KENTUCKY STATEWIDE DIABETES SYMPOSIUM
HELD NOVEMBER 19TH IN LOUISVILLE
265 PROFESSIONALS ATTEND

Two hundred and sixty-five professionals attended the 2010 KY Statewide Diabetes Symposium held in Louisville on November 19th.

Vasti Broadstone, endocrinologist from the Joslin Diabetes Center in Indiana, presented regarding diabetes and neuropathy at the State Symposium.

Jan Lazarus, Chair of the Symposium, left, and Elaine Hacker, right, register attendees at the 2010 Symposium and distribute blue “World Diabetes Day” bracelets (bracelet pictured on Jan’s right wrist).

Gordon Guthrie, endocrinologist from Lexington, addresses Diabetes Symposium attendees.

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If you would like to be added to the mailing list to receive this newsletter, please contact: Kentucky Diabetes Connection, P.O. Box 309, Owensboro, KY 42302-0309 or Phone: 270-686-7747 ext: 3031 or Email: janice.haile@ky.gov.
The fourth annual Kentucky Statewide Diabetes Symposium 2010 was held in recognition of World Diabetes Day on November 19, 2010 at the downtown Marriott in Louisville, Kentucky. This fourth annual collaborative diabetes program was attended by 265 healthcare professionals from many different practice areas within Kentucky, Ohio, Indiana, Illinois, and Tennessee.

Participants enjoyed a day filled with exceptional speakers with topics including: National Initiatives to Address Diabetes Education (presenter Deborah Fillman, RD, CDE), Celiac Disease (presenter Lynn Senecal, RD, CDE), Hot Topics and New Medications in Diabetes (presenter Gordon Guthrie, MD), Neuropathy (presenter Vasti Broadstone, MD), and Periodontal Disease (presenter Pamela Stein, DMD). A breakdown of the 265 participants included: RN 129, LPN 2, RD 83, RPh 8, Health Educators 4, Social Workers 4, DMD 1, MD 3, ADA 2, JDRF 2, Optometric Groups 2, Exercise Physiologist 1, Participant 1, Exhibitors (not counted elsewhere) 23.

Without the collaboration and support of many individuals and organizations, this symposium would not have been possible. The planning committee, with representatives from the Diabetes Educators of the Cincinnati Area (DECA), Greater Louisville Area Diabetes Educators (GLADE), Kentucky Association of Diabetes Educators (KADE), Kentucky Diabetes Network (KDN), Kentucky Diabetes Prevention & Control Program (KDPCP) and the Tri-State Association of Diabetes Educators (TRADE) would like to thank the companies who provided grants or resources to make the 2010 Kentucky Statewide Diabetes Symposium a success. Sponsors included: Animas Corporation, Insulet Corporation (Omnipod), Novo Nordisk, Pamlab (Metanx), Roche Diagnostics, Sanofi Aventis, and Santarus.

Planning for the 2011 Kentucky Statewide Diabetes Symposium will soon be underway. The symposium planning committee invites anyone interested in joining this effort to contact Janice Haile at janice.haile@ky.gov.

Watch This Newsletter for the 2011 Kentucky Statewide Diabetes Symposium Date!
BROMOCRIPTINE MESYLATE (CYCLOSET®):
A NEW ORAL DRUG TREATMENT FOR TYPE 2 DIABETES MELLITUS

Submitted by: Harold Bays MD, FACP, FACE, Medical Director / President, Louisville Metabolic and Atherosclerosis Research Center

In 2009, the Food and Drug Administration (FDA) approved bromocriptine mesylate quick release (bromocriptine QR; Cycloset®) as a new anti-diabetes mellitus medication. Many clinicians may already be familiar with bromocriptine as a dopamine agonist, previously used to stop lactation after delivery, and currently used as an approved drug to treat pituitary prolactinomas and Parkinson’s disease.

Bromocriptine QR, a potent dopamine D2 receptor agonist, is thought to lower glucose levels due to its effects upon the brain or central nervous system (CNS). [1] Studies of seasonal animals (who become more insulin resistant at certain times of the year) suggest that increasing CNS dopamine may favorably affect the brain’s “biologic clock”, and thus may improve glucose metabolism. In these resistant at certain times of the year) suggest that increasing CNS dopamine may favorably affect the brain’s “biologic clock”, and thus may improve glucose metabolism.

In a study of over 3000 patients, administration of bromocriptine QR resulted in fewer pre-specified cardiovascular events compared with administration of placebo (1.5% vs. 3.0% respectively).[9] Some other clinically important properties of bromocriptine QR include that it is minimally cleared by the kidney, is weight neutral and does not increase the risk of severe hypoglycemia.[10]

Overall, bromocriptine QR represents a new monotherapy and combination therapy option in the treatment of type 2 diabetes mellitus. Because of its unique centrally acting properties, bromocriptine QR may provide complementary benefits when used with other anti-diabetes mellitus medications having differing mechanisms of action. [1]

Reference List

Should we put our money on disseminating and applying what we already know about diabetes, or do we place our priority on further research aimed at eliminating diabetes?

Furthermore, if we look at the precedents for NOAD #2, smallpox and polio, we find that these diseases were prevented, i.e. they were eliminated only in people who never had them in the first place. People who actually had smallpox and polio were rarely if ever “cured” in any sense of the word. Finally, we have to consider the side effects and consequences of any medical treatment. We haven’t accomplished much if the cure is worse than the disease.

