About Dr. Brian Mowll

Dr. Brian Mowll, The Diabetes Coach™, is the founder and medical director of SweetLife® Diabetes Health Centers and serves clients worldwide as The Diabetes Coach™. He is a master licensed diabetes educator (MLDE), CDE, and was one of the first doctors to be certified to practice functional medicine by the prestigious Institute for Functional Medicine.

Since 1998, Dr. Mowll has been helping people with all forms of diabetes properly manage their complex health conditions. Additionally, with type 2 diabetes, pre-diabetes, and metabolic syndrome, his goal is to not just manage, but to reverse these conditions using a natural, personalized lifestyle approach.

Dr. Mowll has spent over 20 years studying and applying clinical nutrition, physical activity, lifestyle management, functional medicine, and diabetes self-management education. He is the host of the popular “Diabetes World Summit”, as well as a prolific writer, blogger, and speaker.

In addition, he has written hundreds of articles about diabetes and natural health, and has been a featured speaker and contributor on diabetes. Dr. Mowll treats clients locally in the greater Philadelphia area and nationally through his acclaimed Mastering Diabetes™ programs.

To find out more, visit:
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According to the Centers for Disease Control and Prevention, roughly 30 million Americans are currently living with diabetes. That’s almost 10% of the entire population, which is, clearly, way too many people.

Those living with the diabetes know that diabetes management, the key to living the healthiest life without complications, includes several things, including:

• Eating right
• Exercising
• Monitoring blood glucose

And now technology is helping diabetes patients manage their disease. In the last five years, numerous apps have flooded the market and more come onto the scene, it seems, every month. There are so many diabetes apps at this point, that many people, including some of my patients, are overwhelmed and confused as to which apps they should be using.

In this report I’m going to share some of the best apps on the market that will help you eat right, exercise, and monitor your blood glucose.
Blood Sugar Testing

Blood sugar monitoring is incredibly important for diabetes and glucose management. Therefore, it’s important to use a reliable blood sugar meter (glucometer) to ensure accurate results. Manufacturers of meters must meet certain criteria for accuracy, set up by the International Organization for Standardization (IOS). Currently, this requires approved meters to be reliable up to +/- 20 mg/dL at glucose levels over 75 mg/dL. That means if your blood sugar is 95 and your meter reads 115, it’s still considered “accurate”. That’s concerning, but nonetheless, how the current standards are applied.

Most standard glucose monitors work by reading whole blood from a simple finger prick. Most people find these finger sticks, using a standard lancing device, to be only slightly uncomfortable. There is a device I recommend for my patients, called “Genteel”, which is a painless instrument to draw a drop of blood from the finger tips as well as other alternative testing sites.

In addition, there are a variety of glucometers, which have a wide range of features. Some are very simple, others have a large type face, some report glucose levels more quickly, and others can sync with your computer or smart phone to make it easy for you to track your glucose levels. These features vary with the price of the glucose monitor that you choose, as do the size and appearance of the monitor.

Normally glucose monitors range in price from about $30-$100 and many are fully covered through insurance companies or free from companies who sell glucose test strips. The test strips are more expensive than the monitors themselves, and need to be contentiously purchased.

Here are the most accurate and reliable meters based on individual and peer-reviewed research.
Abbott Freedom (Freedom Lite)

Diabetes pioneer, educator, and physician, Richard Bernstein, MD, declares the Abbott meters to be the most accurate and reliable based on individual testing. In my experience, this seems to hold true (with some exceptions). If your insurance pays for the Freedom or Freedom Lite meter, this seems to be the best choice.

