NEWSLETTER

Monthly

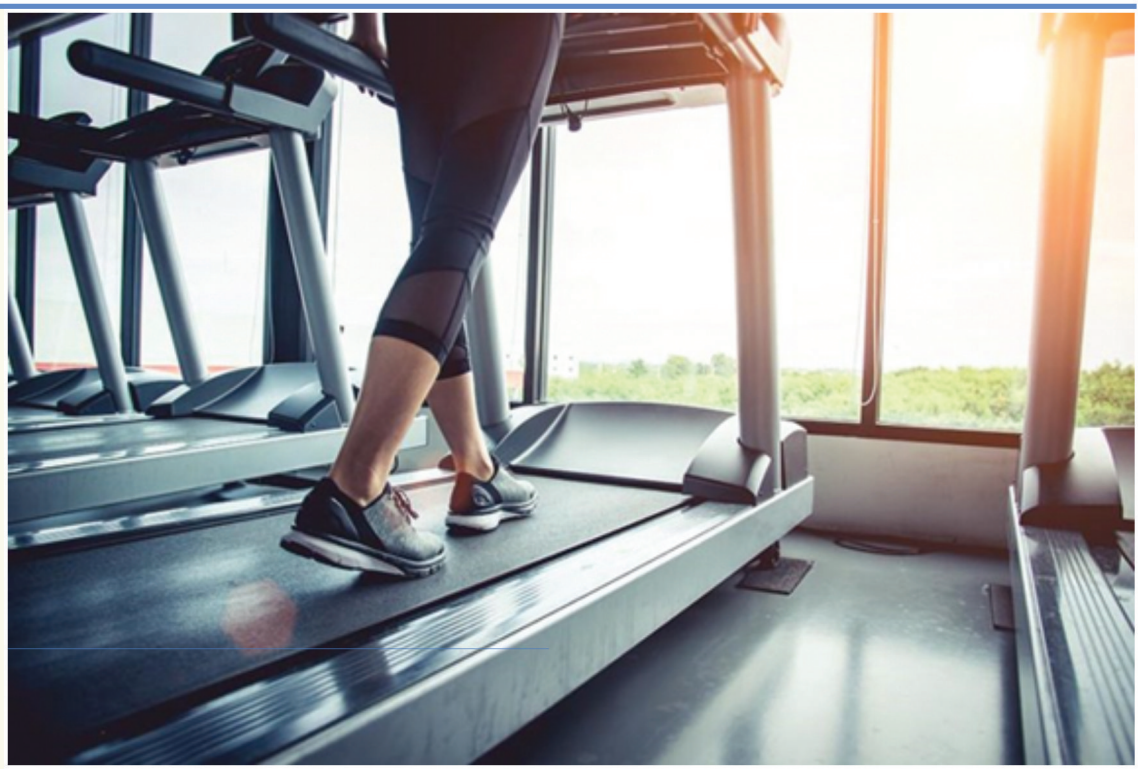
Diabetes Educator

A forum for diabetes educators, dietitians and other health care professionals with interest in diabetes.

Aims:

To provide, facilitate and promote education for prevention and management of diabetes and its complications.

Contents



Should you exercise in the "fat-burning zone?"

by Caitlin Dow

"A colleague once told me, 'I'm only walking at two miles an hour because I'm burning more fat that way,'" recalls John Porcari, professor of exercise and sport science at the University of Wisconsin–La Crosse.

Why? She wanted to be in the "fat-burning zone."

It's true that when you're strolling or sitting on the sofa, you do burn more calories from fat than from carbs.

"Your body doesn't burn fat very efficiently," notes Porcari. "But it doesn't need to be efficient when you're not working hard."

"But as we progress to a higher heart rate—that is, higher-intensity exercise¬—our ability to rely on fat for energy decreases and carbohydrate becomes our preferred fuel," explains Jenna Gillen, assistant professor of kinesiology and physical education at the University of Toronto.

But that's no reason to slow down.

"You may be burning a greater percentage of fat during low-intensity exercise," says Gillen, "but that doesn't mean you're burning a larger amount of fat. Unless you exercise for a long time, you're not burning many calories."

In one study, 27 women with obesity who were on a low-calorie diet were randomly assigned to cycle at either high or low intensity three times a week. The "high" group cycled for 25 minutes; the "low" group cycled for 50 minutes.

"They burned the same calories, and after eight weeks, both groups had lost the same amount of weight and body fat," says Porcari.