We now know that hyperglycemia (diabetes) results from a complex interplay of genetic, environmental, and behavioral factors. There is no unique etiology or underlying cause. At this time I think it is safe to say that there will be no universal cure, no breakthrough that wipes the slate clean of diabetes. Instead, I think we will continue to see the countless small steps that characterized progress in diabetes treatment during the past 50 years. In addition, I think that we will see NOAD #2 cures for some individuals or groups of persons with diabetes.

In an earlier column I noted that proponents of bariatric surgery claim that it is a cure for type 2 diabetes.

While some would argue with this assertion, most bariatric surgery patients with type 2 diabetes experience a complete remission with no complications. It remains to be seen how practical this expensive and invasive surgical procedure will be for treatment of the 200,000,000 or more people with type 2 diabetes worldwide. Nevertheless, bariatric surgery comes very close to NOAD #2 for the relatively small number of persons with type 2 diabetes who have had it done.

Projected cures for type 1 diabetes include transplantation of insulin producing tissue, the artificial pancreas, and immunologic intervention.
Of these, I think that immunologic intervention is most promising. In order to get an update on this fast-moving field, I called Dr. Dennis Karounos at the University of Kentucky.

**Dr. Karounos is a long time researcher and national authority on prevention of type 1 diabetes.**

The following is a summary of our conversation.

This story has its origins in the remission, or honeymoon, that sometimes occurs following treatment of new onset type 1 diabetes. Studying the honeymoon phase taught us that destruction of insulin producing cells may be incomplete at the time of presentation of clinical diabetes. The idea has been around for decades that it might be possible to prolong the remission or at least keep the diabetes mild and easy to treat by aggressive management of type 1 diabetes from the time of diagnosis on. Even better, if we could identify individuals destined to develop type 1, it might be possible to intervene and prevent diabetes from developing. The underlying concept is that humans have a large surplus of insulin producing cells. Even if autoimmunity destroys a high percentage of these cells, there may be enough remaining to maintain normoglycemia as long as the destruction can be stopped. Furthermore, we now know that autoimmune destruction of insulin producing cells is a slow process so that the window of opportunity for prevention of type 1 diabetes may be several years.

Immune intervention for preventing or arresting the progression of type 1 diabetes is currently available only through research protocols. The first step in prevention studies is to identify individuals at high risk by testing for the presence of certain antibodies in the blood of children and siblings of persons with type 1. The tests used most widely are islet cell antibodies, GAD (glutamic acid decarboxylase) antibodies, and anti-insulin antibodies. An individual who tests positive for one or more of these antibodies has a 25% or greater chance of developing type 1 diabetes within 5 years. It should be noted that these antibody tests, along with c-peptide, are available commercially and are very useful for differentiating type 1 from type 2 diabetes in routine clinical practice. The tests are also used to confirm eligibility for studies aimed at halting the progression of new onset type 1 diabetes.

Three types of intervention are currently under study for persons at high risk: antigen specific agents, immune modulators, and stem cells.

Antigen specific agents are things like insulin and GAD, the antigens against which the aforementioned antibodies are directed. One very interesting such agent is inactive insulin. In the course of developing novel therapeutic insulin analogues, some turned out to be biologically inactive but cross reactive with insulin antibodies. Inactive insulin can be used at high doses without risk of hypoglycemia. Immune modulators are drugs for other uses like treating leukemia and preventing rejection of transplanted organs. These are non-specific immune suppressing agents, and toxicity is a major concern. A recent study showed that one such drug, rituximab, increases insulin secretion in children and young adults with newly diagnosed diabetes. Finally, Dr. Karounos mentioned the use of stem cells obtained from human bone marrow donors. These cells have a remarkable ability to repair tissue damaged by autoimmunity.

Dr. Karounos is an investigator in Type 1 Diabetes TrialNet, an international network of researchers who are exploring ways to prevent, delay and reverse the progression of type 1 diabetes. TrialNet provides free screening for the presence of diabetes related antibodies in relatives of persons with type 1 diabetes. TrialNet also sponsors intervention studies as promising agents become available. For more information, go to www.diabetestrialnet.org or call (859)323-1787.

The need for research directed at cures for diabetes is ever more urgent. The epidemic of diabetes is upon us, and it appears unlikely that widespread changes in eating and exercise behaviors will occur in time to head it off. Even though “cure” research has been frustrating, we have learned that it is at least possible. There is not going to be a vaccine or a pill that makes diabetes go away. Instead, we will see better methods for preventing diabetes and more NOAD #2 treatments for some people who have already developed diabetes.

**I hope that the emerging diabetes epidemic will stimulate more research funding as well as pressure on the biomedical research community to produce clinically relevant results.**
Diabetes in pregnancy may be either “pre-gestational”, such as Type 1 or Type 2, or “gestational” (occurring during the pregnancy). Gestational diabetes accounts for approximately 88% of all diabetes cases in pregnancy whereas Type 2 accounts for about 8% and Type 1 accounts for 4%.

Recently, though, there has been an increase in both gestational diabetes as well as Type 2 diabetes possibly related to the increasing prevalence of obesity.

For patients with Type 1 or Type 2 diabetes, preconceptual counseling is extremely important, not only to discuss pregnancy associated risks, but also to identify and treat any diabetes related co-morbidities that are present. One area of concern is the increasing number of women who have undiagnosed Type 2 diabetes and therefore are untreated. Patients are typically not identified until their screening during pregnancy, generally at 24 – 28 weeks, and therefore have a delay in their treatment. It is important for women with pre-gestational diabetes to optimize their glucose control prior to conception. The frequency of both fetal and neonatal complications is directly related to glycemic control. Glycosalated hemoglobin A1C values reflect the average blood glucose levels over the past 8-12 weeks. Hemoglobin A1C values may be used in the evaluation of glycemic control during the periconceptual period. A hemoglobin A1C level greater than 8 in early pregnancy has been associated with an increased risk for both spontaneous abortion as well as congenital malformations (using a non-diabetic mean of 5%). With respect to periconceptual maternal A1C levels, for each one standard deviation unit increase of hemoglobin A1C above normal (5.5%), the odds ratio of congenital anomaly is increased by 1.2.

