Carbohydrate Counting

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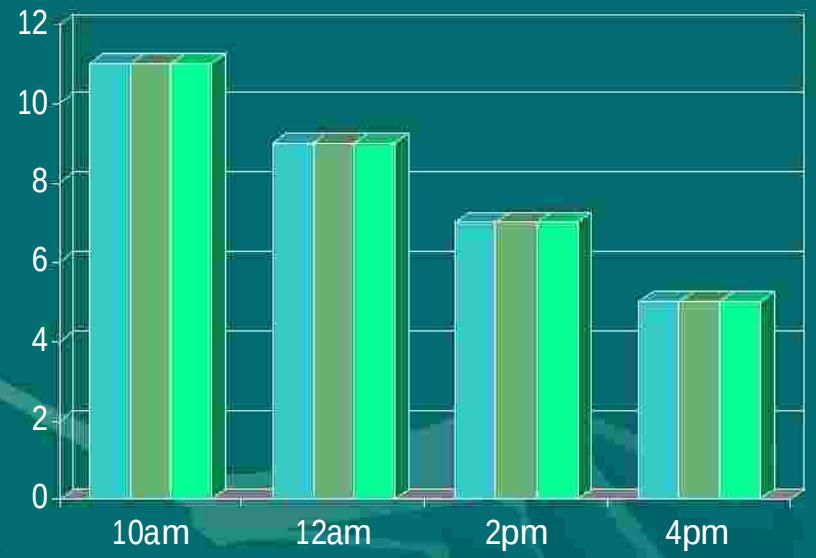
Diabetes - abc



Causes of Blood Sugar falls (hypo):

1. Too much insulin
2. Exercise

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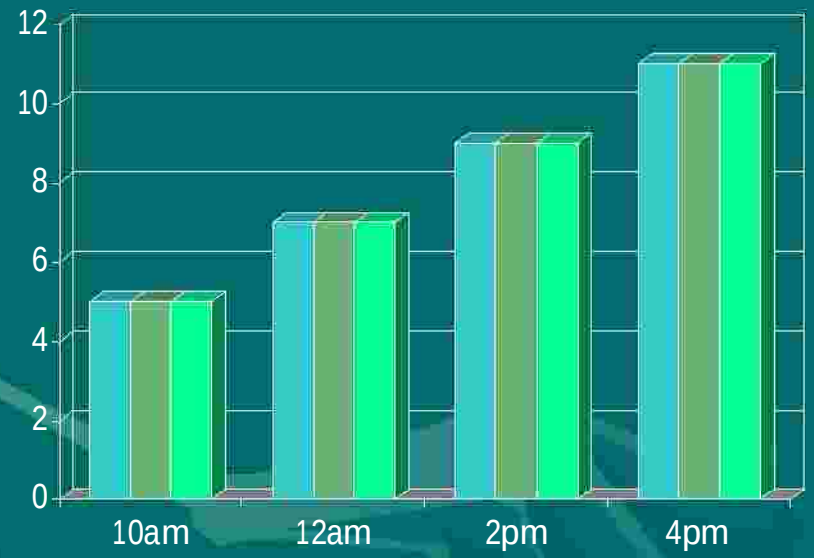

Causes of Blood Sugar rises (hyper):

1. Food
2. Insufficient Insulin
3. Inactivity

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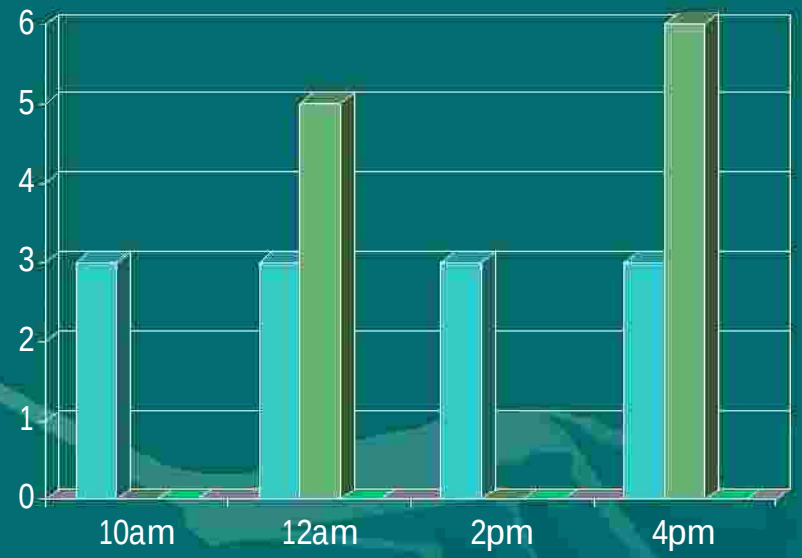

Insulin Doses

1. Basal - background
2. Bolus – food/corrections

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Two parameters needed to determine Insulin Doses:

1. Insulin Sensitivity – how much insulin needed to bring high blood sugars down (into range)
2. Carbohydrate Ratio – how much insulin needed to balance food intake and keep blood sugars stable

- These parameters vary between different people
- These parameters can also vary for the same person at different times of the day

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Insulin Bolus using Carb Counting:

- Determine Amount of Carbs in food (generally in ‘g’ – grammes)
- Get carbohydrate ratio (for present time)
- Divide carbohydrate amount by ratio to get insulin dose.
- That’s it!

