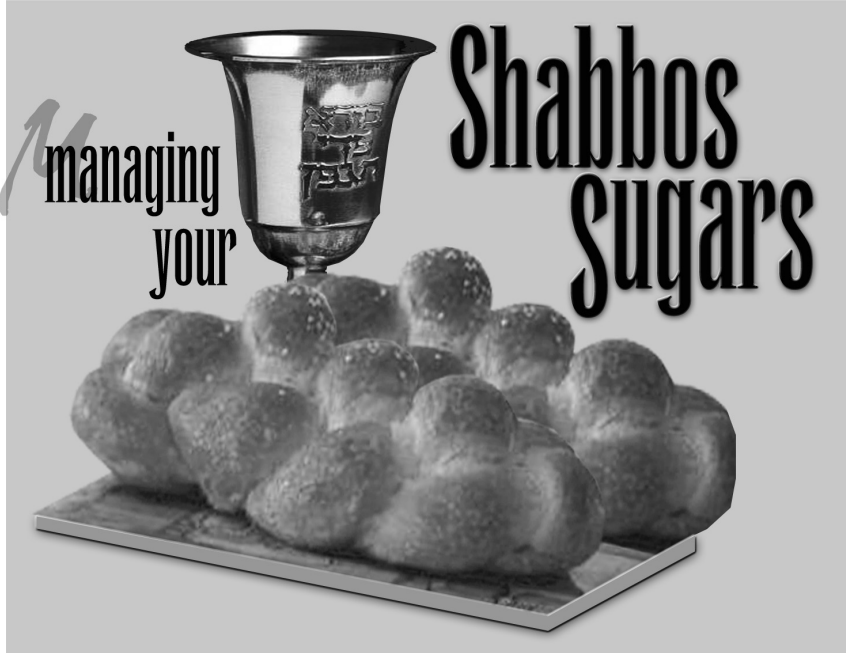


SHABBOS SUGARS



All diabetics will benefit greatly from precise calculating of Shabbos carbs. The type 1 must match insulin dosing with the amount of carbohydrates consumed, while the non-insulin-dependent type 2 is on a constant lookout for moderating/limiting the carbohydrates in his/her diet. Besides discovering exact carb contents of sometimes-hard-to-figure Shabbos foods, you will learn from the following article just how much of each course you are actually required to eat (according to halacha, Jewish law), as well as helpful hints for lowering the carb values of many Shabbos foods.

Note: All carb values stated in this article are 'effective carb counts' i.e., fiber has been subtracted from the total carbohydrate content.

[For more details, refer to the Tu B'Shevat article in our winter publication.] In some cases, dietary fiber values are listed separately to benefit those who are seeking to fulfill the challenging medical recommendation of consuming 30 grams of fiber daily.

KIDDUSH

Grape Juice: Grape juice contains 33-37 grams of carbohydrates per cup (about 4 grams per ounce), but only the label of your particular brand can reveal its exact carb content. In general, grape juice is not recommended because it is very high on the glycemic index. (It enters the blood stream very fast and raises blood sugars excessively, which make it ideal for treating a low blood sugar.)

Wine: Sweet wine may contain as many or even more carbohydrates than grape juice, and a dry, low-carb wine is therefore your best choice. The drier the wine, the less carbohydrates it contains.

When searching for a low-carb wine, please do not be fooled by advertisements which assert that a particular wine contains no sugar. This means only that there is no added sugar, but still plenty of natural residual sugars



(halachically preferred). A leading wine company confirmed that the sugar content in these wines is almost as great as those in grape juice. For people with diabetes, 'natural' sugars are no different than any other type of sugar; isn't sucrose (sugar cane/table sugar) natural as well?

Because alcohol can have a blood sugar lowering effect [refer to the Purim article in our winter issue], many people will find that it is best to ignore the carbohydrates in a dry wine and not to cover them with insulin. Remember that each individual will respond differently.

If one has a low blood sugar at the beginning of the meal, he should certainly substitute some or all of the (low-carb) wine with grape juice, as the alcohol may cause his blood sugars to fall even further.

Amount: At Kiddush on Shabbos and Yom Tov, one has to drink only a melo lugmav, enough to fill one's cheek. For an average person, this would amount to 50-55 cc (1.69-1.85 fl. Oz.).

[To find out your exact shiur (amount), refer to our article on Yom Kippur, but just remember the difference. On Yom Kippur we want to consume LESS than a melo lugmav, which would be 40 cc (1.35 oz.), while for Kiddush we want to make sure to drink a FULL melo lugmav, 50-55 cc.]

According to one opinion, it is possible- although not preferable- to divide the melo lugmav among all participants. If you are being yotze by listening to another person's Kiddush, it is enough if you drink just a tiny bit, and even that small amount may be omitted, b'dieved.

The Mishnah Berurah says that one should use a cup that is big enough to hold 137-150 g./4.7-5.1 oz. (this

תאריך: 11 שבת, 11 תמוז, 5767

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is the largest opinion of *revi'is*- the amount prescribed by our Sages for Kiddush), especially for the Friday night Kiddush which is a *d'oraisah* (a biblical, as opposed to a rabbinical, command). The amount to drink remains the same as mentioned above, regardless of the size of your cup.

Kiddush must be recited at the place where a meal will be eaten. Commonly, cake or cookies are used for that purpose, if the Shabbos meal will be eaten at a later time or different location. However, those with diabetes may benefit from another option: one may drink an extra *revi'is* of wine, which is 86 cc (2.9 oz.), in addition to the amount he drinks for Kiddush (55 cc). In other words, he should consume a total of 141 cc (4.8 oz.). The additional wine is counted as a meal according to halachah and it is therefore considered as the person would have made Kiddush in conjunction with a meal.

Most wines may be mixed with 1/3 water. [Refer to our Pesach issue for details.]

carbohydrates according to exchanges (i.e. one slice=one exchange) is laudable. The one who measures his slice for greater accuracy (i.e. 2 inch by 2 inch slice = X amount of exchanges); he is even more commendable. But the one who weighs the challah (30 grams/1 ounce = 15 grams carb) is most praiseworthy of all!

It is preferable to use matzah, which has the carb count written on the box and is always the same size. Regular matzah has 24 grams per matzah; whole wheat contains 18 grams of effective carbs per matzah (22 grams of carbohydrates, minus 4 grams of fiber). It is also lower on the glycemic index so it will cause a slower rise in blood sugars. [Once again, our Tu B'Shevat article will be helpful. See our winter issue.]