This was also shown to be the most accurate meter when tested against 42 others in a 2012 study published in the “Journal of Diabetes Science and Technology” by Freckmann et al.
Accu-Chek Aviva

Based on another published study by Dr. Freckmann in 2014 in the journal "Diabetes Technology and Therapeutics", the Accu-Chek Aviva was the most accurate and reliable glucometer tested (the Abbott meters were not tested). According to many of my clients, this is a good meter as well, but seems to have more variability than the Freedom and Freedom Lite meters by Abbott.
Bayer Contour Next EZ

In the same 2014 study discussed above, the Contour Next EZ meter scored highly as well. The decision between the three meters listed here may come down to insurance coverage. They are all considered accurate and reliable meters based on individual and clinical trials.
Abbott Freestyle Precision Neo

This meter is my “go-to” recommendation for people who do not have insurance or have not been diagnosed with diabetes and therefore do not have insurance coverage for a glucometer. The Abbott Neo is made for people who have to pay out of pocket for a meter and test strips, but do not want to sacrifice quality or accuracy. This meter uses the same technology as the top flight Freedom meter, but can be purchased for less than half the cost.
The A1c Now home test for hemoglobin A1c is a reliable way to measure the Hb A1c between lab visits. The test is accurate and reliable to within .75%, which is considered acceptable based on current standards. The test kit is not inexpensive, but the information obtained can be valuable when attempting to assess progress in shorter time intervals (Hb A1c is typically ordered every 3-6 months).
Continuous Glucose Monitors

Another option for people who are measuring frequently or want more data are glucose monitors that are “continuous monitoring systems”, or CGMs. For example, the Medtronic Guardian RT is a continuous monitoring system that has an insert that is placed under the skin and can send a report on glucose levels multiple times per hour. Other similar devices, such as the Dexcom G4, are also available. These types of advanced monitors tend to be considerably more expensive than normal glucose monitors- usually around $600- $1300, plus materials.

Some insurance companies may cover CGMs for certain patients, and this can be a convenient solution for those who have coverage or can afford it. While this can be an attractive option for monitoring blood sugar, it’s not as simple as it might seem. There are concerns that continuous monitoring systems may be somewhat inaccurate they need to be calibrated frequently using finger sticks.
Blood Sugar Tracking

Due to recently technological advancements in the market of glucose monitors, many people choose to use software that links their meter to their personal computer or smartphone. This can be fun and convenient, but often sacrifices quality and accuracy. At this time, I generally do not recommend meters that plug directly into your smartphone.

There are many smartphone apps, however, that can make tracking blood sugar levels easy and more interesting. Here are a few good ones.
Glucose Buddy

This is a great app, which is most likely why it has been written about in American Diabetes Association's Diabetes Forecast Magazine, the NYTimes, Wired Magazine, and DiabetesMine.com, to name a few publications.

Glucose Buddy lets you record, annotate, and graph your blood glucose level, medication doses, meals and snacks, and exercise.

Besides letting you post to the Glucose Buddy forums from your phone and check your data on their website, the app will send you notifications when it’s time to check your blood sugar, which I think is a great feature, particularly for those who have been recently diagnosed and are not in the habit of testing their blood.

The current cost is free, though there are additional costs for special features.
Diabetes Pal

The really cool thing about the Diabetes Pal app is that it syncs up with the Telcare blood glucose meter and wirelessly sends your test results directly to the app.

But even if you aren’t currently using the Telcare blood glucose meter, you can still take advantage of Diabetes Pal, you simply have to manually enter your blood glucose readings.

The app also logs your medicine and meal choices, and allows you to make notes. It then takes all of this information and plots data on a line graph, pie chart and bar graph. This is really beneficial because some people are visual learners, and there’s no better way to understand whether or not you are effectively managing your diabetes.

The app is currently offered free of charge.
Glucagon

I love this app because it can actually save lives.

Hypoglycemia, also known as insulin shock, is a dangerous complication of diabetes. Severe hypoglycemia has the potential to cause comas and even death.

This app helps caregivers, or even total strangers who come across a patient in distress, provide the necessary aid in case of severe hypoglycemia. The app includes a video on how to inject the medication and indications. Patients can also make a note right within the app where their Glucagon kit is located.

The app is currently free.
Blue Loop

If you have a child who has recently been diagnosed with diabetes, this app is a wonderful way to keep their health information current.

