

Dietary Carbohydrate, Protein and Fat for People With Glucose Metabolism Disorders. Just What is Optimal?

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A low carb/glycaemic diet benefits people in general

Fact: Willett, “ Four randomised trials compared very low carbohydrate diets with low fat diets and they found that weight loss at 6 months was 4-6 kg greater in the low carb groups at 6 months. The results at the end of one year however were not significant. The low carb/high fat diet minimally changed LDL levels, slightly increased HDL levels and markedly decreased fasting triglyceride levels. Despite earlier concerns the low carbohydrate diets on average did not harm blood lipid levels. The drop out rates tended to be higher on low fat diets. This is important because the value of any diet depends on the degree to which patients adhere to it over time. How can we maximise the health enhancing effects of the Atkins diet? Dr Atkins deserves credit for his observation that many persons can control their weight by greatly reducing carbohydrate content.”

Weight Loss, Compliance, Lipid Benefits

(Yancy, Stern, Foster etc see 18th May 2004 annals of internal medicine for references “ Reduced Carbohydrate Diets: No Roll in Weight Management?”

Opinion: Barry Groves ref weight maintenance and prevention of diabetes.

Prevents Type 2 Diabetes

Opinion: James Hill director of Center for Human Nutrition at University of Colorado.

“Our data would suggest that you don’t get a negative lipid pattern with the Atkins Diet” After a recent study compared the Atkins Diet with a standard low fat high carb diet. Cholesterol levels in the Atkins dieters were actually better after a year.(diet wars)

Opinion: Drs Eades “We have a nutritional programme that we’ve tested on ourselves, our three sons, thousands of our patients and countless others without a single adverse reaction. (Protein Power p 16 - the role of insulin)

Fact: Harvard School of Public Health have issued a new healthy food pyramid in response to their dissatisfaction with the USDAs “infamous” one. This reverses the traditional placements for refined carbohydrate and fats. They state, “The information embodied in the USDA pyramid doesn’t point the way to healthy eating. Its blueprint was based on shaky scientific evidence and hasn’t changed over the years to reflect major advances in our understanding of the connection between diet and our health.”

(See for yourself at www.hsph.harvard.edu/nutritionsource/pyramids.html)

Fact: Dr Will Yancy assistant professor of medicine at Duke University Medical Centre and a research associate at the Veterans Affairs Medical Centre in Durham NC said of the Atkins diet, “ This diet can be quite powerful. We found that the low carb diet was more effective for weight loss. We also found cholesterol levels seemed to improve more on a low carb diet compared to a low fat diet.”

(Results are in Annals of Internal Medicine May 18 2004. Access the report on LowCarbEating.com Atkins diet and low carb support, recipes and products.)

Opinion: Dr Woodson Merrell executive director of the Beth Israel Center for Health and Healing in New York City writes, “ In my 25 years of medical training I’ve seen I wide range of diets come and go. Virtually none of them work long term. I tried the low carbohydrate diets on a few patients for whom nothing else had worked. To my surprise they did well. So I have become a convert. Carbohydrates in the amount we commonly consume, particularly sugar and other refined carbohydrates, are often prime saboteurs of our weight. What’s more cutting back on them- especially on wheat- seems to produce improvements in energy, mood and sleep for many patients. Of all the diets I’ve seen over the past few decades the moderate fat, low carbohydrate ones are the most successful. They are not do much diets as a permanent change to a more balanced eating pattern.”

(Time, Nov 8 1999)

Fact: the rate of childhood suicide is associated with obesity.

(Carb Awareness Council)

Opinion: Dr Ludwig has been prescribing low glycaemic index diets to children and adolescents for over five years at his paediatric obesity clinic. He has a waiting list of 9 months.

Safe for Adults, Safe for Children

(Big fat lie. P 9/12)

Opinion: Joel M.Gore MD, “ In two randomised trials researchers compared low carbohydrate diets to assess effects on cholesterol levels and weight loss. Results should mitigate concerns about adverse lipid effects of low carbohydrate diets and even suggest some benefit. One can no longer dismiss low carbohydrate dieting as a fad. An editorialist recommends encouraging overweight patients to engage in regular physical activity and to experiment with various diets including low carb with an emphasis on healthy sources of fat and protein.”

(Time to take low carb diets seriously? www.medscape.com)

Fact: The National Cholesterol Program diet versus a diet lower in carbohydrates and higher in protein and monounsaturated fat, was a randomised trial. The low carb diet caused significantly greater weight loss over 12 weeks. Favourable lipid changes were noticed in the low carb group but the lipid findings did not achieve statistical significance.

(Aude, Agatson etc Arch Internal Medicine. 2004; 164:2141-2146 available from Archives of Internal Medicine)

Article: New Studies Validate Benefits of Atkins and Low Carbohydrate High Protein Diets.

Summary of studies presented at the North American Association for Obesity Conference 2002 in San Diego. The weight loss, compliance and beneficial effects on lipid profiles in adults are highlighted as are weight loss and reduction in fasting insulin in children.

Reduction in fasting insulin

(www.lowcarb.ca/articlesb/article338.html)

Fact: High fat diets have been shown to improve stroke risk and schizophrenia.

Improves Stroke Risk, Improves Schizophrenia

(Gillman, Lauhharne, Franceschini see page 4/16 of Article “Eating- Is anything reasonable? by Bob Lombardini. www.freenet.tlh.fl.us/blomard/eating.htm)

Fact: Advantages of eating fruit on longevity. Advantages of the Berry Group in particular.

Improves Longevity

(Lombardi's article. P 9/16 for references.)

Fact: Low Glycaemic load diet produces greater improvements in heart disease risk factors than low fat.

Improves Heart Disease Risk

(Pereira et al Effects of a low glycaemic load diet on resting energy expenditure and heart disease risk factors during weight loss. JAMA Nov 24 2004 292: 192-2490 summary available on www.theomivore.com/Low-GL)

People have focused on low fat diets for 50 years and it has not worked. More than 700 published peer reviewed studies support the concepts underlying the Atkins Nutritional Approach. At least 29 studies have supported the safety and efficacy of the controlled carbohydrate approach. Apart from weight loss there are major benefits in lipid profiles particularly regarding triglycerides.

(Associate Parliamentary Food and Health Forum. Tues 29th June 2004)

A low carb/glycaemic diets benefits people with glucose metabolism problems in particular

Fact: Dr James Hays, an endocrinologist and director of the Limestone Medical Centre in Wilmington DE. “ My study of 157 men and women with type 2 diabetes showed an impressive benefit in body mass index, triglycerides, HDL, LDL and HbA1C. The patients went on 1,800 calories a day with 50% of this from fat and 90% of the fat was saturated and 10% monounsaturated. 20 per cent was from carbohydrates and 30 per cent from protein.

I think this is at least worth considering for any diabetic. Higher fat diets make the person feel full faster so they eat less. Higher fat diets tend to reduce postprandial hypoglycaemia so the patients feel better after eating.