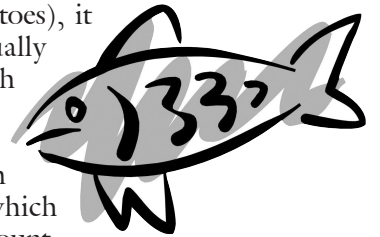
If you do use challah, remember that its carb factor is 0.5, which means that half its weight is carbohydrate. For example, a slice weighing 100 grams will contain 50 grams of carb. This is true also for all soft, baked goods. (Although not absolutely accurate, we feel that the rule of fifty, "Halve the weight; have your carb!" is worth using since it is a close approximation, and so easy to remember.)

- 1/9 of a bilke (5 grams in weight)
- 1/3 slice white bread (8 grams in weight)
- 1/2 of a middle-sized slice of rye bread, or 1/4 of a larger-sized slice (10 grams in weight)
- 1/10 of a bagel (13 grams in weight) Note the wide variations in weight, from 5 to 13 grams, probably due to the difference in the consistency of each bread type.

4/10 of a matzah (a bit less than half; 15 grams in weight) would be one *k'zayis*. One who eats an entire matzah has certainly consumed a *k'beitzah* and can safely make the blessing of *al netilas yadayim* as well.

FISH

Even though fish is a protein and contains no carbohydrates (unless it is cooked with sugar or with starchy vegetables such as sweet potatoes), it is usually made with either regular or matzah flour, which must be counted.



The carbs in your fish recipe can be calculated by adding together all the carbohydrate grams put into the fish (i.e. the total amounts of flour and sugar) and then dividing that number by the amount of portions made. You can also weigh the entire recipe to figure its carb factor. [See the Chanukah and Tu B'Shevat articles in our winter issue for more details.]

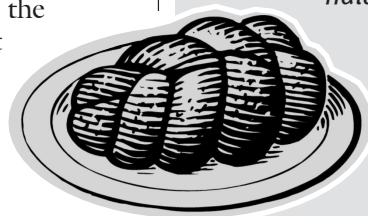
Gefilte fish can be made without flour and sugar, using a sugar substitute such as Splenda. It would then be a pure protein. (Wheat Bran can be used instead of flour.) Some people simply rely on the fact that the little bit of added sugar gets dispersed throughout the broth and the entire

CHALLAH & MATZAH

ת ש ר ת ט פ ד ט ז ח א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת

Every ounce of challah contains 15 grams of carb, with an average slice weighing in at no less than 3 ounces! Weighing your challah portion with a scale is highly recommended; it is impossible to avoid errors otherwise.

- The mishna (in Trumos 4:6) states, המונה משובח, והמודד משובח ממנו, והשוקל משובח משלשתן — The one who counts is laudable; the one who measures is even more commendable; the one who weighs is most praiseworthy of all. (Literally, the Sages are referring to the varying levels of accuracy of one who is separating tithes.)



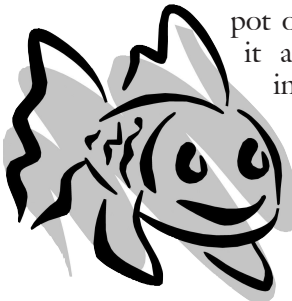
Amount: To fulfill the obligation of the *seudah* (meal) of Shabbos, one should eat slightly more than a *kebeitzah* (literally, equivalent to the size of an egg) of challah, which equals two *k'zaysim* (literally, the size of olives). If only one *kezayis* is consumed, *Birchas Hamazon* (blessing after the meal) can still be recited, but *al netilas yadayim*, the blessing after washing hands, cannot be said, according to some halachic authorities.

We were not able to determine the exact amount of challah which would satisfy the halachic measurement of *k'zayis*, but

Sefer K'zayis Hashaleim brings the following examples:

These words are very applicable here as well: The one who counts his

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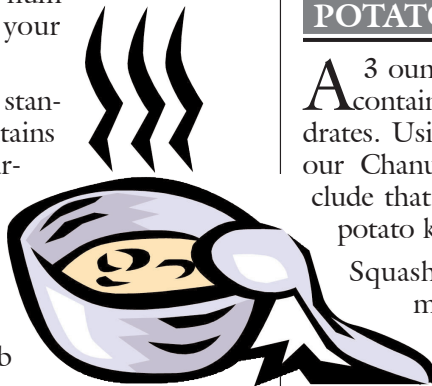
pot of fish, rendering it almost negligible in one portion. Be aware, however, that substituting sweet potatoes and/or carrots for the sugar may not alter the carbohydrate content per portion.

A&B Famous, a popular brand of frozen gefilte fish, contains 7 grams of carbohydrates per slice, while its sugar free version holds 4 grams to a slice. A carb free version will soon be available.

KNEIDLACH

The carb count will vary depending on your recipe. Once again, you can use the abovementioned method: Calculate the total carbohydrates included in the recipe and divide that amount by the number of balls your recipe yielded.

For Example, a standard recipe contains 22 grams of carbohydrates and makes 5 medium-sized balls. This recipe contains 4.4 grams of carb per matzah ball.

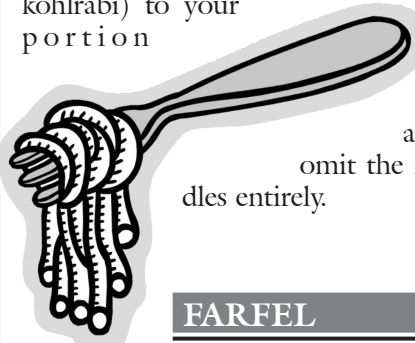


NOODLES

Four ounces (1/2 cup) of noodles contains 20 grams of carbohydrates; 5 grams per ounce (2 Tbsp.). Remember to pay attention to the amount of noodles you add to your soup, as you most likely consume less than 1/2 cup.

Those on a lower carb diet can make pesach'dige "lokshen" (Passover noodles), which is purely fried eggs and

therefore a protein. You can include a bit of soy flour and Seltzer to give the egg mixture additional substance. Or, try adding soup vegetables, such as celery or zucchini (or even white radishes, turnips, and kohlrabi) to your portion



and omit the noodles entirely.

FARFEL

Half a cup of Farfel (4 ounces) contains 15-20 grams of carbohydrates.

Note: If you cook your own Farfel, remember that the nutrition values stated on the packaging are for the dry (uncooked) product.

POTATO KUGEL

A 3 ounce slice, typically 2" by 2", contains 13 grams of carbohydrates. Using the method detailed in our Chanukah article, we can conclude that carbs account for 15% of potato kugel's total weight.

Squash, Broccoli, Cauliflower, mixed vegetable or Spinach kugel are some excellent alternatives for those who are seeking to limit carbohydrates. (No flour is needed either. Just add eggs, mayonnaise, and a bit of onion soup mix for flavor.) Or, try substituting Tofu for half of the potatoes in the standard kugel recipe; Tofu's unique property is to attain the flavor of whatever food it is combined with.