Bottom Line: Ignore the fat-burning zone. Gillen's advice: "Focus on burning more calories rather than the ratio of fat-to-carbohydrate burn."

Children more likely to be overweight if mothers smoke, study finds

By Lynne Kelleher

The children of Irish mothers who smoke are more likely to be overweight or obese, according to a

The University College Cork research on primary carers, 98% of whom were biological mothers, discovered a link between maternal smoking postnatally and obesity in children aged three and five.

It found that children exposed to maternal smoking or primary carers' smoking are 30% more likely to be overweight or obese at age three, and 31% more likely to be obese or overweight at age five, compared with children of non-smoking mothers.

The study's lead author, Salome Sunday, said there is a theory that secondhand smoke is linked to a child's weight.

"It has been hypothesised that inhaling the chemicals in tobacco smoke (secondhand smoke exposure) may cause impaired metabolic and immune functions, leading to an increase in the child's susceptibility to obesity," she said.

It is understood the research — which used findings gathered from more than 11,100 children in the Growing Up in Ireland study — is one of the first Irish studies to examine how secondhand smoke from primary carers is linked to childhood obesity.

"Both childhood obesity and secondhand childhood exposure are public health issues in Ireland," said the authors.

Childhood obesity is linked to a string of health conditions later in life, including an increased risk of type 2 diabetes, heart diseases, cancer, as well as lifelong overweight and obesity.

Public health professional Ms Sunday, from the School of Public Health in UCC, said she believes voluntary smoke-free households need to be vigorously promoted.

The findings also suggested that the risk of childhood overweight or obesity following childhood secondhand smoke exposure was independent of both low birth weight and breastfeeding.

The study authors revealed that current estimates show that, in this country, about 7% of girls and 6% of boys aged from four to 16 years are obese, putting Ireland at 58 out of 200 countries in the childhood obesity charts.

The study, Impact of Carers' Smoking Status on Childhood Obesity in the Growing Up in Ireland Cohort Study, was carried out by Ms Sunday and Zubair Kabir in the School of Public Health, UCC.

The research, which has just been published in the International Journal of Environmental Research and Public Health, found that for six out of 10 participating children neither caregiver/parent smoked.

The research also found that primary carers —mainly made up of biological mothers — who reported smoking proportionately breastfeed their babies less.

The study found that, overall, carers who smoked were more likely to have a household income in the lowest group, to be unemployed, and to consume alcohol weekly.

With connected devices, educators can optimize diabetes outcomes

Healio |August 15th 2019

HOUSTON — Insulin pumps and continuous glucose monitoring offer people with diabetes "opportunities for connected care," and diabetes care and education specialists can do more to leverage available technology to improve clinical outcomes and better integrate devices into practices, according to three speakers at the American Association of Diabetes Educators annual meeting.

"There are many devices that can create data we can use, but they are often not connected in ways that are helpful," Korey Hood, PhD, professor and staff psychologist at Stanford University School of Medicine, said during a presentation. "There is limited interoperability; there are number of concerns about the volume of data and whether we have the ability to go through it all. Practices are busy, so it's also thinking about trying to do something that doesn't disrupt clinic flow. These are all the challenges we have when we think about connecting care and using data better from these devices."

In a remote CGM pilot study conducted by Cecelia Health, a venture-backed health tech services company based in New York City, researchers assessed outcomes after patients with diabetes initiated CGM outside of the clinic setting with a certified diabetes educator, according to Teresa McArthur, MS, RD, CDE, vice president of clinical services for Cecelia Health. Over phone and video, as well as via emails and text messaging, diabetes educators supported patients in CGM selection, virtual training and data system setup. Data review and interpretation with the participants followed.

Increasing engagement

Insulin pumps and continuous glucose monitoring offer people with diabetes "opportunities for connected care," and diabetes care and education specialists can do more to leverage available technology to improve clinical outcomes and better integrate devices into practices.

Source: Adobe Stock

Determine which patients are "high touch" vs. "low touch." High-touch patients may need more motivation and coaching, whereas low-touch patients tend to be more tech-savvy and confident, McArthur said.

Personalized approaches are essential. "Each participant has a different story and a different barrier to work through," McArthur said.

Behavior change is key. "Technology is an amazing tool, and it can benefit people with diabetes tremendously; but if it doesn't lead to behavior change, I don't see the point," McArthur said. "That's why we have these tools."

Identify what motivates each person with diabetes. "If you don't get that to the forefront of the conversation, you're not going to get anywhere," McArthur said.