Hb a1c was on average 3.34 per cent above normal at the start of the study and declined to 0.96 above normal. After one year 90% had achieved the ADA targets for hba1c, hdl, ldl and cholesterol. (In the USA only 7% of diabetics achieved this target in 2004).

I have three cardiologist patients who are now on the diet. If you have a diet that results in weight loss, lower cholesterol and a better lipid profile, eventually everybody will be eating That way. It’s going to come whether we like it or not.”

Improves weight loss, Improves lipid profiles, Less Post Prandial Hypoglycaemia, 90% got to ADA targets in one year compared to 7% of general population.

(www.docguide.com/dg.nsf)

Fact: Dr Lois Jovanovic’s study at the Sansum Medical Research Foundation in Santa Barbara California was of 28 type 2 diabetics who had not achieved blood glucose targets on other diets and sulphonureas drugs showed that after 8 weeks on a 25% carbohydrate diet they did. “At least on the short run the diet may help patients avoid having to take insulin to control their disease.” When put back on the 55% carbohydrate diet control worsened.

Reduced requirement for insulin

(Journal of the American College of Nutrition. 1998; 17:595-600
www.lowcarb.ca/articlesb and wilstar.com/lowcarb/research/research14.htm)

Opinion: Barry Groves ref reduces post prandial spikes. Was used prior to 1984. Referenced with abstracts article “The evidence that a low carb saturated fat diet is better for diabetics” Includes lipid, hbaic, weight loss, insulin benefits.

Reduces post prandial blood sugar spikes.

(www.secondopinions.co.uk/diabetes)

Opinion: Nancy Humeniuk a 70 year old type two diabetic “ I was put on the ADA diet under the direction of a diabetes educator. While I was following the diet my blood sugars were completely out of control. They told me I was being non compliant but I was following the diet exactly. I was scared. After three months I switched to low carb. Within three days of going low carb my blood sugars were normal and they have been for the last six years. My cholesterol profile is also very good. My doctor said that whatever I was doing I should keep it up.” (Diet wars)

Achieves normal blood sugars in previously uncontrolled patients.

Opinion: Frank Hu Associate Professor of Nutrition and Epidemiology at the Harvard School of Public Health also believes that lower carb diets are beneficial to some people with diabetes. He is careful to point out however that carbohydrates should be replaced with “healthy” fats such as the mono and polyunsaturated fats found in olive oil, nuts and avocados.(diet wars)

Opinion: Frank Vinicor Director of Diabetes Research at the Centres for Disease Control and Prevention. “There is no evidence that in an otherwise healthy person with diabetes eating protein causes kidney disease.” (diet wars.)

No evidence of kidney disease

Opinion: Barbara Kahn, physician and diabetes expert at Harvard Medical School and ADA board member, “ The ADA is responsive to new scientific data and is likely to incorporate this information into new dietary guidelines with a lower proportion of carbohydrates.”. She has seen how difficult it is for people with diabetes to gain control while following current recommendations so she is pushing for changes. (diet wars)

ADA Board Member supports low carb diet.

Opinion: Evelyn Narad a type 2 diabetic failed to control her weight or diabetes on the ADA, Dean Ornish or Weight Watchers diets. After one year on Dr Bernstein’s diet she went from 219 pounds to 128 pounds.

(diabeteshealth. Diet Debacle. Low Carb Diet Helps 1996)

Fact: Mary Gannon and researchers after their five week per diet cross over trial in type 2 diabetics. The control ADA diet was 55:15:30 carb:prot:fat and the test diet was 20:30:50. The mean serum glucose was 198 and 126 respectively. The percentage glycohaemoglobin was 9.8 plus or minus 0.5 and 7.6 plus or minus 0.3 respectively. It was still decreasing at the end of the low biologically available glucose diet and the final estimate was 6.3-5.4. Serum insulin was decreased and plasma glucagon was increased. Serum cholesterol was unchanged. "Potentially this could be a patient empowering way to ameliorate hyperglycaemia without pharmacological intervention."

Serum insulin decreased, Plasma Glucagon increased.

(Diabetes 53: 2375-2382 Effect of a High Protein Low Carb Diet on Blood Glucose Control in People with Type 2 diabetes. Available on diabetes.diabetesjournals.org.)

Very interestingly the ADA website published the intention of the trial in December 2003 but did not mention the positive result at all in subsequent issues.

Opinion: Joy Pape RN, BSN, CDE, WOCN is a registered nurse and certified diabetes educator with more than 30 years of experience. "Diabetes Interview has received many letters from readers either sharing their success stories or requesting information about low carb diets. Our job as medical professionals is not to tell people what to do but rather offer options. This is what I teach my patients, "You are the ones who live with your diabetes every day. Your healthcare provider will not be with you 24 hours a day. You need to learn all you can to make good decisions to control your health and your life."

In February 2003 in the Journal of Nutrition ,Dr Donald Layman from the University of Illinois concluded, " A relatively high protein diet improves body composition, enhances weight loss and improves glucose and insulin homeostasis."

I started lowering carbohydrates and increasing protein myself about five years ago and successfully treated polycystic ovary syndrome, a condition that is associated with being overweight and having impaired glucose tolerance. I visited the leaders in the field, Dr Robert Atkins, Dr Richard Bernstein, Dr Barry Sears and Dr Diana Schwarzbein to learn about this option for people who have diabetes. I now have many patients who have been better able to control their weight and ultimately their lives with the lower carb plans.

I encourage you to find a dietician, diabetes educator or nutritionist who understands the concept of a lower carb lifestyle plan and its effect on diabetes."

Opinion: Michael Arnold a type two diabetic writes, "Following the low carbohydrate diet defined by Drs Bernstein, Eades and Atkins, I have lost 23% of my body weight and my blood sugar, total cholesterol and hbaic have all fallen. I have also been able to taper off and stop my diabetes medication (meformin 850mg bd, gliclazide 160mg bd, acarbose 25mg tid) within two weeks of starting the diet. My hbaic has gone from 7.1 to 5.1%. The approximate percentages were 65% protein, fat mainly saturated 33% carbohydrate 2%. The diet requires very strong discipline and motivation. Benign spin offs include virtual elimination of peripheral neuropathy, arrested retinopathy and a feeling of general well being. The diet has worked very well for me and has been worth it."

Reduces or eliminates need for medications.

(Practical diabetes international May 2003 vol 20 no 4)

Fact: Carbohydrate restriction has benefits for mother and child in pregnancies complicated by gestational diabetes. Post prandial blood glucose levels, use of insulin, big babies, caesarean sections, shoulder dystocia and birth trauma were all greatly reduced or prevented in the low carb group compared to a standard high carb diet.

Improves outcomes for mother and baby in gestational diabetes.

(Major CA et al. The effects of carbohydrate restriction in patients with diet controlled gestational diabetes. Obstetrics and Gynaecology. 1998; 91: 600-604. From www.theominvove.com)

A low carb /glycaemic diet benefits insulin dependent diabetics in particular

Fact: Improved blood sugar control in type 2 diabetes results in stabilisation and possible improvement in retinopathy.

Stabilises Retinopathy.