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Determine Amount of Carbs:

- Determine quantity of food:
  - Weigh food (eg potatoes, pasta etc)
  - Count items (eg biscuits, crackers etc)
- Find food label.
- Divide quantity of food by portion size on food label and then multiply by ‘Total Carbohydrate’ amount on food label.
- That’s it!

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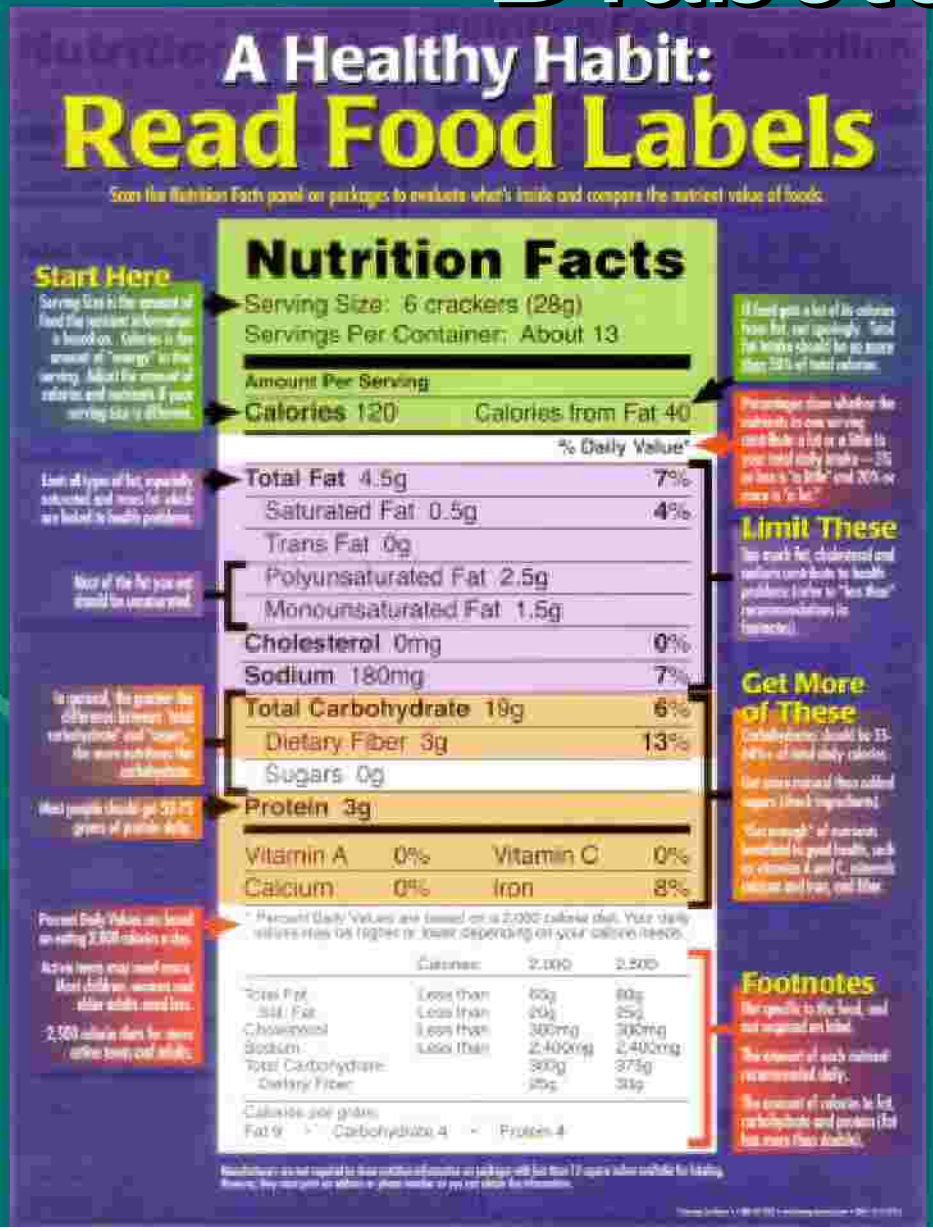

Example Food Label

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Alternatively, use Dawn's palmtop 'Carb Counter'…