The goal of preconception counseling of women with diabetes is to optimize glycemic control through adjustments in medications, diet, or lifestyle.

Macrosomia is a significant predictor of adverse perinatal outcomes and it is important that protocols for glucose monitoring include measuring blood glucose levels both before and after meals for all women with gestational diabetes, Type1 or Type 2.

It is well known that women that undergo preconception counseling with optimized glycemic control have not only lower first trimester mean glycosalated hemoglobin levels, but also a decrease in the number of congenital anomalies both major and minor. Compared to the general population, women with pre-gestational diabetes and glycemic control with a hemoglobin A1C of less than or equal to 7, still have an increased rate of adverse pregnancy outcomes. It may be necessary in order to reduce these risks to have a hemoglobin A1C of less than 6. This may be related to fluctuations in glucose levels that are not detected. Postprandial glucose levels in pregnancy have been shown to be the best predictor of neonatal macrosomia. Macrosomic infants are typically defined as a birth weight greater than the 90th percentile for a specific gestational age.

It is important that frequent monitoring of blood glucose levels be undertaken. Frequent glucose monitoring should include measuring glucose levels at least 7 times a day; however, even with intensive glucose monitoring, there may be fluctuations of glucose levels that are not detected since glucose excursions may reach their maximum level at various times of the day. Even intense self monitoring of blood glucose levels may miss not only hyperglycemic periods but also hypoglycemic periods. Continuous glucose monitoring provides a technique that will detect postprandial fluctuations and assists the clinician in devising an appropriate plan for intervention. A recent study, The Sensor Augmented Pump Therapy for A1C Reduction or Star-3 study, demonstrated the usefulness of continuous glucose monitoring in association with insulin pump therapy in Type 1 diabetes. Although this was not done in the pregnant population, there was a marked decrease in hemoglobin A1C levels compared to individuals using multiple daily injections.

Previous studies using continuous glucose monitoring in the pregnant population have been shown to improve outcomes.
The American College of Obstetrician and Gynecologists recommends fasting glucose concentrations less than or equal to 95mg/dL, pre-prandial glucose concentrations no greater than 100mg/dL, and two hour postprandial glucose concentrations no greater than 120mg/dL.

The mean capillary glucose levels should be no more than 100mg/dL and glycosalated hemoglobin A1C should be less than or equal to 6%. Recent data has suggested that the intrauterine environment in which the fetus develops may impact subsequent disease states as both an infant and adult. In pregnancy, blood glucose control becomes more complicated. These changes are the result of alterations in hormones levels as well as placental factors and changes in the maternal cardiovascular system.

Because of the possibility of the intrauterine environment possibly affecting disease states in both infancy and adulthood, it is important to regulate blood glucose levels during pregnancy, not only during the periconceptual period.

Pregnant patients with diabetes deserve the same level of care as given to patients not pregnant.

Previously, the area of concentration for diabetes in pregnancy has been related to periconceptual period secondary to the concern for congenital anomalies; however, it has been shown that a favorable intrauterine environment during pregnancy will result in better neonatal outcomes. It is important, therefore, to provide the pregnant patient with diabetes the best possible glycemic control. The advent of the use of continuous glucose monitoring now provides the clinician with a technique to detect previously missed hyperglycemic and hypoglycemic events. This hopefully will provide a basis for guiding insulin therapy.

A recent summary statement from the American Association of Clinical Endocrinologists (AACE) recommends that during pregnancy all patients with Type 1 diabetes utilize continuous glucose monitoring and even those patients with Type 2 diabetes and insulin requiring gestational diabetes may benefit from continuous glucose monitoring in an effort to adhere to insulin regimens.

Although each of the studies were small, the frequency of hyperglycemia was decreased as well as obtaining a lower hemoglobin A1C level without increasing the frequency of symptomatic hypoglycemia. A large prospective trial evaluating both maternal and neonatal outcomes associated with the use of continuous glucose monitoring will be needed; however, the use of continuous glucose monitoring in the pregnant patient with diabetes will allow for previously unrecognized high postprandial glucose levels to be detected in order to alter their management regimen.

Certainly during pregnancy, patients with Type 1 diabetes should have continuous glucose monitoring as a result of fluctuations in postprandial glucose levels. Pregnant patients with Type 2 diabetes or gestational diabetes requiring insulin would also benefit from continuous glucose monitoring and this is certainly true in the setting of a patient doing a glucose sampling 7 times a day. Again, continuous glucose monitoring has been associated with a decrease in birth weight as well as lower hemoglobin A1C levels between 28-36 weeks gestation. There are two insulin regimens available for maternal glucose levels in pregnancy. One is multiple daily injections (MDI); the second regimen would be continuous subcutaneous insulin infusion. During the pre-conceptual period, patients on oral hypoglycemic agents should be switched to insulin therapy.

The three rapid acting insulin analogs widely used are Lispro, Aspart, and Glulisine.