(Carbohydrate Awareness Council)

Opinion: Vicki Abbott 65 year old has a rigid schedule regarding diet and insulin, adheres to a very low carbohydrate diet, avoiding most grains, fruits and vegetables. She does not eat pasta, bread or rice. Her last a1c was 5.5% an achievement for anyone with diabetes particularly someone with type one.

(diabeteshealth.com “Perfect Control. Is it possible. Is it worth it?”)

Opinion: Dr Bernstein, “ He believes it is both important and easy for people with diabetes including type ones and twos to get their a1cs down to the 4% range, an expectation that most doctors consider unrealistic or impossible. “People with diabetes are entitled to the same blood glucose as anyone else. It’s much harder living with roller coasters.”

Normal Blood Sugars Achievable.

Fact: Dr Alan Jacobson principal investigator of DCCT and professor of psychiatry at Harvard University, “In the DCCT trial intensive control did not demonstrably help or hurt people’s quality of life”.

Fact: Patrick Lustman Professor of Psychology at Washington University School of Medicine and principal investigator of two National Institutes of Health supported trials on depression and diabetes reports, “ Higher Hba1cs in people with diabetes were associated with an increased likelihood of being depressed.”

Improves Depression Associated with Diabetes.

(Perfect Control Article)

Opinion: Maria Gillen is 30 years old and has had type one diabetes for six years. She lost 20 pounds of excess weight and her hbiacs decreased to 5.8%.

Weight Loss.

Opinion: Dr James Hays 1999 San Diego Conference on his low carb, high fat diet in diabetics. "In juvenile diabetics they may not be overweight and they might have more or less normal lipid levels but when they are on this kind of diet it is possible to treat them with lower doses of insulin and make their lives a little safer."

Lower insulin doses and less hypoglycaemia.

(www.docguide.com/dg.nsf)

Opinion: June Bierman a type one diabetic for 30 years says that writing "The Diabetic Woman" with Dr Lois Jovanovic-Peterson helped convert her to a low carbohydrate diet. Dr Jovanovic recommended that a pregnant diabetic woman could control her blood sugar almost perfectly with a low carb diet. I started it and it worked beautifully. I just don't eat foods that are high on the glycaemic index."

(www.mendosa.com/foods)

Opinion: Juleen of New Zealand writes, " I am a 59 year old female who has had type one for 29 years. I have 3 sons, 2 of which are also type ones. One from the age of 20 months now aged 34 and one from the age 12 who is now 31. Both follow the same regimen as I do. We have been on this low carb regime for the last 8 months have certainly felt and shown the lab test benefits of doing so. We find that there is very little interest or support from the "Professionals" we come in contact with. My endocrinologist is not interested and can't get past stating that carbohydrate is essential. I am a retired dietician who by the way never worked solely in Diabetes and certainly couldn't now as I do not agree with the dieticians position paper on the amounts of carbohydrate that diabetics should eat."

Professional Dietician Unhappy with High Carb Advice for Diabetic Sons.

(From letters to Ron Raab)

Opinion: Leanne Cane writes, " I am the mum of a type one 14 year old. I bought Dr Bernstein's book mid way through last year and have had Jess on the diet since about October. She is now at boarding school and finds it a lot harder to keep to the diet but she does her best. At her last 3 monthly check in Adelaide Women and Children's

hospital her a1c was 6.1 which the registrar then admonished us was way too low. I tried to explain about the low carb diet and how Jess's diabetes was so much easier to control. I was wasting my time. Are there any Australian doctors out there who will at least listen? I don't want lectures, I want support. I accidentally found another parent of a type one her in South Australia who is following the same diet. Their doctor said, "Well, you're on your own."

Lack of Support For Motivated Patients From the "Professionals".

(From letters to Ron Raab)

Fact: In the Veteran Affairs Study obese patients on a low carbohydrate diet for six months lost more weight and fared better on certain cardiovascular and diabetes measures than patients on a low fat, calorie restricted diet.

Lead author Frederick F. Samaha MD chief of cardiology at the Philadelphia VA Medical Centre and assistant professor at the University of Pennsylvania School of Medicine said "more attention needs to be paid to the harmful effects on body chemistry of carbohydrate rich diets. When people overeat carbohydrates they remain overweight and perhaps even exacerbate the development and management of diabetes, unfavourable lipids and heart disease. Those in the low carb group dropped their triglycerides into the normal range and their glycaemic levels approached normal. There are aspects of what Dr Atkins was saying that were not taken seriously and perhaps should have been.

The participants were all severely obese their average weight being 288 pounds with many suffering from conditions such as diabetes, heart disease, hypertension, high cholesterol and depression.

Linda Stern MD said, " Diabetics in particular did very well on the low carbohydrate diet. So, especially in the realm of lifestyle modification, we might have to broaden our horizons on what we're recommending. Eating fewer carbohydrates and more protein and fat makes people feel fuller and less likely to consume extra calories. It avoids blood sugar fluctuations and the constant insulin spikes that lead to insulin resistance which sets the stage for diabetes.

Among non diabetic people in the study insulin sensitivity improved for the low carb group but worsened for the low fat group, possibly raising their risk of diabetes. In the diabetic participants the low carb group reduced their fasting blood sugars by 9 per cent versus 2 per cent in the low fat group. Seven of the low carbohydrate group were able to reduce their insulin or other medication to control blood sugar. In the low fat group on diabetic patient lowered his insulin dose and one had to begin therapy.

Low Carb Diet Reduces Insulin Resistance, High Carb Diet Promotes Metabolic Syndrome.

(May 22 2003 New England Journal of Medicine)

Opinion: Dr Katharine Morrison, GP and mother of insulin dependent diabetic. "Role of Low Carbohydrates in achieving targets."

(tellparliament)

Opinion: Barry Groves, independent researcher, consultant and lecturer in diabetes, "Its time to get some sanity back into diabetes treatment."

(tell parliament)

Fact: Zisser, Jovanovic etc, "The Euglycaemic Diet Facilitates Euglycaemia with less insulin in persons with type one diabetes."

"Current dietary recommendations may not facilitate improvement in glycaemia and may necessitate larger doses of insulin that do not always result in euglycaemia. Minimising the carbohydrate content of the meal and stabilising the carbohydrate and total daily calories are associate with improved glycaemia and less total daily insulin usage. The usually recommended insulin dosage of 0.6 units/kg/day may be covering extra carbohydrate in the diet. Conversely patients may be taking in extra calories in order to prevent hyoglycaemia secondary to excess insulin. The Euglycaemic diet consisting of 30% carbs, 40% fat and 30% protein tailored for gender, weight and activity level requires less insulin and results in improved glycaemia."

(abstract no. 24499-PO. sent in by Ron Raab. Source undetermined.)

Opinion: Ron Raab, "I have been a type one diabetic from the age of 6. I had some background retinopathy, and neuropathy including delayed stomach emptying. I tried my best to get really good blood glucose levels and applied the current Diabetes Association high carbohydrate, low glycaemic advice. I could not achieve continuously near normal glucose levels and was having more and more severe hypos as well.