NOODLE KUGEL

According to the book Kosher Calories, a 5-ounce slice contains 19.5 grams of carbohydrates.

Understandably, the carb amount in your kugel will vary depending on the amount of sugar, noodles, and other carbohydrates included in the batter. (We've witnessed a chef dumping an entire 5-pound bag of sugar into one Jerusalem-style noodle kugel pan!)

You can make a delicious, lower carb Noodle Kugel using spaghetti squash and sugar substitute. Use the same ingredients as in a typical Noodle Kugel, but exchange the noodles for the spaghetti squash, which contains only 7.8 grams of carb per cup (cooked).

FLOUR KUGEL

Once again, individual recipes will differ. A recipe yielding 12 slices, which calls for one pound of flour (343 grams of carb), 2/3 cup Splenda (10 grams of carb), oil, water, and spices, would contain 29 grams of carbohydrates per slice.

COMPOTE



It is important to consult the label of canned Compote, as some contain more carbs than others. For instance, sweetened applesauce has about 20-25 grams of carbohydrates in 1/2 cup, while unsweetened contains 12-15 grams in the same amount.

If you do not know the carb content, you can usually count 15 grams of carb per half a cup of fruit compote with no added sugar.

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Those on a lower carb diet can make Compote by mixing various berries with water and Splenda.

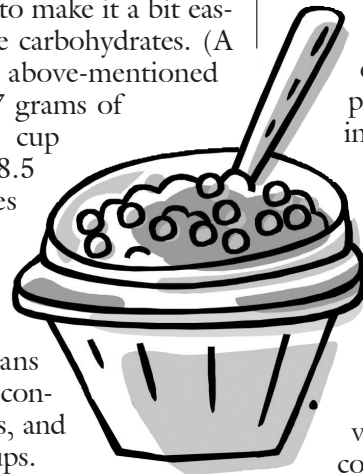


Type of BERRY	Effective Carbs (per 8 oz. cup)
Raspberries	5.9
Strawberries	7.2
Blackberries	10.7
Blueberries	16.6

cup of lima beans, you would add two times the kidney beans (2 X 29 = 58), to one cup of lima beans (26.1), for a total of 84.1 grams of carbohydrates. Dividing that amount in 3 (because, in this example, you have 3 cups altogether), you arrive at 28 grams per cup.

The following chart lists the carb contents of many common beans. You can also look up many more types of beans in carb counting books.

Before serving the cholent, you can prepare it in cups to make it a bit easier to calculate the carbohydrates. (A full cup of the above-mentioned recipe contains 37 grams of carbs, so half a cup would have 18.5 grams, 5 ounces contains 23 grams, etc.) Remember, however, to include only beans and/or other carb-containing ingredients, and no meat, in the cups.



It is definitely permitted to move aside a big piece of meat in order to reach the beans. The question remains, however, when removing smaller pieces of meat that get caught in the cup. Since both foods (beans and meat) will be eaten at the same time and the separation is only for measuring purposes, one can argue that there is no borer. To be on the safe side, one should leave some meat in the cup. (A small piece shouldn't interfere with the carb counting.)

Lower carb dieters can try using more soybeans and meat, or even tofu, instead of other bean choices or potatoes. Try experimenting with fresh pumpkins, turnips, or kohlrabi instead of potatoes or carrots.

If your family includes members who are not on this diet, you may want to cook one large pot of cholent with the regular, high carb ingredients, and choose just the meat for your portion. However, as carbohydrates are very soluble and cholent is cooked for a long time, some of the carbs from the beans and potatoes will likely be absorbed by the meat and broth as well. An exact carb amount is hard to calculate, but do take some carbohydrates into account. (The same would be true for chicken soup, if you choose to cook it with the vegetables and eat only the broth.)

When removing only beans from a pot of cholent, is there a possibility of violating the prohibition of borer (separating two foodstuffs on Shabbos)? After discussion with a posek, a rabbinical authority, the following was concluded:

BEANS COMMONLY USED IN CHOLENT:

Type	Carbohydrates* per cup (boiled)	Dietary Fiber	Protein	Glycemic Index **	Glycemic Load **
Kidney	29.0	11.3	15.3	28	7
Lima, Large	26.1	13.2	14.7	32	10
Navy	36.2	11.6	15.8	38	12
Pinto	29.2	14.7	14.0	39	10
Barley	38.3	5.9	3.5	25	11
Soybeans, mature	6.8	10.3	28.6	18	1

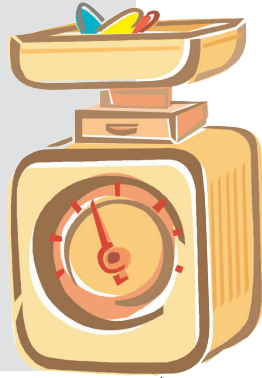
* Dietary fiber was already subtracted
 **For explanation on GI and GL see our Tu B'Shevat and Pesach articles, respectively.

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S H A B B O S S U G A R S

MEASURING FOOD ON SHABBOS

Is it permissible to measure food on Shabbos? Normally this would be forbidden, but b'makom mitzvah (when there is a mitzvah involved) the act is permitted. In our case the mitzvah of taking care of our health (tightly controlling blood sugars) overrides the rabbinical prohibition of measuring foods. (Based on Mishna Berurah Hilchos Shabbos 306:36)



TIMING OF INSULIN DOSE

Since the Shabbos meal often lasts over an hour from beginning to end, and cholent is usually served towards the end of the meal, it is problematic to cover all the carbs with rapid acting insulin (Humalog or Novolog) at the start of the meal. In addition, the absorption of the carbohydrates is slowed by fat and dietary fiber (especially from the cholent beans). Some longstanding, often poorly controlled, diabetics have also developed delayed stomach emptying (gastroparesis), which further impedes carbohydrate absorption. For all these reasons, it is not recommended to cover all the carbohydrates that will be ingested during the Shabbos meal with insulin prior to eating.

Here are a few solutions you can experiment with, after discussion with your doctor:

1. Pumpers can, of course, bolus as necessary throughout the meal ("bite and bolus"). An extended, square wave or dual wave bolus is also an excellent option.
2. Split your meal shot, giving some insulin right before or even after eating the cholent.
3. Substitute Regular insulin for some of the Humalog/Novolog you

would normally take to cover the meal.

4. Replace some of the Humalog/Novolog with long acting insulin (such as NPH or Lente).

Depending on your prior experiences, you may or may not choose to administer insulin for protein as well. Most people do require some additional insulin for the Shabbos meal, when a large amount of protein is consumed. [Refer to our Shavuot article.]

