

VOL. 3 ISSUE 1 • MAY 2022

CRAY QUARTERLY

Official Newsletter of Cray Diabetes Self-Management Center



Our Mission

The Cray Diabetes Self-Management Center supports the University of Kansas Health System's Endocrinology and Internal Medicine Departments for comprehensive diabetes care. The diabetes center is founded on Bud and Sally Cray's beliefs that diabetes treatment should not be hurried and should be based on mutual conversations, listening and problem solving. These beliefs continue to be the driving model for patient care within the program. Patients have opportunities to visit with diabetes educators, attend support groups and take group classes in addition to their regular doctor and advanced practice professional visits.

For more information contact us at craydiabetes@kumc.edu or call 913-588-6877.



By: Kayla Graves, MS, RDN, LD, CDCES, Registered Dietitian and Certified Diabetes Care and Education Specialist

DM technology and Trends: Smart Insulin Pen

Smart insulin pens pair with technology to help make managing diabetes easier. They have many capabilities, including calculating insulin doses, managing insulin on board, setting reminders to take insulin, and creating detailed reports that can be shared with your healthcare team.

One product available on the market is the InPen by Medtronic. It was designed for insulin-dependent individuals on multiple daily injections. It can deliver up to 30 units of insulin, dialed in 0.5-unit increments. InPen is compatible with Humalog, Novolog and Fiasp insulins. It can pair with the Dexcom G6 CGM or the Guardian Connect CGM. InPen has a one-year warranty and does not require charging.

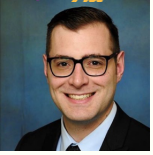
The InPen app is the other half of InPen's smart diabetes management tool. Using information transmitted from the pen, the app can track insulin therapy, calculate doses, share therapy data with your doctor or family, and more.

InPen is covered as a pharmacy benefit under most insurance plans. Currently, you will pay no more than \$35 per year for InPen.



Is InPen a good fit for you?

- Do you ever forget to take a dose of insulin?
- Not sure how much insulin to take for your meal or to correct for high blood sugar reading?
- Don't feel confident about calculating your insulin dose?
- Wish it was easier to keep track of mealtime doses and blood sugar—and be able to share with your healthcare team?



By: Ethan Alexander, MD, PGY-5 Department of Endocrinology, Metabolism, Genetics

Endocrinology Corner

Know Your Risk Factors!

It is well established that diabetes increases risk for cardiovascular disease (CVD). Cardiovascular events are the leading cause of mortality among Americans, both those with and without diabetes. Understanding and attacking your risk factors for cardiovascular events is vital to preventing morbidity and mortality. We understand traditional risk factors for cardiovascular disease such as diabetes, dyslipidemia (lipoprotein abnormalities), hypertension, smoking, and obesity. These risk factors are compounding, each adding to increase the risk of CVD. There is intensive ongoing research both from a basic science perspective and a clinic outcome bases perspective to identify novel risk factors to identify those with increased risk for CVD. One such risk factor that has been identified and is currently undergoing great scrutiny is lipoprotein (a).

Lipoprotein (a)

Lipoprotein (a), also denoted lp(a) and pronounced “LP little a” is a genetically derived lipoprotein that has emerged through basic science research and has been linked to increased cardiovascular risk. Lp(a) is a very interesting lipoprotein and its molecular biology is quite fascinating. Lp(a) is at its core a low-density lipoprotein (LDL). Low density lipoprotein, and more specifically, lipoproteins containing apolipoprotein B (ApoB) have been linked to CVD risk. The unique property of lp(a) is that there is an extra protein attached to the LDL called apo(a). The combination of these two particles have been shown to be an independent risk factor for CVD. The mechanism of increased risk is complex and is outside the scope of this section

Intervention

Lipoprotein (a) is determined genetically and traditional interventions to reduce cardiovascular risk (improved diet, exercise, statin medications) have minimal impact on lp(a) concentrations. One class of lipid-lowering therapy, the PCSK-9 inhibitors, lower lp(a) mildly. Lipoprotein apheresis, a treatment to “filter” the blood lowers lp(a) drastically. Fortunately, at the University of Kansas Medical Center we have a thriving lipoprotein apheresis program.

On the Horizon

Multiple clinical trials are underway to evaluate medications that directly target lp(a). These trials provide hope for those with elevated lp(a), and certainly those with concomitant diabetes where the risk is even more elevated, that this risk factor may be more directly target to reduce CVD.

Summary

Knowing your lp(a) level and discussing this with your physician is extremely important to understanding the risk factors for CVD you are up against. This independent risk factor plays a part in CVD risk and if you are already predisposed to risk with having diabetes, it is pivotal these both be addressed to prevent CVD.

To Learn More:

<https://lipoproteinafoundation.org>

https://www.lipid.org/sites/default/files/elevated_lipoprotein_a.pdf



By: Kayla Graves, MS, RDN, LD, CDCEs, a Registered Dietitian Nutritionist and Diabetes Care and Education Specialist

Let's Move More: Resistance Exercise

Building muscle is one of the best things you can do to improve insulin sensitivity and blood sugar control, increase metabolism, and age well. Did you know that after age 30, you begin to lose as much as 3% to 5% of your muscle mass each decade? This can result in increased insulin resistance and excess weight gain, which can make managing your blood sugars more difficult. To combat this, we must be proactive about incorporating strength training exercises into our routines.