In 1998 I became aware of the low carbohydrate, low glycaemic approach. I used to take 200g of carbohydrate a day and this is now 30-50g all of the slowly absorbed type. My insulin dose has fallen by 55% to 16 units a day. My Hbaic has fallen by 33% to 5.6%. There is much less variation in my daily blood glucose levels. Hypoglycaemia is much less severe and require only 3-5g of glucose tablets to ease the level back up. My weight has dropped from 82kg to 72kg with BMI in the normal range. Blood pressure and lipids are normal. My hunger has decreased. My subjective quality of life and outlook have improved enormously.

Lowering daily carbohydrate intake makes sense on many levels. A high carbohydrate and concomitant high insulin regime must result in more erratic and unpredictable

blood glucose profiles compared to a low carb and appropriately matched low insulin regime. The more starchy foods that are eaten at a meal the greater the potential for blood glucose variability as a result. Delayed or variable stomach emptying which is present in 50% of patients with type one and type 2 diabetes also contributes to greater blood glucose variability with higher carbohydrate intake. Gastroparesis can also increase the risk of hypos if a large amount of insulin is injected to cover a meal but the food remains in the stomach.

There is also continuing evidence between high insulin doses (which are implicit in a high carbohydrate regime) and the development of vascular disease independent of any other factor. There is also increasing evidence of the damage that brief increases of blood sugar following meals can do in terms of development of diabetes complications. I have consulted with the Chief of Metabolic and Obesity Research Laboratory and Professor of Medicine and Biochemistry at Boston Medical Centre USA. She saw no basis for concern over the proportions and nature of the low carbohydrate, moderate protein, moderate fat regimen that underpins this approach. There are no nutrients in high carbohydrate foods that cannot be derived from other sources.

My physician has certified in front of medical audiences that my results with my hba1c have been dramatic and that my previously severe hypoglycaemia has abated. Professor Paul Moffit a diabetes specialist honoured for his contribution to diabetes care by the Australian Government wrote to me to say, "I very definitely believe in a low carbohydrate diet and I have done so for many years."

Many may not want to reduce their total carbohydrate to 30g which is the level needed to result in effectively normal blood sugars, but any significant move in this direction, say to 20g per meal will result in major improvements if the insulin regimen is tailored to it properly."

There are no nutrient present in high carb foods that cannot be obtained from other sources.

(Pract diabetes Int. May 2003 vol 20 no2)

Fact: Dr Bernsteins Regime

Describes insulin, monitoring, diet, reversal of complications.

Reverses complications of Diabetes.

(Virtually continuous euglycaemia for 5 years in labile Juvenile onset diabetic patient under non invasive closed loop control. Diabetes Care vol 3 No 1 Jan/Feb 1980.

Article: Does the So called Anti diabetic diet Actually increase the Risk of Diabetes?

Referenced article by Jack Challem highlighting increase in glucose metabolism disorders and benefits of “paleothic” style diet.

([www.syndrome-x.com/diabetic diet dangers.html](http://www.syndrome-x.com/diabetic_diet_dangers.html))

Article: Diabetes without Complications by Jonathan Christie.

“I’m insulin dependent but my risk of complications is almost zero on a low carbohydrate, ketogenic diet without sugar, refined carbohydrates or starches. My average blood sugar is 5.6 and ketostix tell me I’m in mild ketosis. I eat food I like and I feel good so it can be done.”

(surviveddiabetes.com via www.lowcarbportal.com/archives/2004/02/07)

A high carb/glycaemic diet is detrimental to people in general

Fact: Willett, "The primary remaining justification for high starch diets has been weight control but even this rationale is on shaky ground."

(Barry GA, Popkin BM. Dietary fat does affect obesity ! Am J Clin Nutr. 1998 and Willett WC. Dietary fat and obesity: an unconvincing relation. Editorial. Am J Clin Nutr. 1998)

Little benefit for high carb in weight control.

Opinion: Barry Groves ref natural diet compared with modern western diet and incidence of obesity and diabetes.

High Carb Promotes Obesity and Diabetes.

Fact: Ronald Krauss of the University of California Berkeley studied 200 male subjects who reduced their consumption of fat from 30-40 per cent of their diet to 20 per cent. The subjects who were already in danger of a heart attack with triglyceride levels above 200 dramatically improved their cholesterol levels. But "healthy" men with triglyceride levels below 100 actually had their cholesterol go up. "Not everyone is genetically programmed to go on a low fat diet."

High Carb adversely affects lipid profile.

(diabetes health. low carb diets work)

Opinion: Drs Eades "The low fat/high carbohydrate approach has proven a failure" (Protein Power P 5-7)

Opinion: Members of the Karuk tribe in Oregon and California are suing Scottish Power for erecting dams which prevent salmon, their traditional food, from spawning. A University of California study has claimed the native Americans have been forced to adopt unhealthy high starch diets because they can no longer obtain the quantity of salmon they need. Dr Kari Norgaard states, "The incidence of diabetes and heart disease has skyrocketed." The average tribesman used to consume 450 lbs of salmon a year and it is now 5lbs a year. Ron Reed a Karuk fisherman states, "The lack of good food is killing our people. Instead of having healthy food to eat we are relegated to eating commodity foods. That's our subsidy, unhealthy high starch foods. Because of our poverty we are forced to eat what the government gives us."

(Glasgow Herald 4th Feb 05)

Fact: Increased degrees of insulin resistance are associated with increased risks of age related diseases such as cancer, cataracts, cardiovascular lesions and type 2 diabetes. Dyslipidaemia precedes the onset of type 2 diabetes.

High Carb causes degenerative diseases including cancer, cataracts, and cardiovascular disease.

(Carbohydrate Awareness Council Newsletter vol. 1 issue 2.)

Opinion: Eleftheria Maratos Flier, director of obesity at Harvards's Joslin Diabetes Center states, "For a large percentage of the population perhaps 30-40 %, low fat diets are counterproductive. They have the paradoxical effect of making people gain weight."

(Gary Taubes. What if it's all been a big fat lie? The New York Times. July 7 2002 available via Dr Bernsteins site and others.)

Abstract: Dr Sylvan Lee Weinberg former President of the American College of Cardiology, former President of the American College of Chest Physicians and present editor of the American Journal of Cardiology has written, "The Diet Hypothesis: A Critique. The low fat high carbohydrate diet since 1984 may well have played an unintended role in the current epidemics of obesity, lipid abnormalities, type 2 Diabetes and metabolic syndromes. This diet can no longer be defended by appeal to the authority of prestigious medical organisations or by rejecting clinical experience and a growing medical literature suggesting that the much maligned low carbohydrate high protein diet may have a salutary effect on the epidemics in question."

(www.second-opinions.co.uk/vindicated from J Am Coll Cardiol 2004;43:731-3)

A high carb/glycaemic diet is detrimental to people with glucose metabolism problems in particular

Fact: Willett, "High carbohydrate diets which reduce high density lipoprotein HDL cholesterol and raise triglyceride levels exacerbate the metabolic manifestations of the insulin resistance syndrome."