Example 1:

CHAIM doesn't limit his carbohydrate intake, but makes sure to calculate it correctly and cover with insulin as needed. He also shuns 'diet food', disliking the taste and aiming not to be "different". He takes 1 unit of Humalog per 15 grams of carbs. (Every individual's insulin-to-carb ratio will vary.)

- *Kiddush*: He makes Kiddush on grape juice and drinks 2 oz. = **8 grams**
- *Challah*: His slice weighs 3 ounces. (3x15=45) = **45 grams**
- *Fish*: He eats one slice of salmon, which is a pure protein = **0 grams**
- *Eggs & Onions*: No carbohydrates here. (He doesn't count the small amount of onion.) = **0 grams**
- *Cholent*: His cup of cholent, made with barley and navy beans, contains an average 37 grams of carbohydrates. = **37 grams**
- *Potato Kugel*: He eats 1 slice, weighing 200 grams. (200 x.15=30) = **30 grams**
- 1 Slice of Flour Kugel = **29 grams**

Total: 149 grams

Chaim will take 10 units of insulin to cover the carbs in his meal (1 unit per 15 grams). He will also add 2 extra units to cover protein. Since his meal will last about an hour, he will split his dose into 7 units Humalog and 5 units Regular.

Example 2:

DOVID is on the insulin pump. As a type 3 diabetic (who is both a type 1 [has no insulin production] and a type 2 [insulin resistant], 1+2=3), he tries to limit his carb intake, and eats dietetic food instead of the regular version whenever he can. He takes 1 unit of Novalog per 8 grams of carbohydrates.

- *Kiddush*: He makes Kiddush on a dry wine & drinks 2 oz. = **0 grams**
- *Challah*: He eats 1 whole wheat matzah. = **18 grams**
- *Fish*: He eats one slice of salmon, which is only protein. = **0 grams**
- *Eggs and Onions*: Only protein. (Again, he doesn't count the small amount of onion.) = **0 grams**
- *Cholent*: A cholent made solely with soybeans was a bit too blunt for his taste, so Dovid now eats a cholent of mixed beans. But, he allows himself only a half cup of it, and even that is mostly meat. (He consoles himself with the thought that once he loses a considerable amount of weight and his insulin resistance is diminished, he will be able to eat more of his favorite cholent again!) = **15 grams**
- *Kugel*: 1 slice of Spaghetti Squash Kugel = **4 grams**

Total: 37 grams

Dovid will administer 4.6 units of insulin to cover the carbohydrates in his meal (1 unit per 8 grams), plus 3 additional units for protein. Because his meal will last approximately an hour, he will split the



insulin dose as follows: 4 units as a normal bolus at the beginning of the meal, and 4 units as a square wave, extended over 2.5 hours, taken before the cholent.

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Making your Personal Digital Assistant a Personal Diabetes Assistant



When Baruch entered his endocrinologist's office last month, he was all smiles. Yes, he'd finally managed it: a neat stack of handwritten records documenting his frequent blood sugar checks, carbohydrates eaten at each meal, insulin administered... even stress and exercise were faithfully logged. This priceless information, he knew, was his hard-earned ticket to the land of (Almost) Perfect Blood Sugars; with his doctor's help, he could now make the precise changes in regimen to reach the diabetic version of Perfection.

Triumphantly, Baruch reached into his briefcase and removed the neatly stapled booklet. And that's when he noticed his mistake: these weren't blood sugar records he had snatched off his cluttered desk; instead, he stared at a report his secretary had just prepared, "The Varied Uses of the Modern PDA". He had a suspicion that his doctor couldn't care much, just then, to discover some little known functions of his Palm Pilot.

Those agonizing weeks of endless blood glucose tests (with his trusty meter, lancets, and strips), carbohydrate calculations (which entailed carb counters, calculators, food labels, and more), and time-consuming documentation, not to

mention the endless search for pens and record sheets, had ended so disgracefully. Staring down at the report in his hands, he suddenly noticed its title again, and he composed a silent wish: "Please, please, may there be one bright inventor who will finally come up with a better alternative to help us frazzled diabetics organize our records, carbohydrate intake, blood sugars, and daily activities. My Palm does serve so many varied uses; can't it help me in this area as well?"

**My Palm
does serve
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varied uses;
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in this area
as well?"**

Assistant; famous brand names include Palm and Pocket PC), which you very likely already own for business or personal use can really help a tremendous deal.

Various companies have jumped onto the popular bandwagon of PDA software, competing to create the most diabetes-friendly programs with unique and helpful features. In fact, the AACN (American Association of

Critical-Care Nurses) recently published an interesting report entitled, "The Emerging Role of Electronic Diaries in the Management of Diabetes Mellitus". Their statement that electronic diaries "are demonstrating promising benefits over paper-based diaries" will surely have you nodding your head once you try it out.

This article will present the distinct attributes, advantages, disadvantages and helpful characteristics of the diverse programs available today. Our list of features to look out for will help you decide which of the diabetes oriented software programs will most closely fit your needs to make life with diabetes just a bit easier.

Available Features:

In addition to the basic features of charting and graphing blood glucose values, here are some extras you may want your software to include.

- **INSULIN CALCULATOR:** This is among the most important qualities you will want your diabetes software program to possess. It will automatically suggest an amount of insulin to administer, based on the quantity and type of food item you will be eating, or your current blood sugar. Some programs can even fine-tune their dosing suggestions based on your specific insulin sensitivity, and a few go as far as allowing for varying insulin sensitivities for different meals. One comes preprogrammed with the unused insulin rule. The ezManager by Animas is currently the only program on the market that calculates insulin for protein and subtracts fiber from final carb counts. All of these are phenomenal additions which you may want to take advantage of.
- **A BUILT-IN FOOD DATABASE** is another excellent feature which will save you a lot of page-turning and manual hunting through gram

counters, labels, or charts for the carbohydrate content of your meal. One program boasts the additional capacity of "favorite food" markings, so you can avoid searching the entire database for carb counts of popular foods you often consume.

- **EVENT MARKINGS:** Many software programs give the user the ability to label blood sugar results with a choice of titles, such as "Before meal", "After exercise", or "Hypoglycemia". Some also allow for custom events, so you can invent the labels that suit your particular needs, i.e. "Post swimming" or "Skipped morning walk". Logbook DM will even handle the work of categorizing each entry for you, intelligently and accurately. This not only saves time, but also provides you with more useful statistical information later.
- **EXERCISE LOGGER:** This feature allows for recording the type, intensity, timing and duration of all exercise done. It is an excellent aid for tracking the effects of various types of activity on blood glucose levels.
- **DESKTOP COMPANION:** Many

companies offer a desktop program which can be synchronized with the PDA version and is good as a backup for people who have limited memory on their handheld. It also provides the ability for the user to print reports and graphs (bringing you full circle, back to the paper generation!)

