

DIABETES CENTER OF EXCELLENCE

NEWSLETTER

Section of Endocrinology, Diabetes and Nutrition



EXCEPTIONAL CARE. WITHOUT EXCEPTION.

NEWSLETTER NO. 3

FEBRUARY 2010

NATIONAL NEWS

A1C for Diabetes Diagnosis

American Diabetes Association (ADA), The Endocrine Society, and American Association of Clinical Endocrinologists/American College of Endocrinology (AAACE/ACE) have all issued statements for the use of A1C as a diagnostic tool.

ADA Statement: to test for diabetes or to assess risk of future diabetes either A1C, FPG or 2-H, 75-G OGTT (2hr. 75g oral glucose tolerance test) are appropriate. An A1C level of 5.7% - 6.4% indicates increased risk for diabetes. An A1C level of 6.5% or higher indicated the presence of diabetes.

The Endocrine Society Statement: The Endocrine Society supports the ADA recommendations for the use of A1C as an option to diagnosis diabetes, because of its close correlation with microvascular complications and its ease of use. They support the general concept of the use of A1C to diagnose pre-diabetes but they indicate that the ADA criteria define a much smaller population than tested with fasting glucose and OGTT. The Endocrine Society recommends a more stringent CV risk management for metabolic syndrome patients and patients with an A1C of >5.7%.

AAACE/ACE Statement: The American Association of Clinical Endocrinologists and the American College of Endocrinology (ACE) have evaluated the role of A1C for the diagnosis of type 2 diabetes. They endorse the use of A1C of 6.5% or higher as the primary criterion of the diagnosis of diabetes.

They list the following recommendations that must be applied:

1. A1c should be considered as an additional option criterion, not as the primary criterion.
2. AACE/ACE suggest using traditional glucose criteria for diagnosis when feasible.
3. A1c is not recommended for diagnosing type 1 diabetes.
4. A1c is not recommended for diagnosing gestational diabetes.
5. A1c may be misleading in several ethnic populations (e.g. African-Americans).
6. A1c may be misleading in the setting of various hemoglobinopathies, iron deficiency, hemolytic anemias, thalassemias, spherocytosis, and severe hepatic and renal disease.
7. AACE/ACE endorse using only standardized, validated assays for A1c testing.

AACE/ACE do not endorse A1C criteria for pre-diabetes or for those at risk for diabetes. They do support an A1C or 5.5% - 6.4% as a screening test for pre-diabetes if it leads to measurement of fasting glucose or OGTT for diagnosis.

Summary of Standards of Medical Care in Diabetes - 2010

The Standards of Medical Care in Diabetes are revised annually by the ADA Multidisciplinary Professional Practice Committee. Below is a summary of the new 2010 Standards:

A1C – goal is <7%	Quarterly but based on treatment goals
Aspirin therapy 75-162 mg/day	For all with type 1 or type 2 with increased CV risk for primary prevention, including men > age 50 and women >age 60; as secondary prevention for all with history of CVD
Blood Pressure – <130mm Hg/<80 mm HG	Each visit ACE-I or ARB as first line therapy
Diabetes Self-Management Education (DSME)	When diagnosed and as needed thereafter
Review of diabetes self- management goals	Each visit

Influenza immunization	Annually
Pneumonia immunization	One time unless given more than 5 years before age 65 or immunocompromised
Preconception and family planning counseling	As needed. Women with gestational DM should be screened 6-12 weeks postpartum and subsequent screenings for DM or Pre-DM
Self-monitored blood glucose: Preprandial 90-130 Post-prandial <180	Type 1 = 3 or more times/day for MDI or insulin pump Type 2 = as needed to maintain glycemic control May need to check post-prandially
Smoking cessation	Counsel at each visit
Urine Microalbumin / Creatinine	Type 1 = after 5 years of DM, then annually Type 2 = at diagnosis, then annually ACE-I or ARB for treatment when 2 of 3 tests are elevated within 6 months

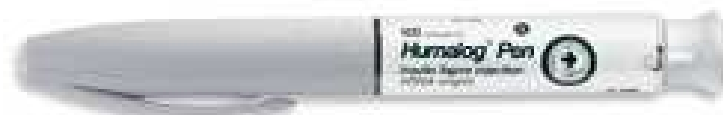
KwikPen™

Disposable Insulin Delivery Device



New KwikPen™

The Humalog KwikPen™ is now available on the BMC formulary. This 3 mL vial pen is prefilled with Humalog pre-meal insulin, and delivers insulin in one-unit increments up to a 60u/dose. Patients like this small, lightweight pen with the shorter plunger that is easier to push. The KwikPen does not need refrigeration after the first dose. Humalog, Humalog Mix 75/25 and Humalog Mix 50/50 are all available in the KwikPen and the original prefilled pen.