High Carb exacerbates Metabolic Syndrome.

(Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids (Macronutrients) www.nap.edu/catalog/10490.html. 5 April 2004.

Opinion: Barry Groves ref high carb diet causes both blood sugar and insulin spikes causing high blood sugars and weight gain.(second opinion site)

Opinion: "Malpractice" is how Lois Jovanovic physician and chief scientific officer of the Sansum Medical Research Institute in Santa Barbara California describes conventional high carb nutrition advice. (Diabetes Diet Wars. Bernsteins site.) "Diabetes is a disease of carbohydrate intolerance. Thus meal plans should minimise carbohydrates because people with diabetes do not tolerate carbs. She prescribes food considerably lower in carbohydrates than does the ADA.

High Carb Advice "Malpractice".

Opinion: Bernstein, "Virtually all my patients prior to reading one of my books or seeing me for training were following one version or another of the ADA high carbohydrate diet. As a result they suffered not only from the long term complications caused by elevated blood sugars but also the discernible results of malnutrition such as deterioration of their teeth and retracted gums. This was certainly not helped by the urination of water soluble vitamins that accompanied the loss of glucose in their urine. Carbohydrate to most was bread, potatoes, desserts, sweetened cereals, skim milk and pasta. All recommended by the ADA. Deliberate consumption of nutritious vegetables was rare.

Our low carb diet attempts to emulate what was available to our ancestors before agriculture introduced dental disease, atherosclerosis and diminished lifespan. In pre historic times humanity survived and evolved eating animal sources and whole plants mostly leaves and stalks. Most of my patients eat vegetables at two or all of their meals.

Humans can survive without carbohydrate but the cannot survive without essential fatty acids and essential amino acids. High carb diets are not “balanced” and have little in common with the diets on which humanity evolved.

I have had type one diabetes for 57 years and have been on a low carbohydrate diet for 33 of those years. This diet has reversed many of my long term diabetes complications including kidney disease, vascular disease and cardiac disease.”

High Carb Diet promotes malnutrition.

(diabetes-normalsugars.com April 2003. A Perfect Response)

Opinion: Jenny Brand-Miller Australian doctor and researcher on the glycaemic index states, “ I think it’s not ethical any more to recommend high GI starchy foods. They may be doing more harm than good for diabetes and lipid control. I think any carbohydrate in a diabetic diet needs to be low to medium GI”.

High Carb Diet in Diabetics “Unethical”

(www.mendosa.com/food.htm)

Opinion: Unknown writer “This is advice from the National Diabetes Information Clearinghouse, a service on the National Institute of Diabetes, Digestive and Kidney Disease and unit of the National Institute of Health.

Eat the right portions of healthy foods such as fruit and vegetables (5-9 servings a day), fish, lean meats, dry beans, whole grains and low fat or skim milk and cheese.

In truth a meal containing servings of high carbohydrate foods like grain and fruits can raise your blood sugar level to 180 (10mmol) or more. The more you allow your blood sugar to climb to these alarming rates the more risk you have for life threatening diabetic complications.

Remember, the best thing you can do for yourself and your diabetes is keep your blood sugar low and level.”

(www.rhodescom.com/diabetes.html)

Opinion: moxeyns “I am in my early 40s and newly diagnosed as type 2. I have perhaps another 40 years to live with this disease and the advice I have been given is

wildly inappropriate for anyone willing to work at blood glucose and lipid control. On diagnosis I was told to lose weight by following a low fat high carbohydrate diet. I ate a bowl of high fibre breakfast cereal and my BG level went from 8 to 29. A slice of bread doubled my reading. I want to be able to maintain blood glucose levels as near as possible to non diabetic ones to minimise the risk of complications. My experience of the health profession has been stressful beyond belief. I am trying not to be the blind dialysis patient in a wheelchair because of the neuropathy but my PCT is actively hindering that aim.”

High Carb causes High Blood Sugars.

(tell parliament)

Opinion: Ian B. Blood Glucose testing and Diabetic Specialists. “When I was first diagnosed in 2001 the dietician said to cut out sugar, reduce fat intake and to base all meals around carbohydrates. After six months of high BG numbers I learnt from meeting people in a diabetic chatroom that listening to that stupid woman was just causing more damage. No when anyone asks if I want to see the dietician I just say, “only through the crosshairs of a telescopic sight.” The specialist diabetes nurse said the same as the dietician but added, “if you don’t listen to me, you won’t see me again, because you will be dead.” I learnt the proper way to manage my diabetes mainly from talking to people from the USA, Canada and Oz in chatrooms. I check my blood sugars regularly. My GP and the Practice nurse are quite realistic and we can usually agree, but the diabetic “specialists” were slightly short of disgraceful as far as knowing their subject and should look for employment where they can’t have such a bad effect on the health of people.”

(tell parliament)

Specialists in Diabetes Lack Knowledge of their Subject.

Opinion: Dr Katharine Morrison “Standard Dietary Advice is Flawed”

(tell parliament. your story)

Opinion: Ron Raab type one diabetic and vice president of IDF, “ I believe the current dietary advice for diabetes is wrong, not supported by the evidence, and does enormous damage.”

(tell parliament your story)

Opinion: Dr Katharine Morrison, “NHS Dieticians”

(tell parliament)

Referenced Article: Why Diabetics should avoid high carbohydrate diets.

“The research leaves little doubt as to what diabetics can expect from the American Diabetes Association's bizarre, “high carbohydrate diet will raise your blood sugar but you should eat it anyway” message: worsening glycaemic control. It is poor glycaemic control that causes the health problems that befall diabetics-not imaginary villains like saturated fat or cholesterol. Diabetics would be very wise to disregard the contradictory, incoherent, and scientifically baseless recommendations of the ADA.”

Poor Glycaemic Control Causes the Health Problems Associated with Diabetes.

[www.theomivore.com/American Diabetes Association.](http://www.theomivore.com/American%20Diabetes%20Association)

A high carb/glycaemic diet is detrimental to people with insulin dependent diabetics in particular

Opinion: Dr Richard Bernstein “There are a number of myths surrounding diet and diabetes and much of what is still considered sensible nutritional advice for diabetics can over the long run be fatal. I know, because it almost killed me.” (The Diabetes Solution and diabetes-normal sugars.com) “In my experience the ADA diet does not work for anyone.”

Opinion: Dr Richard Bernstein, “ The new but unproven hypothesis from the ADA that people with diabetes can keep blood sugars normal from eating the table sugar, bread, potatoes, pasta and so on that they recommend but covering the large amount of carbohydrate with “industrial” doses of insulin. This never worked for me (I’ve had diabetes 58 year) or for my thousands of patients. The reasons include the fact that we can never know the exact carbohydrate content of any meal. US laws permit an error of up to 20% on food labels. For a typical ADA meal containing 150g of carbohydrate the uncertainty is plus or minus 30g. John P Bantle MD professor of medicine, division of diabetes, endocrinology and metabolism at the University of Minnesota Medical School demonstrated that for a given individual the uncertainty of insulin absorption from typical ADA megadoses varies from plus or minus 29-39%. He further showed that the timing of action of these large doses is likewise highly variable.