- **EXPORT FEATURE:** Allows the user to export the information to other programs, usually as a text file. Excel is commonly used and its layout can be customized to your needs.
- **ELECTRONIC REMINDER:** Can be programmed to remind you to reorder supplies, check blood sugars, or change pump sites.

Diabetes Hardware for use with your PDA:

- **ACCU-CHEK** has two meters available which can beam results directly to your handheld.
- **ANIMAS** pumps allow the user to beam information to a PDA if you have the ezManager Plus and the IR port. (see later on)

- **FREESTYLE TRACKER:** A meter and electronic diabetes tracker in one. This excellent device automatically logs all blood sugar testing results.

Program Reviews:

In this assessment of diabetes software programs for your handheld PC, information is applicable in each case up to the version indicated. A truly in-depth evaluation of the many programs available would have been almost impossible, so we mention only the most prominent or interesting features. Besides the distinct pros and cons of each program, many attributes are simply a matter of preference. Remember that most companies offer a free trial version, so you can insure your full satisfaction and make an educated decision before purchasing the software. Friends With Diabetes has compiled a very useful CD which includes trial versions of many excellent diabetes software programs, giving you the unique opportunity to compare and contrast among the various programs before making your decision.

ezManager



Latest version: 3.0

Company or developer: Animas Corp.

Purchasing information: Available at Animas eStore website.

Price: \$99.00, or \$69.00 for Animas pumps

Trial version: 32 days after free registration (6 days prior to registering)

Charts: Only logs are available on the handheld, but many charts and graphs can be viewed on the desktop companion.

Pros: The most advanced and polished of all diabetes-oriented PDA software to date, the

ezManager boasts many exclusive features. It is currently the only program that records extended boluses and automatically calculates protein coverage (for those who need it). The program is very easy to use; no drop down menus. Make a list of favorite foods, so you don't need to search the whole food database for commonly used foods. You can even save entire food menus (carbohydrate values plus actual food items), and different insulin-to-carb ratios can be set for different meals and snacks (for example, you may find that 1 unit insulin per 6 grams carbohydrate works best to cover breakfast, while a ratio of 1:10 is adequate for lunch, and at dinner

you respond best to a 1:8.). You can also enter a food in any serving size and the carb values are automatically adjusted.

Cons: *Exiting the program can only be done from the main screen which may cause a delay of several seconds. Blood glucose values can be entered only by scrolling and not by the use of graffiti.*

ezManager Plus



Price: \$129, or \$99 for Animas customers.

In most ways the same as the ezManager, this program has the additional capabilities to down-

load information from the Animas pump as well as a variety of meters. The comprehensive data can then be used to produce beautiful, professional, and wide-ranging reports.

Logbook DM



Latest version: 2.2

Company or developer: Copyright by Ryan J. Bruner

Purchasing information:

www.PalmGear.com or
www.handango.com Search for Logbook DM.

Price: \$15.00

Trial version: 40 entries

Pros: Logbook DM (DM = Diabetes Management) provides the easiest and fastest way to log blood glucose levels, carbohydrate intake, insulin, low blood glucose, exercise, ketones, and other notes. The developer of Logbook DM is himself a pumper and uses the program daily, so it is extremely practical and contains almost every conceivable feature that may be of help.

Most commonly-used features are accessible from a single entry screen. And, using Quick DM, you can enter information with the touch of a finger...no stylus necessary! Logbook DM can be configured to provide automated reminders for checking blood glucose (either at specified times or in response to meals, boluses, or low blood sugars), appointments, ordering supplies, etc.

The "Interpolated Average" field provides a time-weighted average of blood sugars. Meaning, it doesn't just calculate actual glucose values, but also factors in how long that particular sugar

level was maintained in the body. (Supposing your blood glucose was 150 for an hour, and 250 for three-hour's duration, your average blood sugar will not be a simple 200.)

Cons: Does not have an integrated food database, but you can create your own "quick carbs"- a customized list of the foods you often eat and their carb values.

FreeStyle Tracker



(This is a meter that slides into a Handspring Visor and comes with FS Tracker software.)

Latest version: 1.24

Company or developer: FreeStyle

Purchasing information: 888-522-5226 or: www.therasense.com

Price: \$109 after \$40 mail in rebate. With Visor: \$194

Trial version: There is an online demonstration available. (No trial version.)

Charts: A 'logbook' showing two days at once, diary, 3 screens for statistics.

Graphs: Line, Pie, model day.

Pros: Blood glucose meter automatically logs testing results. Smallest blood volume required for testing (0.3 microliters), alternate site testing available, glucose results in an average of 15 seconds, with 2,500 event memory (1.7 years of data at four tests per day)! You can enter a comment with each reading and also note how much time elapsed since you last ate.

FS Tracker allows for sophisticated filtering and displaying of data. If you test with more than one meter, blood glucose readings can be manually added into the Tracker application on the Visor. The software even stores

temporary basal adjustments and has a food database of 2,500 foods. In addition, the Tracker is incredibly discreet. As quoted in *Diabetes Positive*, "We chose not to even put our brand name on the Tracker module... There's absolutely nothing to give away its function. No one will know it's a blood glucose meter unless you tell them."

Cons: Will generate a sliding scale based on your insulin sensitivity, but will not automatically calculate insulin doses based on current blood sugars. The food database is also not integrated, meaning that after you look up food values in the database you have to enter the carbohydrate content manually. (You may prefer downloading the USDA list of 6,000 foods, available for free). Nutrition information is also stated based on specific serving sizes, which may not be the amounts you need. For example, the database lists the carbohydrate value for a serving of 17 grapes, but if you ate 30 grapes, you have to adapt the values yourself.

Accu-Chek Pocket Compass



Latest version: 1.0

Company or developer: Roche Diagnostics

Purchasing info.: 800-428-5076

Trial version: Not Available

Charts: Overall statistics, target graph, average day graph, average day statistics, hypoglycemia statistics, carbohydrates graph, logbook, average week graph, average week statistics, trend, timeblock trend, insulin log, insulin graph, HbA1c graph, blood pressure graph.

Pros: Downloads blood glucose values from Accu-Chek Compact and Accu-Chek Active meters; the data is beamed directly from your meter to your Palm. You can customize your personal "time-blocks" so that blood glucose results are stored in the correctly labeled time slots. This feature is of aid when making reports.

Calorie King Diabetes Log



Latest version: 1.3

Company or developer: Calorie King

Purchasing information:
www.calorieking.com/handheld

Price: \$14.95 (Diet diary \$19.95)
15% discount with mention of FWD.