Aspart and Lispro have been most investigated in pregnancy and appear to have appropriate safety profiles as well as minimal transfer across the placenta with no evidence of teratogenesis. Longer acting analogs have also been used including insulin glargine as well as insulin detemir. Observational data regarding both these long acting insulin analogs have not shown any increase in adverse maternal or neonatal outcomes. The use of continuous subcutaneous insulin infusion or insulin pump therapy in addition to continuous glucose monitoring has been shown in the non-pregnant patient to reduce the hemoglobin A1C significantly. Also, similar studies in pregnancy will need to be undertaken using both insulin pump therapy as well as continuous glucose monitoring. The use of insulin pump therapy in association with continuous glucose monitoring provides a wealth of information regarding alterations in glucose levels especially postprandial during a 24 hour period as well as allowing for the ability to fine tune glucose levels.
NOVEMBER DIABETES AWARENESS ACTIVITIES

The Diabetes Education Team with the KY Diabetes Prevention and Control Program at the Lake Cumberland District Health Department (LCDHD) was very busy promoting diabetes awareness for American Diabetes Month throughout November!

- All ten “County Judge Executives” signed proclamations recognizing the seriousness of diabetes and declaring November 14, 2010 (which is World Diabetes Day) as Diabetes Awareness Day.
- Team members presented sets of children’s books, The Eagle Series, to all ten county libraries, to not only increase diabetes awareness, but to also promote healthy eating and exercise in children.
- Educators were interviewed on the radio about the seriousness of the disease, risk factors, signs & symptoms, management, as well as the prevention of diabetes.
- The second annual Diabetes Walk was led by Pulaski County High School in Somerset after two weeks of fundraising activities. Approximately 159 students, faculty, and friends of Pulaski County High School walked from the school to the new Judicial Center in downtown Somerset to release gray balloons and to receive the traveling “Diabetes Awareness Champion” trophy sponsored by LCDHD.
World Diabetes Day, November 14, 2010, has come and gone and the Magoffin County Diabetes Coalition and Health Department, recognized the event by displaying blue lights at the Magoffin County Health Department, Salyersville City Hall, as well as the Magoffin County Court House and Justice Center. They also had a diabetes proclamation signed by Magoffin County Judge Executive, Dr. Charles Hardin, and held an educational program for Magoffin County residents.

Diabetes Proclamation Signed
Front row – Kathy Borders, RN, Magoffin County Health Department Diabetes Coordinator with Magoffin County Judge Executive, Dr. Charles Hardin
Back row – left to right: Stella Prater, Magoffin County Circuit Court Chief Deputy Clerk, Peggi Jordan, RN, Magoffin County Health Department Community Services Director, Tonya Ward, Magoffin County Circuit Court Clerk, David Gibson, Magoffin County School District Director of Pupil Personnel, Marlene Robertson, RN, Magoffin County Health Department Clinic Nurse Supervisor, Brenda Wireman, Magoffin County Health Department Catalyst/Consultant/Community Encourager County residents.

The World Diabetes Day program included free blood pressures in Magoffin County.

Above: Blue Lights for World Diabetes Day 2010, were displayed each evening November 12 - November 14 at the Salyersville City Hall, the Magoffin County Justice Center (top photo), the Magoffin County Health Department (middle photo), and the Magoffin County Court House (bottom photo).
A little more than a decade ago when I joined the faculty of the University of Vermont, I met my now colleague, Dr. Charles MacLean, who at the time was trying to find a solution to a common problem for physicians: keeping up to date the data of his patients with diabetes in order to effectively manage their treatment.

Like many of his colleagues, Dr. MacLean had tracked his patients’ care by copying lab results by hand into flow sheets in order to create a historical record. Recognizing the inefficiencies of such a system, in the late 1990s, several of us at the University of Vermont conducted a CDC-funded qualitative analysis of the care of patients who had poorly controlled diabetes (A1C>10) in spite of engagement with a primary physician.

The study included in-depth structured interviews with patients, their caregivers, and their primary care providers, to better understand perceptions of the reasons for failure to control diabetes. During this process, patients expressed a desire for more communication with their doctors. Providers, in turn, expressed frustration about keeping track of laboratory tests, access to results done at other facilities, the difficulty of keeping patients motivated, and the confusion over testing schedules and optimum management strategies.

In trying to figure out an effective and efficient solution, Dr. MacLean persuaded a hospital lab to make an innovative change: *Shift the focus of A1C lab reports into a flow-sheet model that tracked the history of each patient instead of only providing the results of a single lab transaction.*

The new system worked well, and doctors that used it, loved it.

Dr. MacLean’s innovation inspired us to apply for a grant through the National Institute of Health (NIH) to expand the system to include other diabetes tests besides A1C. The NIH agreed to fund a randomized trial in May 2002, and with this $2 million federal grant, we hooked up 15 labs and created the Vermedx Diabetes Information System (VDIS), a registry and decision support system for adult patients with diabetes and their primary care providers.

**How does Vermedx work?**

Blood or urine test results are transmitted to Vermedx, which generates an alert letter to the patient, explaining the implications of test values that are out of control and encouraging the patient to work with their provider to improve their numbers. Vermedx writes, prints, and mails the letter using the provider’s letterhead.

At the same time, a flow sheet is sent to the provider. The flow sheet contains current and previous test values presented in a way that makes it easy for providers to understand the progress of their patients’ diabetes. The report includes an analysis of the patient’s laboratory results along with evidence-based, best practice recommendations. It also includes prompts to schedule necessary follow-up appointments.

In addition, providers receive quarterly population reports summarizing the current status of each patient, and benchmarking the progress of their entire patient population against established norms.

These reports highlight the need for further follow-up action for each patient.

Patients love the way Vermedx engages them in their care. They feel encouraged to participate in more preventative activities, adhering to the best practices guidelines of the American Diabetes Association. As a result, they spend less time in hospitals and emergency rooms, and more time feeling better.