Make technology simple by breaking down instructions into small steps and accounting for a person's readiness to learn. "There are a lot of reports and data from CGM," McArthur said. "Maybe it's just looking at one report and that is all you're going to look at and work with."

Trust the numbers. "One thing we have learned is that participants have a hard time trusting that switch from [blood glucose monitoring] to CGM," McArthur said. "There is a lot of fear and hesitation there. We have to get them to trust."

"The more diabetes educators work to understand the technology and tools that are available for people with diabetes, the more valuable educators are to the practice they work in," David Weingard, MBA, founder and CEO of Cecelia Health, said during the presentation.

Additionally, the connected device landscape encompasses other wireless devices and apps, such as fitness trackers, that can now take CGM data and integrate it with wellness data, allowing personalized coaching for patients, he said.

"You're going to start to see all of this data come together, but in the end, technology can only do so much," Weingard said. "It's your judgement to take all this data, take all of the output of the algorithms, and identify the best course for the patient."

Raising awareness

It is important for diabetes educators to keep

up on the latest devices and reach out to people with diabetes to identify their potential barriers to find the device that works best for them, Hood said.

"There can't be a one-size-fits-all approach," Hood said. "Having the opportunity to know someone's readiness for using these different tools is really important. It is also important that they have access to the landscape of devices available to them so that they can be part of the conversation with the diabetes educator in shared decision-making."

The key takeaway, Hood said, is to know where the person with diabetes is coming from and what might get in the way of using a potential device, such as a CGM. Ask questions early in the process, he said, think about where people are seeking and obtaining information now, and leverage use of social media to inform discussions.

"You can't just have the devices and the person with diabetes," Hood said. "You need this critical diabetes care team, the diabetes educator, that helps facilitate trust and helps with problem-solving early on in the process." – by Regina Schaffer

Reference:

Hood K, et al. D14. Presented at: American Association of Diabetes Educators; Aug. 9-12, 2019; Houston.

Disclosures: Hood reports he has received research support for an investigator-initiated study from Dexcom and consultant fees from Lifescan Diabetes Institute, Lilly Innovation Center and Roche. McArthur and Weingard report no relevant financial disclosures.

As School Starts, Pack That Lunch with Nutritional Goodies

HealthDay News | SUNDAY, Aug. 18, 2019

Planning for your children's return to school this fall should include thinking about how to pack healthy lunches that they'll enjoy.

Try to include children in the process of creating their lunches, including buying food and packing (or helping pack) their lunches. This lets them make their own choices and helps them learn about nutrition, according to Manisha Vaidya, a clinical dietitian at the University of Alabama at Birmingham.

Many grocery stores offer a variety of ready-to-pack cut fruits and veggies, as well as dried fruits and unsalted nuts, pre-portioned cheese and single-serve yogurts, hummus and cracker cups, and tuna and chicken pouches. Direct your children to these fruit, veggie, grain and protein products for their lunch shopping and menu planning.

A good-quality lunch box, water bottle, thermal beverage container, some cool packs and some reusable containers will help lunches stay cool and fresh, increasing the chances that children will eat more of their lunches, according to a university news release.

Ensure food safety. Put an ice pack in your child's lunch box if they're having yogurt/deli sandwich/fresh vegetables, or fruits. Teach children about hand sanitation and safe food handling and storage.

Create a reward plan with your child for finishing school lunches and choosing healthy snacks. It can be something such as a trip to the bookstore, a play day at the park with a friend, or a visit to the frozen yogurt shop on the weekend.

Make school lunches fun. After sandwiches are made, let your child use cookie cutters to create fun, bite-size portions. Fruits and vegetables are also more appealing to children when they're in fun shapes and bite-size portions.

On random days, surprise your children with items such as a cheerful note, comic strip, or fortune cookie in their lunch box. Or on the last day of each month, put a small prize from the dollar store in their lunch box.

I'm in pain, so why is my doctor suggesting a psychologist?

Salim Zerriny, MD, David Boyce, MD | August 14, 2019

Pain makes us human. It is a bell, fine-tuned by evolution, that often rings in moments necessary for our survival. Because of pain, we can receive warnings that trigger the reflexes to escape potential danger.

But what happens when that bell continues ring? How do we respond to a signal when it interferes with the other elements that make us human?

Pain that lasts longer than six months is considered chronic, and it may not go away. With chronic pain, the bell's ongoing signal gets your nervous system wound up and increases its reactivity to incoming messages. This can be quite distressing and anxiety-provoking. Additionally, the feelings of frustration or sadness when pain doesn't go away can make pain worse.