Easily update information like what their most recent blood glucose reading was, or what they had for lunch. Parents and caregivers can then view this data in real time. The app sends text messages to kids to remind them of diabetes-care activities and alerts parents when the child has taken action.

The app was developed by a mother for her daughter, so you know it has the features you are looking for.

The app is currently free.
mySugr

The my Sugr app is a little different. It’s much more involved than your average blood sugar monitoring app, but can also be more fun. The app is based around “taming the diabetes monster” and allows you to earn points by logging readings, diet entries, and other important activities. The website also has an “academy” which provides some great free diabetes education.
Food and Nutrition

One of the most convenient functions of the modern smart phone is the ability to track nutrition data and food intake. Although I often still recommend pen and paper when starting out, smart phones are a great tool for tracking what you eat and carb content. There are other useful apps that provide recipes, meal plans, and even suggestions for eating out on a low carb diet.
GoMeals

It goes without saying that proper nutrition is essential to successfully managing your diabetes. But for many patients, knowing whether or not they are meeting their daily nutritional needs is challenging.

The GoMeals app uses bold and colorful plate graphics to help you visualize how you are eating. Users can log in foods using a comprehensive database that includes more than 40,000 foods and over 20,000 restaurant meals. You can also view nutrition facts to see what percentage of your calorie intake is from protein, fat, and carbohydrates.

The app is currently free.
Lose It

If you want to track food intake, calories, and carbohydrates, the Lose It app is probably the best on the market. It allows you to track calories, fat, carbs, and fiber, plus activity levels and other factors related to weight loss and diet.

There’s also a great network and support feature which lets you connect with others who use the app and system to lose weight, if that’s one of your goals.
Low Carb Tracker PRO

This is a great app which helps track not only carbohydrates, but calculates net carbs, based on the fiber rule.

It’s not perfect and not every food is easy to find, but it’s an excellent tool for tracking calories and carbohydrates. It has some nice graphics and gives a macro breakdown of your day.

The thing I really love about this app is that it’s designed for people who are eating low carb, so you won’t get any alarming charts showing you need to increase your carb intake!
My Fitness Pal

Here’s another food log and tracker. I’m listing this one because it’s widely used and highly rated (so it must be good!).

This one is mostly calorie-centric, but it’s well designed and has a huge database. It syncs seamlessly with the desktop version, so it’s good for people who want both. Best of all, it’s free!
Nutrients

Nutrients is a food tracker and calorie counter with a twist. This app is fun and engaging, and gives you a very helpful breakdown of all the nutrients in the foods you’re eating, including all vitamins, minerals, amino acids, fats, fatty acids, sugars, sterols and more compounds like caffeine.

It has a wonderful food journal, excellent search features, and interesting graphics. Nutrients also lets you create or input your own recipes and compiles all the data for you.

If you’ve ever wondered which foods are the best sources of magnesium, calcium, or potassium, you’ll love this app.
Fooducate

I like this app a lot because it helps my patients make better buying decisions at the grocery store. Fooducate educates individuals on proper nutrition choices. Simply scan a bar code at the store, or directly search for a food item, to retrieve a comprehensive profile.

But, even better, with one tap the app will give you a list of healthier alternatives or add a product to your shopping list.

App is free with basic features.
My absolute favorite recipe app is Keto Diet App. The basic app is free, and you can add on lots of modules for more options. The recipes are keto friendly and have beautiful pictures.

One thing I love is the ability to go deep into each step with additional pictures along the way. Another amazing feature is the breakdown of macronutrients for each recipe, including net carbs.

You won’t have to dig through this app to find recipes that fit a low carb, blood-sugar friendly diet. If you need help figuring out what to eat or want ideas to increase your options at meal-time, this is a great app.
iCookbook Diabetic

The people behind the original iCookbook app created a special edition just for people with diabetes and the concept is simple: every month users get diabetes-friendly recipes delivered to their phone or tablet.

One really cool feature is the built-in kitchen conversion chart. There are also built-in timers and voice activation so you can read through a recipe without using your messy hands.

Just be careful with the recipes because many of them are not low carb.