Thus it is the high carbohydrate diets covered by megadoses of insulin that increase the risk of hypoglycaemia. In the 20 plus years that I have been in practice only five of my patients have had severe hypoglycaemia causing loss of consciousness. Two of these people were eating excessive amount of carbohydrate and three made major mistakes such as taking the wrong type of insulin. I’m sure this is a far cry from the incidence of severe hypoglycaemia among patients of high carbohydrate practitioners.

The ADA's designation of high blood sugar being a hbaic of 7% when non diabetics I have tested show about 4.2-4.8% attests to its lack of interest in blood sugar normalisation.

This may further explain the ADA failure to give up on its high carbohydrate diet. Remember that lowering dietary carbohydrate without drastically reducing insulin doses and other blood sugar lowering medications can cause hypoglycaemia.”

(diabetes health. low carb guru weighs in on controversy. March 2004)

Impossible to calculate exact dose of insulin required to cover high carb diet.

High Carb Diet Means a High Insulin Diet which Means More Hypoglycaemia.

Other References:

Patient Empowerment: Patients need to gain knowledge and take responsibility.

From IDF newsflash 6 03: Diabetes UK is calling on people with diabetes to take action into their own hands to ensure their future health. It is launching the campaign “Power to the People: Diabetes DIY” to stress the seriousness of diabetes to people with the condition. The hard hitting campaign is designed to help people find out as much as possible about managing diabetes.

A report published 30 April highlighted the need for the National Health Service in the UK to provide more support to individuals to allow them to take greater responsibility in dealing with the growing diabetes problem. The report published one month into the implementation of the government’s flagship National Framework for Diabetes highlights current gaps in the knowledge of people with diabetes.

(From International Diabetes Federation from Ron Raab)

Definition of Glucose Intolerance:

Fasting Plasma Glucose 7.0 or greater is impaired fasting glucose. 2 hour post GTT Plasma Glucose equal to 7.8 but less than 11 mmol per litre is impaired glucose tolerance. (Diabetes for Dummies 2003 UK version p21)

Insulin Resistance:

Those people with type 2 diabetes are insulin resistant meaning that their bodies resist the healthy functioning of insulin. Before obesity or lack of exercise or diabetes for that matter is present, future type 2 patients already show signs of insulin resistance. First of all the amount of insulin in the blood of these people is raised compared to normal people. Secondly an injection of insulin doesn’t reduce the blood glucose in these insulin resistant people nearly as much as it does in people without insulin resistance. (p 43 Diabetes for Dummies)

Pancreatic Beta Cell Burnout:

(P 39 Bernsteins)

In type two diabetes the UK Prospective Diabetes Study demonstrated a progressive decline in beta cell function at less than 60% at baseline. The initial defect is the loss of the first phase insulin release in response to a rapid rise in glucose. This results in

high postprandial glucoses. Over time the insulin deficiency progresses causing elevated fasting glucoses. Exogenous insulin becomes necessary as pancreatic beta cell function declines. **Improving overall glucose control especially in the early course of diabetes can slow or prevent complications, preserve beta cell function and improve long term glycaemic control.**

(Referenced Article, Achieving Glycaemic Control in Type 2 Diabetes. Practical Guide for Clinicians on Oral Hypoglycaemics by Drs Lisa Willett and Eric Albright. www.diabetesincontrol.com/modules.php?name=News&file=article&sid=2345)

Gender in Type 2 Diabetes:

Males and females are equally as likely to develop type 2 diabetes. Gender doesn't play a role in the onset of this disease. (P 45 Diabetes for Dummies)

Risk Levels and Blood Sugar:

Venous plasma glucose. low risk fasting less than 6.6-6.9 arterial risk 7 or over.

Self monitoring blood glucose fasting low risk up to 5.5 arterial risk 5.5-6 microvascular risk over 6.

Venous plasma glucose post prandial or peak low risk up to 7.5 arterial risk 7.5-9 microvascular risk over 9.

HBAIC low risk up to 6.5 arterial risk 6.5-7.4 microvascular risk over 7.5

Average hbaic levels compared to average blood glucose:

5 = 5

hbaic 6 = 6.66 average blood sugar

7 = 8.33

8 = 10

9 = 11.66

10 = 13.33

11 = 15

12 = 16.66

13 = 18.33

14 = 20

5-6 is considered normal

6-7 is considered good

7-8 is considered fair

over 9 is considered poor

(P 122/123 Diabetes for Dummies)

In Pregnancy studies have shown that the one hour post meal glucose level is the most important to keep under control. **The recommended level is between 7.3 and 8.3 at one hour and under 7 mmol after two hours.** Higher than this gives higher risks of problems including big babies, language retardation and smaller head circumference. Lower levels put the child at risk of being too small.

(Diabetes for Dummies P 99)
(Type One Diabetes 2nd Edition Hanas P274)

The American Diabetes Association is satisfied with an aic of 7% or less while the **American Association of Clinical Endocrinologists recommends a target of 6.5% or lower.**

(diabetes health. Perfect Control)

Research on Blood Sugar Levels and Organ Damage:

These studies show that post meal blood sugars of 7.8 and higher and fasting blood sugars over 5.6 cause permanent organ damage and cause diabetes to progress.

(University of Utah: Singleton, JR. Smith, Increased prevalence of impaired glucose tolerance in patients with painful sensory neuropathy. Diabetes Care 24 (8) 1448-1453 2001. The full article can be seen
<http://care.diabetesjournals.org/cgi/content/full/24/8/144>)

The damage seems to start in the small nerve fibres in glucose intolerance and in established diabetics affects more of the large nerve fibres.

(John Hopkins: CJ Sumner, The spectrum of neuropathy in diabetes and impaired glucose tolerance. Neurology 2003; 60: 108-111
www.neurology.org/cgi/content/abstract.)

Dr Krisley decreased the mortality of a group of critically ill patients by 29.3% by keeping their blood sugars below 7.8 at all times using insulin. The incidence of kidney failure and time in the ICU reduced. This means that 45 people out of a group of 800 left the hospital alive who would have died had they adhered to the ADA's standard for blood sugar control.

(Krisley, James, Effect on an intensive glucose management protocol on the mortality of critically ill Adult patients. Mayo Clinic Proc. Jan 2004 p 992-1000.
www.mayo.edu/proceedings/2004/aug/7908a2.pdf)

Beta cell destruction begins at levels over 5.6 mmol/l.

(Gastaldelli A Beta cell dysfunction and glucose intolerance: results from San Antonio metabolism study. Diabetologia 2004 Jan; 47 (1): 31-9
www.springerlink.com/index/MVOL2Y570H8GMKG.pdf

Beta cells die off in people whose fasting blood sugar is over 6.1.

People whose fasting blood sugar is 6.1-6.9 have already on average lost 40% of their insulin producing beta cells. People with diagnosed glucose intolerance who wish to avoid further loss should try to keep their blood sugars under 7.8 at all times.

