calling 412-586-9780.

Allegheny Health Network has medically supervised weight loss and bariatric surgery services together in their Bariatric Metabolic Institute (BMI). This will be described in detail in a later edition of the newsletter. ■

CALENDAR OF EVENTS

AMERICAN DIABETES ASSOCIATION-(ADA)

October 3, 2020 - Virtual Ride, Run, or Walk
Contact: Clay Rehm 412-824-1181 or diabetes.org/pghtour
Select your time and place to ride Run or walk. \$100 minimum fundraising to earn your t-shirt.

JUVENILE DIABETES RESEARCH FOUNDATION - (JDRF)

July 18-Nov 22, 2020 - JDRF Ride-
Nov 1, 2020 - JDRF One Walk
Contact: Carling Nolan 412-259-1319 or jdrf.org

GPDC Spring 2021 - Andy Stewart, MD – Date to be announced

Membership - continued from page 1

Our next meeting will be virtual on November 18, 2020. Dr William Lowe, from Northwestern University, Feinberg School of Medicine will speak on maternal glycemia during pregnancy. Prior to his talk, you will have an opportunity to visit a few sponsor vendors for an update. Remember, our vendors are the reason we are able to bring speakers to Pittsburgh and, in normal times, provide a venue for networking with your local colleagues. Be sure to log-in, prior to the lecture, to hear from our sponsors. Nadine Popovich, Administrative Assistant at the Allegheny County Medical Society has been working hard to assure a good experience. We will be guiding you through this New Virtual Platform. Use this local Virtual Meeting, as a steppingstone, to learn how to navigate through a future professional virtual meeting. If you have not already had this experience, it is not as scary as you may think! Please watch your e-mail for information on signing up for our first virtual meeting. We promise to work hard to provide a positive experience. ■

Websites:

American Diabetes Association – 1-800-DIABETES- www.diabetes.org
Juvenile Diabetes Association – 412-471-1414 - www.jdrf.org
Lilly – announced on 4-7-20 a \$35 co-pay for most insulins. Call Lilly Diabetes Solution Center at 1-833-808-1234 to see if you qualify – www.insulinaffordability.com/solutions
Tools for Healthcare Savings from American Diabetes Care and Education Specialists – www.diabeteseducator.org/affordability
Partnership for Prescription Savings – www.pparx.org
RXassist – www.rxassist.org
NeedyMeds – www.needymeds.org
Rx Hope – www.rxhope.com
Benefits check-up – www.benefitscheckup.org
CR3Diabetes – www.cr3diabetes.org
Insulin for Life – <http://ifl-usa.org>
Walmart – www.walmart.com

Other resources:

Greater Pittsburgh Food Bank
Website lists locations of food drives, assistance with SNAP application (formerly food stamps), Senior assistance (> 60 yo), Door Step Delivery, and how to get additional help. greaterpittsburghfoodbank.org OR 412-260-3663

Emergency Mental Health Counseling:

resolve Crisis Services – Provides crisis intervention services for all residents of Allegheny County: 1-888-796-8226 OR 412-864-5065

THE GPDC GOVERNING BOARD

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Please contact the GPDC if you would like to contribute a future article to the newsletter.