The app is currently free with basic features.
HealthyOut

While the previous app is great for helping people cook healthier, the HealthyOut app is geared toward people with diabetes who want to make better choices when eating out at restaurants.

Users can use filters like “low carb” to search local restaurants. Using this handy app, diabetics can find meals that are suitable for their special diet.

This app is free to use.
Foodily

This is a really fun and helpful app that lets users find, manage, and share favorite healthy recipes. Think of it as a “food social network” that allows you to share healthy recipes with other people struggling with blood sugar problems.

Foodily is currently free.
Exercise

Exercise is a key component of managing your blood sugar and diabetes. Often clients get inspired to workout, buy that gym membership, and then have no clue what to do or lose the motivation to do it. And let’s face it, not everyone has the budget to hire a personal trainer for weekly training sessions.

That’s where the smart phone fitness apps can really help. They won’t wake you up and kick you out of bed or tie your laces for you, but they can provide that extra bit of fun and motivation to fuel your fitness routine. Here are a few that I like.
Map My Fitness

This is probably my favorite exercise app. It tracks over 600 different types of workouts, including GPS-based tracking of runs and walks.

Many of these apps are really buggy, but this one seems well-designed and actually works. It has other features that I’ve never used like tracking your exercise gear and workout challenges.

If you want a good app to track your fitness program with a GPS feature that’s functional and intuitive, I recommend this one.
Workout Trainer

The Workout Trainer app solves the personal trainer problem by offering users thousands of free workouts complete with timed step-by-step audio and video instructions. The thing I think is so great about the app is that not only does it include built-in workouts, but users can access the app's library to build their own custom routines and share them online.

So, beyond the app's workouts, you can also try a workout from other users. Your routines will never get old this way, you won’t get bored, and you’ll stay healthier and fit.

The app is free but a premium subscription unlocks more features such as HD workout videos, more exercise routines, as well as removing ads.
Cardio is not the be-all-and-end all of fitness, and far too many people neglect strength training. But a muscular body is essential for optimal health. The E-FIT app is geared toward users looking to gain strength and build muscle.

The database contains thousands of routines sorted by targeted body part (quads, biceps, hamstrings) and offers detailed instructions, a workout planner, exercise log, progress tracker, numerous timers and options and synchronization with your JEFIT profile.

Like most of these apps, its free but supported by ads, so paying a bit more will get you an ad-free version as well as more features.
I like this app because it acts like your personal training coach and tailors your workouts to match your physical capabilities. This means you are challenged without your routine being so difficult you give up.

You get to choose your fitness goals and what your ideal duration is. Based on this information the app finds the right workout for you and you get to rate the difficulty of the routine once completed. This helps the app learn your ability and goals.

Free for basic features.
Sworkit

Unlike some apps on the market, Sworkit doesn’t focus on set exercise routines but rather lets users create targeted routines by selecting their goals. For instance, you can choose whether you want to focus on flexibility, build strength, or practice cardio.

The app makes sure to continually switch up your routine so you don’t get bored.

Free for basic features but premium unlocks additional features like exercise variations, a workout history and the ability to save custom workouts for a fully customizable experience.
Fitocracy

Fitocracy is an app that people of all ages would really benefit from. Fitocracy uses peer pressure as well as gamification to encourage users to get active and reach their exercise goals.

Users look up exercise routines and then log them in to score points, get to the next level, and gain achievements. All of this is done in a social media stream so other users can see it, comment, and cheer each other on.

If you sign up at the Fitocracy website, you can sync your data between the web and mobile, as well as have your updates automatically posted to your Twitter and Facebook accounts.

Free for basic features.
Conclusion

If you have been diagnosed with diabetes and are feeling overwhelmed at the thought of having to manage your blood glucose, nutrition, and exercise all by yourself, these smart phone apps and technologies can give you that little extra help that you might need. Diabetes is a lifelong battle that can get tiring after a while. Use these apps and technologies to lift your motivation and help keep your focus sharp on reaching your goals to control blood sugar and master your diabetes.