(Butler AE Beta Cell Deficit and increased beta cell apoptosis in humans with type 2 diabetes. Diabetes. 2003; 52: 102-110.
<http://diabetes.diabetesjournals.org>

Tissue studies indicate that the damage to cells is a duration and concentration exposure phenomenon rather than a threshold effect.

(Catherine E Gleason et Determinants of glucose toxicity and its reversibility in pancreatic isle cell line HIT-T15. Am J Physiol Endocrinol Metab 279: E99-E1002, 2000. <http://ajpendo.physiology.org/cgi/content/abstract/279/5/E997>.

Post Prandial Hyperglycaemia and Diabetes Complications. Is it time to treat?

Article by Antonio Ceriello, Department of Pathology and Medicine University of Udine, Italy.

“ Increasing evidence suggests that the post prandial state is a contributing factor to the development of atherosclerosis. In diabetes, the postprandial phase is characterised by a rapid and large increase in blood glucose levels. Epidemiological studies and preliminary intervention studies have shown the post prandial hyperglycaemia is a direct and independent risk factor for cardiovascular disease. The mechanism of damage may be due to the production of free radicals. **Correcting the post prandial hyperglycaemia may form part of the strategy for the prevention and management of CVD in diabetes.**

(Diabetes 54: 1-7 2005)

Jennifer's guide to blood sugar targets:

Fasting Under 6

One hour after meals Under 8

Two hours after meals Under 6.5

(Alt-Support-Diabetes.org. Jennifer has collated and published the data regarding cell destruction and bases her advice given in the above papers.)

Fact: The American Society of Clinical Endocrinologists say that blood sugar should not be allowed to rise above 7.8 (140) after a meal. (ACCE Consensus statement on Guidelines for glycaemic control.)

Opinion: Jenny states, “ **The ADA is still recommending maintaining sugars at much higher levels ie 10 after a meal. The reason doctors recommend this higher dangerous level is because they believe that patients are too lazy and undisciplined to make the changes needed to bring their blood sugars down to truly safe levels. The other reason is because it is usually impossible to attain these levels using anti diabetic drugs alone. These targets can only be reached by cutting way back on your carbohydrate intake. Remember: It’s your eyes that go blind, your nerves that die, and your kidneys that fail, not your doctor’s.**”

(www.geocities.com)

Opinion: John Hopkins University researcher Dr Sherita Golden assistant professor of medicine and epidemiology and endocrinologist states, “ People living with diabetes are twice as likely to die from cardiovascular disease as those without. We concluded that for every one percent rise in glycated haemoglobin there was an 18 per cent increase in the risk of developing large vessel cardiovascular disease among people with type 2 diabetes. For type one diabetes this rise was 15 per cent rise per cent of hbaic. The management of blood sugar levels is a key part of cardiovascular disease prevention in diabetes.”

(Annals of Internal Medicine. Sept 21. 2004 from diabetes.about.com)

Diabetes Control and Complication Trial 1983 onwards:

75% reduction in retinopathy etc in patients with near normal blood sugars.

(Bernstein P38)

Diabetes:

(Erasmus P341)

Gluconeogenes and other things that mess up blood sugar control.

(Bernstein P 91)

Goals of Treatment.

(Bernstein P 115)

Characteristics of People who have survived 50 years with type one diabetes.

They had maintained normal body weight
took low doses of insulin- an average of 0.52 units per kg
had elevated HDLs
Had average hbaics of 7.6 or less
Their parents had lived a long time

They consumed alcohol moderately.

Foot Care for Diabetics

(Bernstein p454)

Foot Care and how to avoid amputations.

(www.diabetesincontrol.com/modules.php?name...article2219)
How you can help insulin dependent diabetics in poor countries.

(www.insulinforlife.org)

Internet Resources for Diabetics.

(type into google “internet resources for diabetes” a huge list of sites appears courtesy of the Indian Journal Of Medical Sciences at www.indianmedsci.org/article.asp?issn=0019-5359. 2005 vol 59 issue 1 page 32)

Diabetes epidemiology

Rise in obesity 1980s onwards.

(Big Fat Lie P 3/12)

Fact: Diabetes UK report, “ An audit of over 11,500 children in England, Wales and Northern Ireland has concluded that **four in five children under five and six in seven 11 to 16 year olds are not achieving the recommended blood sugar targets.** Diabetes UK called on health services to make blood glucose monitoring a priority and to ensure that children with diabetes receive good standards of support and care.”

(www.globalnews.idf.org/2004/06/children with)

Opinion: Jacqui Troughton, BSc(Hons), SRD, Specialist Dietician, University Hospital, Leicester and Senior Teaching Fellow, Warwick University states, “ **Nutritional advice that has little or no supporting evidence is still being given to people with diabetes.** People with diabetes need evidence based information about carbohydrates and to be given the knowledge and skills necessary to adjust their lifestyle, medication or insulin around the choices the wish to make.”

(Practical diabetes international. May 2003 Vol 20 no4)

The Laws of Small Numbers. Dr Richard Bernstein.

How insulin absorption varies.

How types of injectable insulin dosage compares with normal insulin response.

(www.diabetesincontrol.com)

Early Diabetic Neuropathic Complications.

Reduced Heart Rate Variability

Dry skin on feet

Claw toes and high arch

Reduced sensation in the feet

Double vision in one or more directions of gaze.

(www.diabetesincontrol.com/bernstein/ask.shtml)

How to Impact on your patient's lifestyle in 20 minutes.

1. Most people with type 2 diabetes are overweight with hbaics over 8%.
2. Most people think it is their doctors job to look after their diabetes and they need to understand it is a lifestyle disease and they have 95% control over it.
3. Portion sizes and carbohydrate content of foods are the most important thing to pay attention to. Not whether it has sugar in it or not.
4. Patients need to understand why physical activity is important in controlling diabetes.
5. Most patients did not understand the hbaic result and its correlation with blood sugar levels. They need it checked four times a year.
6. Patients need to check their blood sugars 2 hours after eating. They can then learn if what they ate needs to be modified regarding carbohydrate type and quantity.
7. Most patients have not completed a full diabetes education programme but only by doing this will they have the knowledge to control their condition.
8. Diabetes treatment needs to focus on prevention of complications not just treating them when they occur.
9. Patients need to lose their fear of insulin and getting over that first fear of self injection and seeing it as a benefit in controlling the disease rather than a punishment is important.

(Diabetesincontrol. Jan 24 2005)

Dead in Bed Syndrome and the Human/Animal Insulin issue.

Give your unopened in date insulin to people who would otherwise die without it.

Experiences of Low Carbohydrate Diet in Diabetics.

(Report of Annual conference of IDDT May 2001
www.iddtinternational.org/newsletters.

www.insulinforlife.)

Syndrome X:

Elevated vldl
low hdl
insulin resistance
hyperinsulinaemia
hyperglycaemia
hypertension

(Protein power P 316)

22% of the US population meet the criteria for Metabolic syndrome. Criteria include the presence of three or more of the following. Abdominal obesity, Hypertriglyceridaemia over 1.69 mmol/l low levels of HDL under 1.04 mmol/l, blood pressure over 130/85 and fasting glucose over 6.1.