Trial version: 14 days

Pros: Warnings and color-coded entries indicate blood glucose levels outside your target range. (Colored PDA needed)

Cons: Food database is not integrated. The exercise list is very limited with no option of adding to it. Glucose values must be entered by scrolling just one-tenth of a point with each click.

Diabetes Pilot



Latest version: 2.0

Company or developer: Digital Altitudes, LLC

Purchasing information:
www.diabetespilot.com

Price: \$24.00. Desktop companion: \$39.00

Trial version: 15-day trial version available.

Charts: Averages, range, show data by category. No graphs.

Pros: Allows for "Favorite food"

marking. You can customize the main screen to show any or all of the following: glucose, food, medication, exercise, notes. This program can filter data by events, or to include only "today" or "yesterday", past 7 days, or any selected date or range of days. You can also create your own list of exercises.

GlucoPilot



Latest version: 1.6

Company or developer: HealthTech Inc.

Purchasing information:
www.healthtech.com

Price: \$29.00

Trial version: 30-day trial version available.

Charts: Pie, line, modal, histograms, reports.

Pros: Users can add defined categories. Charts and reports can be filtered by category (events). You can choose one statistic (e.g. today's glucose average, glucose minimum, insulin sum, or carb sum) to be displayed on the main screen at all times.

Cons: Not yet compatible with Palm OS 5.

GlucoTools 2.0



This is a free software which aids in calculating meal or high blood sugar insulin doses. It will compute meal boluses based on different insulin-to-carb ratios for varying times of the day. All you do is enter the number of carbohydrates you wish to eat, and an insulin dosage for that specific time of day is automatically given.

This software computes correction boluses based on different blood glucose targets and insulin-to-blood glucose ratios for different times of the day. It even calculates "negative correction boluses" when blood sugars are below the target range.

GlucoTools has many more excellent features. Check it out at <http://glucotools.sourceforge.net>

Glycemic Index



Rick Mendosa has a very popular and useful table listing hundreds of foods with their glycemic index and load.



overwhelmed?

Do you own a desktop computer and a PDA, and would love to have a diabetes software program, but you simply don't know where to start choosing?

Friends With Diabetes has compiled a wonderful CD containing trial versions of many of the available programs. We save you the headache of ordering each sample from its respective manufacturer, and then deciding which among them you like best. Here, all the choices are in one compact CD.

TO ORDER: CALL: (845) 352-7532 EMAIL: rabbimeisels@friendswithdiabetes.org
WRITE: Friends With Diabetes, 31 Herrick Avenue, Spring Valley, NY, 10977

Chart 1: LOGS

	BloodGlucose	Insulin	Basal	Food	Activity	Notes	Events
ezManager	✓	✓		✓	✓	✓	
Logbook DM	✓		✓	✓	✓	✓	✓
Pocket Compass	✓	✓		✓			
Diabetes Log	✓	✓		✓	✓	✓	✓
Diabetes Pilot	✓	✓		✓	✓	✓	✓
GlucoPilot	✓	✓		✓		✓	✓
FS Tracker	✓	✓	✓	✓	✓		✓

Chart 2: FEATURES

	Food Database	Bolus Calculator	Desktop Companion	Export Feature	Reminders
ezManager	✓	✓	✓		
Logbook DM		✓		✓	✓
Pocket Compass					
Diabetes Log	✓ separate	✓			
Diabetes Pilot	✓	✓	✓	✓	
GlucoPilot			✓		
FS Tracker	✓	✓ see notes	✓	✓	✓

Other programs that weren't listed
(but will be in a future update)

DIABETES NOW \$10.95

www.clothesrack.net/palm/diabetes/diabetesnow.htm

HEALTHENGAGE DIABETES 3.0.1 \$70

www.healthengage.com/

FUTUREWARE PERSONAL DIABETES TRACKING PRODUCTS \$29-\$49

www.futurewaredc.com/diabetes/

DIABETES MANAGEMENT SOFTWARE

\$14.99 <http://tinyurl.com/l9i>

GLUCO TRAK 3.0 \$9.99

<http://store.yahoo.com/bsoftware/glucotrak10.html>

GLUCOBASE \$17.96

www.glucobase.com/

GLUCOCONTROL (for PDA's based on Pocket PC) Free software
www.glucocontrol.org/eng/

GLUCO-LOG 3.1 \$10.00

<http://tinyurl.com/l92>

BLOOD GLUCOSE LOG 1.0 - Free

<http://tinyurl.com/lscx>

GLUCOSE DIARY 1.4B \$10.00

<http://tinyurl.com/l92>

GLUCOSE LOG BOOK 1.0 - Free

<http://tinyurl.com/l92>

GLUCOSE LOG 01 \$9.99

<http://tinyurl.com/l92>

INSULIN+ \$30.00

<http://tinyurl.com/l92>

MY BLOOD GLUCOSE LOG 1.8.2 \$10

<http://tinyurl.com/l92>

We will also be running another such article on PDA programs to assist with nutrition/Diet, carb/calorie counting.


For all these programs visit our web page www.friendswithdiabetes.org/r_PDA.html

The greatest discovery of any generation is that a human being can alter his life by altering his attitude.



Friend to Friend


Bubble Trouble

 Here's a scientific solution for those problematic air bubbles that many of us cannot seem to get rid of, despite our best efforts when filling an insulin pump cartridge. These persistent little air pockets are often born after a new cartridge has been safely installed, and may be due to the discrepancy in air temperature between the inside of the tubing (about 76 degrees) and the outside world (around 90-95 degrees).


A suggestion that really seems to work is to first lubricate the reservoir, then inject as much air into the insulin vial as the amount of insulin you plan on withdrawing. Next, fill the cartridge with insulin and allow it to stand upright (with the cartridge syringe covered) for at least one half hour. This allows the insulin to acclimate to outside temperatures and causes air bubbles to form. You can then tap the reservoir to bring bubbles to the top, and push them out.

Even after the tubing is connected, you should have no more trouble from those bubbles!


Tape Allergies

 If you've tried everything- from skin preps to various types of tapes on the market- and still suffer irritating allergy symptoms, perhaps this surprisingly simple advice (courtesy of Medtronic MiniMed) will help: Try abstaining from any kind of soap, alcohol, or cleansing agents at all. These products will only remove your naturally protective skin oils. (Alcohol, or any alcohol-based skin prep, is particularly notorious for drying out the skin.) Even a mild soap will remove the skin's protective layer, essentially allowing irritating tape agents to penetrate the skin. Sometimes, the plain and simple still works best!