Original prefilled pen



Humalog and Humulin R U-100

Lilly has announced that 3mL (300 unit) vials of Humalog (insulin lispro) and Humulin R U-100 (regular insulin) are now available to hospitals and patients. Based on the average length of stay in the hospital for patients with diabetes or patients requiring minimal amounts of insulin, the smaller insulin vial was developed to provide more flexibility for storage and delivery. This size might also be more economical for patients on small doses. Note that Lilly is using a 5mL vial but filling the vial with 3mL of Humalog. Lilly will continue to supply the traditional 10mL (1000 unit) insulin vial sizes as well as its pre-filled pen injection devices.



Victoza® (liraglutide)

Novo Nordisk recently received US approval for Victoza® (liraglutide) for the treatment of type 2 diabetes in adults. This is the first once-daily human Glucagon-Like Peptide -1 (GLP-1) analogue that is indicated as an adjunct to diet and exercise to improve glycemic control with a low risk of hypoglycemia. Victoza® works by stimulating the release of insulin from the pancreatic beta cells only when blood sugar levels are high. It reduces meal-related hyperglycemia (for 12 hours after administration) by increasing insulin secretion, delays gastric emptying, and suppresses

prandial glucagon secretion. It is not associated with weight gain and clinical trial data demonstrate a decrease in body weight. The most common side effects were associated with the gastrointestinal system in the early part of treatment.

Onglyza® (saxagliptin)




Bristol-Myers Squibb and AstraZeneca Pharmaceuticals received approval, in mid 2009 for Onglyza® to be used to treat type 2 (not type 1) diabetes in adults. This once-daily pill is meant to be combined with proper diet and exercise to help control blood glucose. It is among a class of drugs called DPP-4 inhibitors, which are designed to help the body increase the level of insulin after meals. Onglyza® is not likely to cause blood glucose to be lowered to a dangerous level as it does not work well when blood glucose is low. This medication may be taken with or without food. The most common side effects are upper respiratory and urinary tract infections and headache.

DIABETES CENTER OF EXCELLENCE: PEOPLE IN THE NEWS

✚ **Marie McDonnell, MD published the following:** Long-term successful weight loss improves vascular endothelial function in severely obese individuals. Bigornia SJ, Mott MM, Hess DT, Apovian CM, McDonnell ME, Duess MA, Kluge MA, Fiscale AJ, Vita JA, Gokce N. Obesity (Silver Spring) 2010 Jan 7.

✚ **Sara Pietras, MD published the following:** Pietras SM, Obayan BK, Cai MH, Holick MF. Vitamin D2 treatment for vitamin D deficiency and insufficiency for up to 6 years. Arch Intern Med. 2009 Oct 26; 169(19):1806-8.

Pietras SM, Holick MF. Refractory hypocalcemia following near-total thyroidectomy in a patient with a prior Roux-en-Y gastric bypass. Obes Surg. 2009 Apr; 19(4): 524-6.

-  **Daniel J. Rubin, MD and Marie McDonnell, MD published the following:**
Rubin DJ, McDonnell ME. The effect of a diabetes curriculum on internal medicine resident knowledge. Endocr Pract. 2010 Jan 9; 1-19.
-  **Neil Ruderman, MD, D.Phil. published the following:**
Ruderman, NB, XuXJ, Nelson LE, Cacicedo JM, Saha AK, Lan F, Ido Y. AMPK and SIRT1: a longstanding partnership? (Abstract) Am J Physiol Endocrinol Metab. 2010 Jan 26
-  **Elliot Sternthal, MD published the following:**
Wiecha J, Heyden R, Sternthal E, Merialdi M. Learning in a virtual world: experience with using second life for medical education. J. Med Internet Res. 2010 Jan 23; 12(1):e1.