**There is a measurable improvement in their quality of life.**

This, in turn, leads to positive financial outcomes for the health-care system. Managed-care entities, public health agencies, and provider groups realize a net savings of $500 per patient with diabetes in the first year and more than $2,400 annually in subsequent years.

A large randomized controlled trial demonstrated the positive impact upon patients and was published in *The Journal of General Internal Medicine* in December 2009. These compelling results were validated in an independent sample of patients and published in the March 2009 edition of *The American Journal of Managed Care.*
Submitted by Anna Faul, PhD, Associate Dean Academic Affairs, Kent School of Social Work, Louisville, KY

**Project Summary/Abstract**

The Kentucky Rural Health Collaborative, a 5 year project funded by the Centers for Disease Control and Prevention (CDC), aims to reduce the diabetes-related inequalities in vulnerable populations, specifically older adults and persons of lower socio-economic status, in the rural counties of Bullitt, Henry and Shelby. The lead agency on this project, the Kentuckiana Regional Planning and Development Agency (KIPDA), will use their extensive coalition building skills to develop a county-specific coalition comprised of representatives from formal health promotion agencies (e.g. Health Department) and informal county-specific natural helpers (e.g. community organizer) to explore the individual, interpersonal, community, institutional and societal influences on the prevalence of diabetes.

Initially, the coalition will design a comprehensive needs assessment which will include 1) a health status survey of a sample of each county’s residents using a door-to-door data collection strategy, 2) a photovoice project in which residents will document their community-specific challenges to a healthy lifestyle by taking photographs with a disposable camera and discuss in subsequent focus groups, 3) an observational study of the number and types of county-specific services which promote social interaction among the community members (e.g. churches, senior centers), services which directly impact the health needs among community members (e.g. pharmacies, hospitals, exercise facilities, parks, fast food venues) and services which adversely affect the reputation of the county (e.g. liquor, pawnbrokers), and 4) a review of supportive and non-supportive healthy living, economic and school policies. County-specific paid volunteers will assist in the various data collection events.

After a thorough analysis of the county-specific needs, the coalition will develop a county-specific action plan which will include discovering interventions known to have a positive impact on the resident’s knowledge, attitude and behaviors of healthy living. Interventions might include community health fairs; self-management, exercise, weight loss and smoking cessation programs; physician-training; care coordination case management models; improved public safety; environmental changes such as greater park maintenance, community gardens, or marked walking trails; and lastly, policy changes such as zoning restrictions on the total number of fast food venues or food policies at schools. Selected interventions will be implemented per county and the impact of the interventions will be documented.

This project hopes to 1) reduce the prevalence of diabetes in these counties, 2) increase number of people who eat five or more servings of fruits and vegetables per day, 3) increase the number of people who engage in 30 minutes of moderate physical activity at least 5 days a week, 4) increase the number of people who are non-smokers, 5) decrease the number people who are overweight or obese, 6) increase the number of Type 2 diabetes patients who monitor their glucose levels daily and take their medicines on a daily basis, and 7) increase the number of Type 2 diabetes patients who receive the 5 recommended process of care measures from their county specific baseline rates.
The 2010 Dietary Guidelines Advisory Committee (DGAC) was established by the Secretaries of US Department of Agriculture (USDA) and the US Department of Health and Human Services (HHS). The Committee’s task was to advise the Secretaries of USDA and HHS on whether revisions to the 2005 Dietary Guidelines were warranted, and if so, to recommend updates to the Guidelines. The DGAC immediately recognized that, on the basis of the vast amount of published research and emerging science on numerous relevant topics, an updated report was indeed needed.

The 2010 DGAC Report is distinctly different from previous reports in several ways. First, it addresses an American public of whom the majority are overweight or obese and yet under-nourished in several key nutrients. Second, the Committee used a newly developed, state-of-the-art, web-based electronic system and methodology, known as the Nutrition Evidence Library (NEL), to answer the majority of the scientific questions it posed. The remaining questions were answered by data analyses, food pattern modeling analyses, and consideration of other evidence-based reviews or existing reports, including the 2008 Physical Activity Guidelines for Americans. The 2005 Dietary Guidelines for Americans were the starting place for most reviews. If little or no scientific literature had been published on a specific topic since the 2005 Report was presented, the DGAC indicated this and established the conclusions accordingly.

A third distinctive feature of this Report is the introduction of two newly developed chapters. The first of these chapters considers the total diet and how to integrate all of the Report’s nutrient and energy recommendations into practical terms that encourage personal choice and behavior change. A multi-sectoral strategy is imperative. For this reason, the 2010 DGAC strongly recommends that USDA and HHS convene appropriate committees, potentially through the Institute of Medicine (IOM), to develop strategic plans focusing on the actions needed to implement key recommendations likely differ by goal.

**Major Cross-cutting Findings and Recommendations**

**Total Diet: Combining Nutrients, Consuming Foods**

The 2010 DGAC report concludes that good health and optimal functionality across the life span are achievable goals but require a lifestyle approach including a total diet that is energy balanced and nutrient dense. Now, as in the past, a disconnect exists between dietary recommendations and what Americans actually consume. On average, Americans of all ages consume too few vegetables, fruits, high-fiber whole grains, low-fat milk and milk products, and seafood and they eat too much added sugars, solid fats, refined grains, and sodium. SoFAS (added sugars and solid fats) contribute approximately 35 percent of calories to the American diet. This is true for children, adolescents, adults, and older adults and for both males and females. Reducing the intake of SoFAS can lead to a badly needed reduction in energy intake and inclusion of more healthful foods into the total diet.