At an Angle

 It pays to spend an extra minute to master this frustration-free technique for handling FreeStyle strips. If you examine the strip, you will find very tiny holes (situated on the edge of a blue semi circle) which suck up blood samples using capillary action. Only one of these holes needs to be filled in order to receive an accurate blood glucose reading. To prevent their blockage, place the semi circle at a 45 degree angle to your blood sample. Then, let the strip do the work!

Save Your (Sore) Fingers

 You can use the following system to ensure that none of your fingers are overused as testing sites:

Look down at your hands with your palms face up. Number your fingers


from left to right (your left thumb will be #1 and your right thumb will be #10). Then look at today's date; if the last digit of the date is 1 (i.e., it's the 1st, 11th, 21st, or 31st of the month), use your finger numbered '1' for all tests on that day. On days that end in '2', use your finger numbered '2' and so on. The only time that you'll end up using the same finger two days in a row is in months that have 31 days (you'll use your left thumb both on the 31st and on the following day which is the 1st of the new month). Hope this helps save your fingertips!"

As appeared in BD Update, Fall, '02

This tip works even better when the Jewish calendar is followed, as we only have 29-30 days in a month. (But will our fingers be sorer during a leap year when we have an extra month? 😊)

(For more information on the software programs mentioned, see our PDA article in this issue.)


ezManager Gets EZer

 We love the ezManager PDA software, but find just one aspect a bit cumbersome: The user is required to enter a specific food eaten, and the food's carb value is then automatically calculated. There is no faster option of mechanically entering a carb value for a food you often eat and whose carb content you already know. So we took advantage of the 'favorites' feature and added an item called '10 gram'. This stands for 10 grams of carbohydrates as one serving. We usually know the amount of carbs we are consuming and want the software's help just for figuring insulin dosages. If we consume 38 grams of carbohydrates, for example, that would be 3.8 servings of '10 gram'. The program will then calculate an insulin dose based on the information previously entered in 'settings'. It pays to remember one additional trick: If you enter an extra spacebar before typing the name of an item to be added to your favorites, this item will always be at the top of the list. (The empty space at the beginning prevents the item from being listed alphabetically.)



Making Technology User-FRIENDLY

Faster FreeStyle

 When testing blood sugars using the FreeStyle Tracker, many button presses and clicks are normally required before a blood sample can be applied.

Here is a little trick to save a few keystrokes. Click on the "Prefs" icon and then select 'buttons' from the drop down menu. You can program the Visor to open to any specific program with the press of one of the four buttons. For example, you can set the Visor to open to the FreeStyle program whenever the right (memo pad) button is pressed. You won't have to turn on the meter with the ON/OFF button. Just click on the predetermined key and FreeStyle will open up. Afterwards, the only click you will need to do is pressing OK to confirm the code number.

Just remember that there are two icon applications associated with freestyle, so you won't get confused between the two. 'FS tracker' opens the software and 'Freestyle' allows for blood sugar checks.



SWEET SUCCESS

Since mastering the use of carb factors (with guidance from FWD's Tu B'Shevat article), Shabbos became the hardest day of the week for Shimon*. By now, carefully weighing each food item he wished to eat, and then multiplying its effective carb factor (ECF) by that weight, was an easy part of his routine. He was grateful for his impeccably controlled blood sugars and the wholesome sense of pride that came with it. But on Shabbos, he found his efforts frustrated. Although he continued to weigh his food and look up each item's carb factor, how could he reach an accurate final carb count without the use of a calculator? Shimon is no math wizard, and he found the mental multiplication of 0.13 (the

carb factor of an apple) by 176 (that apple's weight in grams), just a bit too maddening.

"Necessity," they say, "is the mother of invention." Determined to restore the serenity of our precious seventh

day, Shimon arrived at an ingenious solution, which was also surprisingly simple. He invented fast factors™.

Nowadays, when Shimon wants to eat a banana on Shabbos, he makes an easy calculation. Bananas have an ECF of 0.20, so Shimon simply drops all complicated decimals and zeroes, and he remains with the plain number 2. He thinks to himself as follows: A banana weighing 10 grams contains 2 grams of carbohydrates. Of course, if his banana weighed 20 grams, he would just double the number of carbs as well, and so on.

To make these calculations even more effortless, we have devised a chart depicting the fast factors of many foods. The following is only a partial listing, but the complete table can be retrieved at www.FriendsWithDiabetes.org.



Carb Factors Made Easy

*name has been changed

Fast Factor	Food	ECF	Fast Factor	Food	ECF
1 gram carb per 10 weight grams. 2 g. carb per 20 g. 3 g. carb per 30 g. 4 g. carb per 40 g. 5 g. carb per 50 g.	Apples	0.13	3 gram carb per 10 weight grams. 6 g. carb per 20 g. 9 g. carb per 30 g. 12 g. carb per 40 g. 15 g. carb per 50 g.	Cashews	0.26
	Grapes	0.14		French Fries	0.34
	Horseradish	0.10		Pizza	0.28
	Oatmeal	0.10		Sherbert	0.32
	Potato Salad	0.13		Spaghetti	0.26
2 gram carb per 10 weight grams. 4 g. carb per 20 g. 6 g. carb per 30 g. 8 g. carb per 40 g. 10 g. carb per 50 g.	Almonds	0.19	7 gram carb per 10 weight grams. 14 g. carb per 20 g. 21 g. carb per 30 g. 28 g. carb per 40 g. 35 g. carb per 50 g.	Cheerios	0.70
	Beans	0.21		Dates, dried	0.67
	Ice Cream	0.21		Jam	0.70
	Plums	0.18		Saltines	0.70
	Rice, cooked	0.24		Toast	0.70

Note: You will notice some discrepancy between the fast Factors and regular ECF; fast factors are slightly less accurate, because they involve rounding carb factors and weight grams to the nearest tenth for greater simplicity. However, it is an excellent shortcut for days like Shabbos and Yom Tov, or when you do not have access to a calculator. Certainly, fast Factors are many times more precise than eyeballing or estimating can ever be!

FALL '03 • T" D S H N

S W E E T S U C C E S S

It's really easy to use fast factors on your own, even without the help of our chart. We will illustrate with the example of a banana, mentioned above.