Strength exercises can be modified for people with different abilities and mobility. You can use your own bodyweight, perform seated chair strength workouts, or incorporate resistance bands or free weights.

If you are just starting with resistance training start with 1 set of 8-12 repetitions of 8-10 exercises for conditioning of each major muscle group. You can always increase repetitions before increasing or introducing weight.

A good long-term goal is to aim for 2-3 exercise sessions per week that include:

- 8-10 different exercises
- 1-3 sets of each exercise
- 6-15 repetitions per exercise

Check out these resources to get started:

1. Resistance Training with Free Weights: <https://diabetesed.net/wp-content/uploads/2018/10/resistance-exercise-intro-2.pdf>
2. Resistance Training Using Bands: <https://diabetesed.net/wp-content/uploads/2018/10/resistance-band-exercises-2.pdf>
3. Youtube. 17-minute Strength Training Workout for Beginners: <https://www.youtube.com/watch?v=WIHy-ZnSndA>



By: Pattie Lueyot, MS, RDN, LD, CDCEs, Program Coordinator / Certified Diabetes Care and Education Specialist

Easy-to-Grow Herbs: Simple Way to Add Flavor to Your Meals

Why Grow Your Own: Fresh herbs bring a whole new dimension to cooking, helping to enhance flavors while boosting health and wellness. Natural foods such as herbs and spices help diets become rich in antioxidants. Phytonutrients in herbs such as phenolic compounds, and other antioxidants have shown promise as anti-aging, anti-inflammatory, anti-carcinogenic, anti-microbial, and cardiovascular agents, among others.

How to Grow Your Own: With a little sunshine and a few pots, you can start your own easy-to-maintain herb garden either indoors or outdoors. Perennial herbs like mint, thyme, rosemary, sage, oregano, chives, and parsley grow back every year while annual herbs such as cilantro, dill and basil are also easily grown in your herb garden or containers. Late spring is typically a good time to start sowing herb seeds directly outdoors in the garden. For indoor planting, start the seed in a container with potting soil in early spring and use a grow light or sunny part of your home. Experiment with different kinds of herbs; you will find fresh cut herbs adds flavor that cannot be matched by dried store bought herbs.

How to Use Your Herbs in Recipes:

- Marinating: most herbs such as mint, thyme, rosemary, sage, oregano, chives, parsley, cilantro, and dill are great to add to any marinating sauce for meat, poultry, fish and roasted vegetables.
- Garnish: mint, basil, chives, parsley, cilantro, and dill
- Flavor your stock: chives, parsley, and cilantro
- Add fragrance to your salad and vegetable dishes: mint, chives, parsley, cilantro, and dill

Herb Seasoning Guidelines:

1 tablespoon finely chopped fresh herbs = 1 teaspoon crumbled dried herbs = 1/4 to 1/2 teaspoon ground dried herbs.

- When doubling a recipe, do not double herbs and spices. Increase amounts by 50%, adding more if needed.
- Add less delicate herbs (such as dill seed, oregano, rosemary, thyme) earlier in the cooking and more delicate herbs (such as basil, chives, mint, cilantro, parsley) later or just before serving

THE BEST WHOLE 30 BANANA MUFFINS

From: <https://measurewhole.com/blog/2020/1/9/the-best-whole-30-banana-muffins>

INGREDIENTS:

- 4 medium bananas, ripe
- 3 eggs
- 1/4 cup coconut oil melted
- 1/2 cup coconut flour
- 1 tsp baking soda
- 1 tsp cinnamon
- 1/4 tsp sea salt



DIRECTIONS:

1. Preheat oven to 350°F.
2. Mash bananas in a large mixing bowl. Whisk in eggs and coconut oil until well combined.
3. Add in all dry ingredients and mix until a thick batter forms.
4. Divide batter evenly among 12-15 muffin tins and bake for 20-25 minutes. If you would like add in a few fresh blueberries or dairy free chocolate chips if you aren't doing whole30.
5. Remove from the oven and allow the muffins to cool for 15-20 minutes before enjoying. Store in an airtight container in your refrigerator up to a week. You can also freeze these for up to a month.

NUTRITION: PER MUFFIN

Nutrition Facts per muffin: 106 kcal, Total Carb: 12g (Fiber: 3g Sugar: 5g), Protein: 3g, Total Fat: 6g Saturated Fat: 4g Monounsaturated Fat: 1g Polyunsaturated Fat: 0g Trans Fat: 0g Cholesterol: 47mg Sodium: 170mg Potassium: 159mg



Fluffy Key Lime Pie

From: <https://www.tasteofhome.com/recipes/fluffy-key-lime-pie/print/>

Ingredients (8 servings)

- 1/4 cup boiling water
- 1 package (0.3 ounce) sugar-free lime gelatin
- 2 cartons (6 ounces each) Key lime yogurt
- 1 carton (8 ounces) frozen fat-free whipped topping, thawed
- 1 reduced-fat graham cracker crust (9 inches)

Directions:

1. In a large bowl, add boiling water to gelatin; stir 2 minutes to completely dissolve. Whisk in yogurt. Fold in whipped topping. Pour into crust.
2. Refrigerate, covered, until set, about 2 hours.

Nutrition Facts: Per each serving:

194 calories, Total Carb: 33g (Fiber 0 g, Sugar 18g), 3g Protein: 3 g, Total Fat: 3 g (Saturated fat: 1 g), Cholesterol: 2 mg, Sodium: 159 mg