The diet recommended in this Report is not a rigid prescription. Rather, it is a flexible approach that incorporates a wide range of individual tastes and food preferences. Accumulating evidence documents that certain dietary patterns consumed around the world are associated with beneficial health outcomes. Patterns of eating that have been shown to be healthful include the Dietary Approaches to Stop Hypertension (DASH)-style dietary patterns and certain Mediterranean-style dietary patterns. Similarly, the USDA Food Patterns illustrate that both nutrient adequacy and moderation goals can be met in a variety of ways. The daunting public health challenge is to accomplish population-wide adoption of healthful dietary patterns within the context of powerful influences that currently promote unhealthy consumer choices, behaviors, and lifestyles.

**Translating and Integrating the Evidence: A Call to Action**

Complementing the Total Diet chapter, this chapter describes the four major findings that emerged from the DGAC’s review of the scientific evidence and articulates steps that can be taken to help all Americans adopt health-promoting nutrition and physical activity guidelines:

- **Reduce the incidence and prevalence of overweight and obesity of the US population by reducing overall calorie intake and increasing physical activity.**
- **Shift food intake patterns to a more plant-based diet that emphasizes vegetables, cooked dry beans and peas, fruits, whole grains, nuts, and seeds. In addition, increase the intake of seafood and fat-free and low-fat milk and milk products and consume only moderate amounts of lean meats, poultry, and eggs.**
- **Significantly reduce intake of foods containing added sugars and solid fats because these dietary components contribute excess calories and few, if any, nutrients. In addition, reduce sodium intake and lower intake of refined grains, especially refined grains that are coupled with added sugar, solid fat, and sodium.**
- **Meet the 2008 Physical Activity Guidelines for Americans.**

The 2010 DGAC recognizes that substantial barriers make it difficult for Americans to accomplish these goals. Ensuring that all Americans consume a health-promoting dietary pattern and achieve and maintain energy balance requires far more than individual behavior change. A multi-sectoral strategy is imperative. For this reason, the 2010 DGAC strongly recommends that USDA and HHS convene appropriate committees, potentially through the Institute of Medicine (IOM), to develop strategic plans focusing on the actions needed to successfully implement key 2010 DGAC recommendations. Separate committees may be necessary because the actions needed to implement key recommendations likely differ by goal.

A coordinated strategic plan that includes all sectors of society, including individuals, families, educators, communities, physicians and allied health professionals, public health advocates, policy makers, scientists, and small and large businesses (e.g., farmers,
agricultural producers, food scientists, food manufacturers, and food retailers of all kinds), should be engaged in the development and ultimate implementation of a plan to help all Americans eat well, be physically active, and maintain good health and function. It is important that any strategic plan is evidence-informed, action-oriented, and focused on changes in systems in these sectors.

Any and all systems-based strategies must include a focus on children. Primary prevention of obesity must begin in childhood. This is the single most powerful public health approach to combating and reversing America’s obesity epidemic over the long term.

Strategies to help Americans change their dietary intake patterns and be physically active also will go a long way to ameliorating the disparities in health among racial and ethnic minorities and among different socioeconomic groups, which have been recognized as a significant concern for decades. While the reasons for these differences are complex and multifactorial, this Report addresses research indicating that certain dietary changes can provide a means to reduce health disparities.

Change is needed in the overall food environment to support the efforts of all Americans to meet the key recommendations of the 2010 DGAC. To meet these challenges, the following sustainable changes must occur:

- Improve nutrition literacy and cooking skills, including safe food handling skills, and empower and motivate the population, especially families with children, to prepare and consume healthy foods at home.
- Increase comprehensive health, nutrition, and physical education programs and curricula in US schools and preschools, including food preparation, food safety, cooking, and physical education classes and improved quality of recess.
- For all Americans, especially those with low income, create greater financial incentives to purchase, prepare, and consume vegetables and fruit, whole grains, seafood, fat-free and low-fat milk and milk products, lean meats, and other healthy foods.
- Improve the availability of affordable fresh produce through greater access to grocery stores, produce trucks, and farmers’ markets.
- Increase environmentally sustainable production of vegetables, fruits, and fiber-rich whole grains.
- Ensure household food security through measures that provide access to adequate amounts of foods that are nutritious and safe to eat.
- Develop safe, effective, and sustainable practices to expand aquaculture and increase the availability of seafood to all segments of the population. Enhance access to publicly available, user-friendly benefit/risk information that helps consumers make informed seafood choices.
- Encourage restaurants and the food industry to offer health-promoting foods that are low in sodium; limited in added sugars, refined grains, and solid fats; and served in smaller portions.
- Implement the US National Physical Activity Plan, a private-public sector collaborative promoting local, state, and national programs and policies to increase physical activity and reduce sedentary activity (http://www.physicalactivityplan.org/index.htm). Through the Plan and other initiatives, develop efforts across all sectors of society, including health care and public health; education; business and industry; mass media; parks, recreation, fitness, and sports; transportation, land use and community design; and volunteer and non-profit. Reducing screen time, especially television, for all Americans also will be important.

Topic-specific Findings and Conclusions were also written regarding:

- Energy Balance and Weight Management
- Nutrient Adequacy
- Fatty Acids and Cholesterol
- Protein
- Carbohydrates
- Sodium, Potassium, and Water
- Alcohol
- Food Safety and Technology

The 2010 DGAC recognizes the significant challenges involved in implementing the goals outlined in this Report. The challenges go beyond cost, economic interests, technological and societal changes, and agricultural limitations, but together, stakeholders and the public can make a difference. We must value preparing and enjoying healthy food and the practices of good nutrition, physical activity, and a healthy lifestyle. The DGAC encourages all stakeholders to take actions to make every choice available to Americans a healthy choice. To move toward this vision, all segments of society—from parents to policy makers and everyone else in between—must now take responsibility and play a leadership role in creating gradual and steady change to help current and future generations live healthy and productive lives. A measure of success will be evidence that meaningful change has occurred when the 2015 DGAC convenes.