Windows Mobile Carb Counter

Runs on a Windows PDA type device like HP Compaq

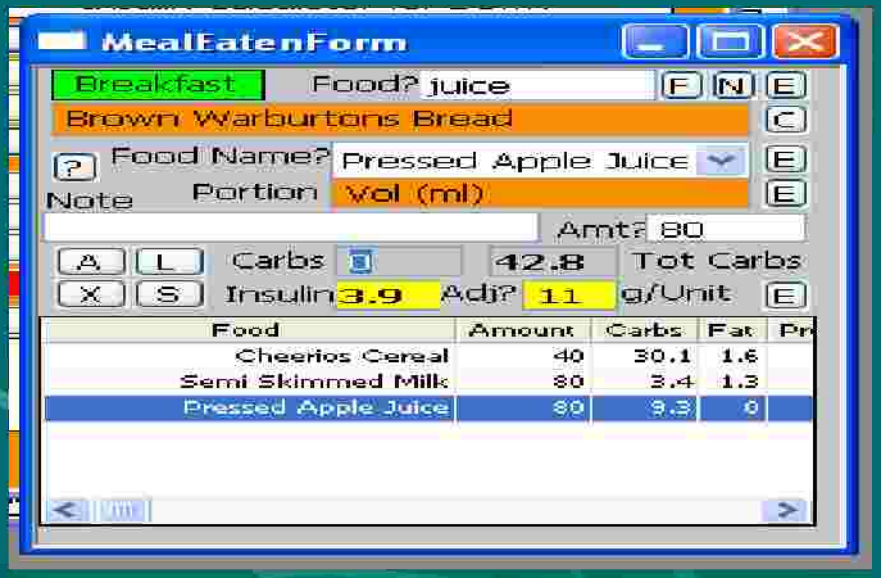
1. The screen shots in the following slides are from a PC emulator running the application.
2. The Carb Counter Application was developed in March 2008 by David Richardson and subsequently refined through four versions since.
3. Carb Counter has been in use every day for every meal ever since then.
4. THERE ARE NO BUGS!
5. It's repaid the hours invested to develop it by reducing Dawn's HbA1C

Alternatively, runs on a Windows Mobile phone device like HTC Desire

Windows Mobile Carb Counter

1. Separate panels for each meal of the day and a snack panel.
2. Extensible Food Database that can be maintained at home, restaurants, school etc.
3. Archives each meal consumed each day to build up a sizeable searchable history.
4. Search panels to recall previous meals.
5. Flexible Reminders panel.
6. Insulin ratio screen that allows the Carb Counter to calculate the insulin amount required for each meal.

Windows Mobile Carb Counter

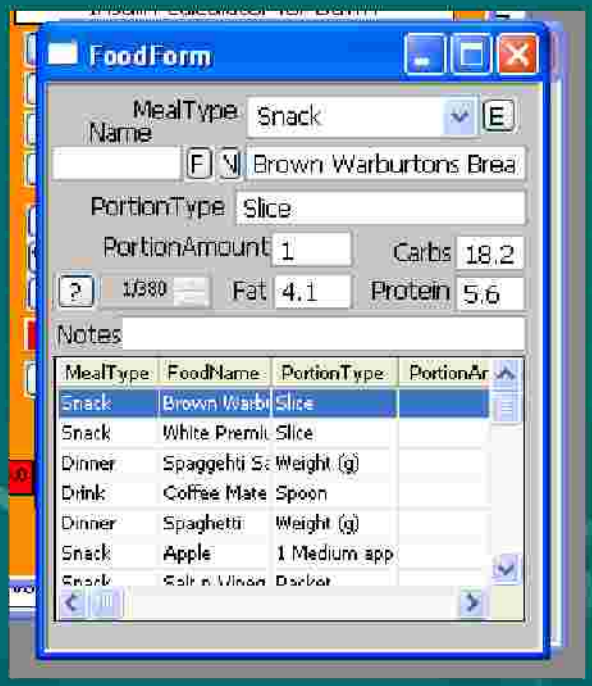


1. Search panel to look up foods
2. Spreadsheet type rows allow a meal to be built up
3. Food database retrieves carb, fat, protein amounts and adjusts based on quantity in current meal
4. Calculates total carbohydrate and also insulin amount

Windows Mobile Carb Counter

1. Meals automatically archived each day. 2 years of history in device we use every day.
2. History of meals can be searched by date & meal or by looking for a food, for example ‘Bread’.
3. Meals retrieved can be copied back to the current meal and modified as necessary. Useful when having a similar meal that was eaten before.
4. It’s also possible to copy forward from the current meal to override a previous archive.
5. Optimisation feature gives control of how many days back to search.

Windows Mobile Carb Counter



1. Extensible Food Database allows foods to be added at any time.
2. Food entries hold carbohydrate, fat, protein amounts per (for example) 100g food.
3. Foods can be held by other Portion Types too such as ‘Slice’, ‘Pot’, ‘Biscuit’ etc … This allows complete flexibility in how to carbohydrate and not does not necessitate the use of scales to weigh food.
4. Carb counter meal panel will multiply quantity of food by these parameters to calculate how much carbohydrate, fat & protein is in the meal.

Windows Mobile Carb Counter

1. Reminder panel tracks things that need to happen every so many days.
2. Useful for Pump items like infusion sets, pump insulin. Also things like control solution etc.
3. Allows certain items to be marked as ‘Priority’. They appear first in reminder panels.
4. As many or as few items can be set up for reminders.

Windows Mobile Carb Counter

For more details on the Carb Counter …

Please contact David Richardson (ms_davidr@hotmail.co.uk)