<p>1. Look up the food's carb factor and round it the nearest tenth.</p>	<p><i>Banana is easy, since its carb factor is 0.20. No rounding is needed.</i></p>
<p>2. Simply delete all zeroes and decimals. This is the number of carbohydrate grams your food item contains per 10 grams of weight.</p>	<p><i>We arrive at the whole number 2. This is the fast factor for bananas.</i></p>
<p>3. All that is left for you to do is to weight the food you'd like to eat. To keep things uncomplicated, round that number to the nearest ten as well.</p>	<p><i>Shimon's banana weighs 136 grams. He rounds this to 140.</i></p>
<p>4. Think: How many times does 10 go into the number of weight grams?</p>	<p><i>In this case, 140 divided by 10 is, of course, 14.</i></p>
<p>5. Before you bite in, just multiply the fast factor by your answer to instruction #4.</p>	<p><i>We answered "14" to instruction number 4, so we will multiply 2 by 14. Another easy calculation! This banana contains 28 grams of carbohydrates.</i></p>

If Shimon feels like eating a snack of pretzels on Shabbos afternoon, he uses the same five steps:

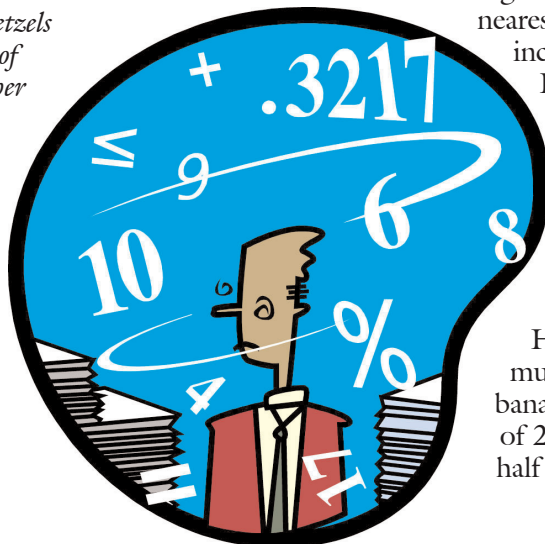
1. The carb factor for pretzels is 0.75, rounded to 0.80
2. Erasing zeroes and decimals, Shimon arrives at the number 8. Pretzels have 8 grams of carbohydrate per 10 grams in weight.
3. Shimon weighs his portion; 44 grams. He rounds this number to 40.
4. 40 divided by 10 is 4.

5. He multiplies 4 by the fast factor of 8. His portion contains approximately 32 grams of carbohydrate.

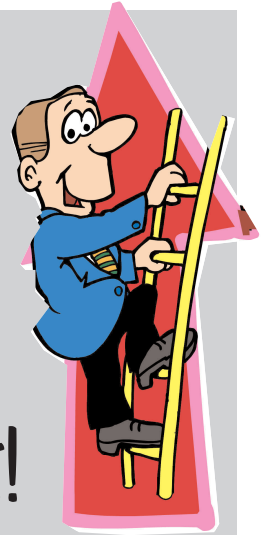
If you are more mathematically inclined and wouldn't mind a greater challenge, try rounding the number of weight grams to the nearest five, for increased accuracy.

For example: Shimon might round his banana's weight (136 grams) to 135, instead of 140.

He would then multiply the banana's fast factor of 2 by 13 and-a-half weight grams.



Success lies in cans not in cannot!



Somebody said it couldn't be done
 But he with a chuckle replied
 That "maybe it couldn't," but he would be one
 Who wouldn't say so until he had tried.
 So he buckled right in with the trace of a grin
 On his face. If he worried he did it.
 He started to sing as he tackled the thing
 That couldn't be done, and he did it.

Somebody scoffed: "Oh, you'll never do that;
 At least no one ever has done it."
 And the first thing he knew he'd begun it.
 With a lift of his chin and a bit of a grin,
 Without any doubt or quitting,
 He started to sing as he tackled the thing
 That couldn't be done, and he did it.

There are thousands to tell you it cannot be done;
 There are thousands to prophesy failure;
 There are thousands to point out to you, one by one,
 The dangers that wait to assail you.
 But just buckle in with a bit of a grin
 Just take off your coat and go to it;
 Just start to sing as you tackle the thing
 That "cannot be done," and you'll do it!



Latest Updates:

Halacha Tidbits



תשפ"ג
יג
אלול
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JUST CHECKING IN

A father posed the following question: His young (under bar mitzvah-aged) son is capable of checking his own blood sugars and therefore performs his own tests on Shabbos, without parental help. He is usually awakened during the night to check his blood glucose, but would it perhaps advisable to skip this extra nighttime test just on Shabbos?

The decision of Rav Weissmandl shlit"a may come as a surprise to many of us. He ruled that it is absolutely more preferable for the child to perform this additional test on Shabbos, than to skip it even on this one day.

(What a sobering thought... and worth remembering when laziness tempts us to omit that extra glucose check!)

YOUR METER MATTERS

We have previously published several halachic rulings regarding the use of specific meters on Shabbos. Here's an update on two of the newer meters:

- *The One Touch Ultra Smart is permitted for use on Shabbos, despite its requirement of a code number confirmation for every 25th test.*
- *However, one should avoid using the FreeStyle Tracker which entails several additional steps per glucose check, which other meters do not require.*

LIFESAVERS

The following is a quote from "The Fifth Commandment", by Rabbi Moshe Leiber:

"If a sick parent asks his child to give him something to eat or drink which doctors have determined to be unhealthy for the parent, the child should refuse to honor the parent's request. Chida submits that only if the requested item is life threatening must the child refuse, but if it is only damaging to the parents' health, the parental request should be honored. Thus, according to all opinions, if a diabetic parent requests sweets from a child, the child should not comply."

Note: Obviously, the above refers to a parent with type 2 diabetes, who needs to limit the carbohydrates in his diet. If covered appropriately with insulin, sweets pose no danger to the type 1.

A laugh a day ... To keep your 'low' moods away ...

A Bulgarian court was forced to postpone a court case as the 50 year old man was too fat to travel to the courtroom. He is unable to leave his house as he weighs 675 pounds and can hardly walk anymore. The court has been postponing the fraud case against him for six years, but has now ordered him to lose weight. He will be charged with contempt of court unless he loses enough weight to attend court. Don't wait till this happens to you!

Little Rikky was going to a birthday party and mom wanted her to be sure to eat the right size of cake. She drilled her on the size so she'd have it in her mind. When she got home she talked about the games and prizes, etc., but mom insisted on asking about the size of the cake. She said, "Yes, it was the right size - after I rolled it into a little ball."

A Dr. was talking to a group of children with diabetes. He explained to them that Debbie was the only one who had all her tests written down, and since she could do it, they could too. Debbie beamed and said, "I have next month's too, you want to see it?"

I recently decided to live year round on the St. Laurence River. To do this I had to get a new home, have a well drilled, and get a water pump to go with it. The well is 236 feet deep. At a party a woman that I had not seen in quite a while came to my table. She is from Canada and has a diabetic son and has always been interested in my insulin pump. When she sat down she asked me, "How is your pump working?" Of course I replied, "Great, 30 gallons a minute!" You should have seen the look on her face.