To View the entire report go to:
Dietary Guidelines 2010
DGAC Report at:
http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm
Who should come?
Anyone interested in the prevention or control of diabetes in Kentucky

What?
Advocacy training and visits with your legislators

When?
February 10, 2011
8:00 am  Registration
8:30 am  Advocacy Training
As Scheduled  Visits with Legislators

Where?
State Capitol in Frankfort, Kentucky

For More Information:
Contact Nancy Walker at nancyt.walker@ky.gov

Sponsored by:
The Kentucky Diabetes Network (KDN) and partners including the American Diabetes Association

* SNOW DATE February 17, 2011
COALITION MEMBER SEES A NEED —
MAKES DIABETES EDUCATION HAPPEN FOR LOCAL JAIL STAFF

Submitted by: Nancy Walker RD, LD, CDE, Kentucky Diabetes Prevention and Control Program of the Green River District Health Department, TRADE, KDN Member

Steve Smith, past President and a member of the Daviess County Diabetes Coalition (DCDC), read an article in the Owensboro newspaper about an unfortunate incident that occurred at the local jail which involved diabetes and an inmate who ended up having an amputation. As the mission of the DCDC is to improve the lives of all people with diabetes, Steve went into action.

Steve spoke with several people he knew about the jail event. They decided that additional education of the staff at the jail would be the best way that DCDC could help. Steve contacted several local coalition members and one of them contacted the American Diabetes Association (ADA) regarding a DVD entitled, “Treating Diabetes Emergencies: What Police Officers Need To Know”, that was developed to educate law enforcement officers about diabetes.

Once the DVD arrived, Steve spoke with Reid Haire, the Daviess County Judge Executive, who introduced Steve to John Osborne, the jailer, who agreed that continuing education regarding diabetes was a positive approach. Jailer Osborne arranged a diabetes in-service with the jail staff. Steve Smith worked with Nancy Walker, RD, LD, CDE, the regional Diabetes Coordinator for KDPCP at the Green River District Health Department to set the wheels in motion for a training.

On October 1, 2010, a diabetes in-service was held at the jail with 17 jail supervisors in attendance, including jail nurses, guards and others who care for the inmates. The video proved to be very informative to the jail staff and they requested to keep the DVD for future in-services with their staff.

This shows how one person and a coalition can make a difference in their community in making diabetes care the best it can be for all people.
Kentucky attendees at the Appalachian Coalition Conference, left to right: Gwenda Adkins, Susan Kincaid, Vivian Smith, Lelia Elam, Courtney Barnes, Reita Jones, Laura Dennis, Christy Nuetzman, Erma Thornbury, and Ann Thornberry.

Pat Schumacher, MS, RD from the Program and Evaluation Branch at the CDC Division of Diabetes Translation doing presentation at Coalitions Celebrating Success 2010.

Kentucky Diabetes Coalition Efforts Profiled at Appalachian Conference

Submitted by: Reita Jones, RN, BSN, KY Department for Public Health, KY Diabetes Prevention and Control Program, KADE and KDN member

The diabetes division at the Centers for Disease Control and Prevention (CDC) has had a partnership with the Appalachian Regional Commission since 2001 to address the high prevalence of diabetes in the 13 Appalachian states, particularly targeting areas designated as “distressed counties”. The project is directed and managed by Marshall University and has made grants periodically available to eligible communities for forming or strengthening community partnerships or coalitions to address diabetes needs. This project has awarded a total of 66 start up and 37 strengthening grants over the last 9 years with 20 start up and 14 strengthening grants going to Kentucky communities.

Recently these Appalachian project grantees were invited to attend a conference in Abingdon, Virginia called “Diabetes Coalitions Celebrating Success 2010”. Pat Schumacher from the Program and Evaluation Branch at the CDC Division of Diabetes Translation opened the conference with a presentation “Diabetes…Why the Sense of Urgency?” and participants were encouraged that their work can make a difference.

At the conference, Kentucky had representation from five local diabetes coalitions and from the state Diabetes Prevention and Control Program. Four of these coalitions were on the conference agenda to profile one or more of their group’s projects. The Kentucky Diabetes Prevention and Control Program also provided a presentation. Kentucky presenters included Erma Thornbury of the Pike County Diabetes Partnership; Gwenda Adkins and Ann Thornberry of the Elliott County Diabetes Coalition; Christy Nuetzman of the Clinton County Health Coalition; Vivian Smith and Susan Kincaid of the Lee County Diabetes and Wellness Coalition; and Reita Jones with the Kentucky Diabetes Prevention and Control Program. It was exciting and inspiring to hear about the efforts these coalitions are implementing to address diabetes-related needs in their communities.