What's the link between emotion and my perception of pain?

Pain, depression, and anxiety travel through similar pathways along your nervous system and share many of the same biological mechanisms. One of the areas in the brain that receives pain signals — specifically, the limbic region — shares many of the same messengers as the mood signals. We know from research studies using neuroimaging that the parts of the brain controlling emotion and sensory features of pain are altered in people with chronic pain.

The connection between pain and emotion can also be seen with certain classes of medications. For example, some medications used to treat pain can cause side effects like euphoria, and medications originally developed for psychiatric conditions can be effective treatments for certain types of pain.

The medical community has come to appreciate a direct correlation between improvement in one's emotional well-being and their experience of pain (and vice versa). Chronic pain increases the risk of depression and anxiety, and depression and anxiety strongly predict the development of chronic pain. This association is seen in conditions like fibromyalgia and irritable bowel syndrome, where behavioral and psychological treatment strategies have shown benefit in reducing symptoms.

What can a psychologist help me address?

- **Pain catastrophizing:** This is when you magnify the negative effects of pain and focus on feelings of helplessness while ruminating about the presence of pain in your life. Negative thoughts and beliefs about pain often lead to worsened emotional and social functioning and a decreased response to medical interventions for pain.
- **Fear of pain:** Concern or worry about an injury drives avoidant or protective behaviors. The anticipation of an increased sensation of pain may limit you from engaging

• **Pain acceptance:** This is a challenging, but highly effective technique focused on developing an accepting attitude towards the pain. It involves doing your best to nonjudgmentally acknowledge the presence of pain and minimize unhelpful thoughts and behaviors that won't make pain better.

• **Trauma:** The link between prior trauma and chronic pain is becoming better understood. Psychological therapies can address ongoing physical and emotional stress responses linked to traumatic experiences.

What type of therapies help with chronic pain?

There are multiple psychotherapeutic treatment options commonly used to help people manage chronic pain. Practicing meditation and becoming as active as possible have been shown to be effective methods that can be done on your own. Mental health professionals who specialize in working with people in pain can guide you with additional evidence-based treatments:

• **Cognitive behavioral therapy (CBT):** talk therapy that helps to change your thoughts and behaviors related to pain and improve coping strategies. You can learn CBT techniques with a psychologist or as part of a therapeutic group, which may also provide a support network.

• **Mindfulness-based stress reduction (MBSR):** a form of mediation where you learn to nonjudgmentally become aware of your thoughts and feelings and accept pain and other uncomfortable sensations as neither positive nor negative.

• **Hypnosis for pain (hypno-analgesia):** a set of techniques intended to modify your thoughts, feelings and behaviors via subconscious suggestions aimed at altering your experience of pain. Hypno-analgesia differs from CBT, which is a conscious recognition of your emotions related to pain and a more self-directed, action-oriented approach.

• **Biofeedback:** a technique where your body functions such as heart rate, muscle tension, and skin temperature are monitored to make you aware of your involuntary responses to stress. During biofeedback sessions you learn a variety of ways to control your physical reactions to stress and anxiety.

Where can you find help to manage the emotional aspects of pain?

It is always recommended that you have a primary care physician coordinating your care, and you doctor may be able to provide you with a referral to a pain specialist or psychologist. It is worth finding out what mental health services your health insurance covers as you navigate this process.

Will my pain ever go away?

This question is surely at the top of every person's mind if they are in pain. The difficulty in answering this stems from the variety and types of chronic pain syndromes, as well as individual variability. What has been shown to make a difference in people managing chronic pain is trying a variety of approaches, such as cognitive and behavioral techniques, staying active, practicing meditation, and working with your doctor to find effective medical and procedural interventions. The more of these interventions you try, the more likely you will find something that makes a positive impact.

The challenges of coping with a chronic pain condition cannot be understated. The negative emotions that come from it can be self-perpetuating, as one's feelings of pain can lead to depression, and that very depression can lead to worsening pain. In coping with this cycle, the goal is to take whatever steps are possible to continue to lead a fulfilling life, including getting emotional and social support.

Our understanding of pain continues to evolve, and with it may come improved personalized treatments and better understanding of chronic pain's influence on the body and mind.

In the Next Issue

- Latest updates of NADEP activities
- Diabetic amputations a 'shameful metric' of inadequate care
- Update on pre - Ramadhan activities
- and more...