Great work folks — we were proud to have you represent our state at the conference!
PASSPORT TO MONACO GALA

AN EVENING TO BENEFIT DIABETES RESEARCH

The Kentuckiana Chapter of Juvenile Diabetes Research Foundation (JDRF) presents Passport to Monaco Gala, sponsored by Brown-Forman Corporation, on Saturday, February 5, 2011 at the Louisville Marriott Downtown from 5:30 p.m. to midnight. There will be silent and live auctions, bourbon tastings, dinner, music and a casino following the dinner presentation. Tickets are $175 per person, $50 for the Casino only. This evening will transport you from the winter blues to festive and fun Monaco. For more information contact the JDRF office toll free at (866) 485-9397 or send an e-mail to kentuckiana@jdrf.org or to register log on to https://jdrf-kentuckiana.ejoinme.org/JDRFGala

COLLABORATIVE EFFORT MAKES FALL FESTIVAL SUCCESSFUL

Submitted by: Donna Heaverin, RN, BSN, Kentucky Diabetes Prevention and Control Program, Lincoln Trail District Health Department, GLADE, KDN Member

On October 15, 2010, thanks to a collaborative effort between the Hardin-LaRue Diabetes Coalition, Hardin Memorial Hospital, Roche, and the Lincoln Trail District Health Department, a Fall Festival took place at Windy Ridge, the farm of Betty Bryan, RNC, CDE, employee of Hardin Memorial Hospital, for adults and youth who have been diagnosed with diabetes. Traditional fall food fare was available including chili, chips, baked beans, hot chocolate, apple cider, and smores. Activities included a hayride, pumpkin carving, fishing, a scavenger hunt for the kids, yard games, and socializing with old and new friends. Approximately 85 people attended in a variety of age ranges. Entire families were there enjoying beautiful weather and fun activities; and the kids enjoyed the scavenger hunt that had them search for pieces of a “puzzle” to assemble with a message about avoiding the complications of diabetes. This has become an annual event for the diabetes groups within the Lincoln Trail region and it continues to grow each year.

Pumpkins for carving.  Children enjoying the festivities.  Mechelle Coble and Donna Heaverin, Regional Diabetes Coordinators, are ready for the hayride.
Diabetes Vaccine Tips

**Diabetes “Seasonal” Flu Vaccine Guide**

- People with diabetes (6 months old or older) should receive a yearly “seasonal” flu vaccine as soon as the vaccine becomes available each fall.
- Children with diabetes, under the age of 9, who get the “seasonal” flu vaccine for the first time should get 2 doses at least 28 days apart.
- People with diabetes SHOULD receive the “seasonal” flu vaccine (inactivated) and SHOULD NOT receive FluMist® or intranasal (live) flu vaccine.

**NOTE:** If you have egg allergies or have had other allergic reactions – check with your physician before receiving any flu vaccine.

**People with Diabetes who become sick with the flu...**

- Should see their health care provider as soon as possible and ask about using antiviral drugs (like Tamiflu or Relenza) preferably within 2 days after becoming ill.

**Diabetes Pneumococcal (Pneumonia) Vaccine Guide**

- Adults and children (age 2 or more) with diabetes should receive a pneumococcal polysaccharide vaccination (PPSV) against pneumococcal disease (pneumococcal bacteria can cause pneumonia).
- A one time pneumococcal revaccination may be recommended for people with diabetes who are older than 65. Discuss the need for revaccination with your health provider.
The Kentucky Association of Diabetes Educators (KADE), which covers Lexington and Central Kentucky, meets the 3rd Tuesday of every month except summer (time & location vary). For a schedule or more information, go to http://kadenet.org/ or contact: Dee Deakins deeski@insightbb.com or Diane Ballard dianeballard@windstream.net

Details: go to http://kadenet.org/

The Kentucky Diabetes Network (KDN) is a network of public and private providers striving to improve the treatment and outcomes for Kentuckians with diabetes, to promote early diagnosis, and ultimately to prevent the onset of diabetes.

Anyone interested in improving diabetes outcomes in Kentucky may join. A membership form may be obtained at www.kentuckydiabetes.net or by calling 502-564-7996 (ask for diabetes program).

2011 Dates: February 10th (Diabetes Day at the Capitol); March 11th; June 3rd; September 16th; November 4th

If you are involved in diabetes research or the delivery of diabetes care and services—Don’t miss this chance to join your colleagues at the world’s largest and most prestigious diabetes meeting. It provides cutting-edge education and information for all members of the health care community.

Date: June 24-28, 2011
Location: San Diego Convention Center
San Diego, California

For information on fees or to register, visit: https://www2.cmrreg.com/ada_3s/

Diabetes Educators of the Cincinnati Area (DECA) (covers Northern Kentucky) invites anyone interested in diabetes to our programs. Please contact Susan Roszel, corresponding secretary at sroszel@fuse.net or Jana McElroy at jmcelroy@stelizabeth.com or call 859-344-2496. Meetings are held in Cincinnati at the Good Samaritan Conference Center unless otherwise noted.

Registration 5:30 PM — Speaker 6 PM
1 Contact Hour —Fee for attendees who are not members of National AADE

The Greater Louisville Association of Diabetes Educators (GLADE), which covers Louisville and the surrounding area, meets the second Tuesday every other month. Registration required. For a meeting schedule or to register, contact Melissa Kleber diabetesed@rocketmail.com.

The Ohio River Regional Chapter of the American Association of Clinical Endocrinologists (AACE) and the Kentuckiana Endocrine Club (KEC) meet on a regular basis. For a schedule of meetings, contact Vasti Broadstone, MD, phone 812-949-5700 email joslin@FMHHS.com

All Programs Offer 2 Free Contact Hours

2011 Dates: January 20th; May 20th (Workshop); July 21st; October 20th

The Tri-State Association of Diabetes Educators (TRADE), which covers Western KY/Southern IN/Southeastern IL, meets quarterly from 10–2 pm CST with complimentary lunch and continuing education. To register, call (270) 686-7747 ext. 3019 or email Nancy Walker at nancyt.walker@ky.gov.