Identification and treatment of known cardiovascular risk factors is essential at the time metabolic syndrome is diagnosed and should not be delayed until DM2 is diagnosed.

(Willett and Albrights article in Diabetes in Control)

High Carb Diets can cause Syndrome X in “normal” males.

(Soft Science of Dietary Fat by Gary Taubes. P 10/11)

Fat Level Targets:

Serum total cholesterol low risk less than 4.8 high risk over 6.0
LDL low risk less than 3.0 high risk over 4.0
HDL low risk more than 1.2 high risk less than 1.0
Triglycerides low risk less than 1.7 high risk over 2.2

(P 127 Diabetes for Dummies)

How excess sugars and starches in the diet cause problems:

How sugar is turned into fat.

(Fats that Kill, Fats that Heal. Erasmus P 31.)

Role of insulin and insulin resistance.

(Big fat lie. P7/12)

Family budget implication of a healthy diet.

The Atkins diet costs 15 dollars per person but the typical American spends 4 dollars a day on food.

(The High Cost of Good Eating; www.diabetesincontrol.com/modules.php)

Hunter Gatherers typically do less work for the same amount of food, are healthier and are less prone to famine than are primitive farmers.

(Lee and de Vore 1968, Cohen 1977 and 1989 see Lombardi P 10/16)

Exercise:

Resistance exercise decreases insulin levels.

(Protein power P212)

Exercise.

(Bernstein P 205)

Benefits of exercise. Referenced article.

(www.ultimate-low-carb-diet-tip.com/diabetics-diet-healthy.html p5/7)

The Dietary Recommendations that Don't Make Sense: USDA Food Pyramid.

Figure 8.1 (A Healthy Eating Pyramid)

(p 137 Diabetes for Dummies)

Opinion: Dr Bernstein “There never were, and still have never been any studies to support the ADA hypothesis that the long term complications of diabetes were due to dietary fat and that by dramatically reducing fat and substituting large amounts of carbohydrate these complications would be avoided.”

(diabeteshealthcom Low-Carb Guru Weighs in on Controversy. March 2004)

Basic Food Groups:

“Much of what you have been taught about diet is probably wrong.”

“Complex” carbs are still sugar.

(Bernstein. P119, P 164)

What diabetics should eat for health.

(Bernstein P 149)

Creating a Customised Meal Plan.

(Bernstein P 163)

Professor Willetts recommendations for improving the health benefits of the Atkins diet.

(No roll in weight management paper. Very similar to Protein Power Diet)

“A calorie is a calorie is a calorie” - An increasing amount of evidence says this is wrong.

(Bob Lombardini’s article Eating- Is anything reasonable? P7/16. He also recommends visiting the site www.omen.com/adipos/html)

The Mediterranean Diet Effect. Is it a lack of vegetables and fruit rather than too much fat that causes problems?

(Gary Taubes article. The Soft Science of Dietary Fat. via Bernstien P 9/11)

Lower Carbohydrate Recommended Diets:

The Diabetic Diet.

(Dr Richard Bernstein)

The following menus have been adjusted to reflect the lower carbohydrate and higher protein that we recommend.... keeping in line with 40% carbohydrate, 30% protein and 30% fat programme.

(Diabetes for Dummies P 323/324)

This diet is very similar to the Zone diet in construction. The Zone diet and “high end” of Atkins for Life form the basis for my baseline dietary recommendation for people with glucose metabolism disorders. This diet however needs modification for individuals based on their weight goals, their hunger levels and their blood sugar levels including one and two hour post meals. How to do this is clearly explained.

(Mastering the Zone, Barry Sears)
(Atkins for Life, Robert Atkins)

Sansum Medical Research Institute Nutrition Advice

Limit the carbohydrate in your meals and snacks. Reduced carbohydrates to 30g with meals and no more than 15 g with snacks. If you control the amount of carbohydrate you eat and when you eat it your blood glucose levels will become more consistent. Protein has little effect on blood glucose levels and fat does not affect glucose levels. Recommended daily amounts of fat differ depending on whether you are at your ideal weight or have high blood cholesterol levels.

(www.sansum.org/nutrition)

Why Calorie Counting Fails and What to do to lose Weight:

(Erasmus P192)

Learning from Successful Dieters.

Attitude is more important than having a specific food plan. The successful dieters gathered information from resources and groups but did not rely on support groups for the success of their diet.

They experimented to see which approach suited them best. Whatever method was used however they ended up cutting calories significantly eg 1,200 on plan to 1,800 on maintenance. The type of food eaten and the pattern of eating did not change once the goal weight was achieved, only the quantity.

Men tended to exercise while losing and women tended to exercise after losing.

They did not have their lives revolve around food and thinking about it all the time.

The successful dieters also changed other aspects of their lives to increase their happiness or sense of fulfilment.

They kept track of their weight and restarted their diet before they had put on very much.

(From Lessons from Keeping it Off: Winning at Weight Loss. By Robert Olson and Susan Colvin. www.geocities.com/jenny)

Harley Street Doctors prescribing low carb diets.

(www.thefooddoctor.com/displayarticle/263)

Fact: Study shows “Catkins” diet helps beat diabetes.

Yes. It works for cats (and dogs) too.

(www.50connect.co.uk/articlepages/pets/index/11672)

High Carb diets cause hunger and weight gain.

(Gary Taubes, Soft Science of Dietary Fat)

Glycaemic Index:

Concepts explained.

(Easy GI diet)

This concept is also explained in the Zone and Atkins and Protein Power and Dr Bernstien's diabetes solution P 444 and many low carb cookbooks.

The Glycaemic Index and Diabetics.

Why diabetics must still exercise caution and self test even if using “medium” or “low” glycaemic foods.

(Dr Bernstien's article. www.diabetesincontrol.com)

Role of Cholesterol and Lipoproteins:

How these substances affect the body are explained.

(Protein power P 386)

(Erasmus P64)

Cholesterol in foods.

(Erasmus P 221)

Is the Cholesterol Theory Wrong?

(Erasmus P 331)

What different dietary fats do to your lipids.

(Soft Science of Dietary Fat. Gary Taubes Article via Bernstein's site P7/11)

The Good Fats and Oils:

Olive oil, extra virgin, virgin or pure.

Nut oils, walnut, macadamia, hazelnut.

Peanut Oil.

Sesame seed oil, (light)

Avocado and avocado oil.

Unsalted butter or clarified butter (saturated source)

(Protein Power, P 111)

The Healing Essential Fatty Acids

(Fats, Erasmus P43)

Fact: Willett states, "In large prospective trials total fat intake does not predict cancer risk."

(Hunter DJ, Spiegelman D, Adami HO, etc Cohort studies of fat intake and the risk of breast cancer-a pooled analysis. N Engl J Med. 1996;334/356-61.

Fact: Willett states, "In addition dietary fat per se does not predict the risk for coronary heart disease in ecological or prospective studies or clinical trials. However intake of specific fatty acids is important.

(US National Research Council, Committee on Diet and Health. Diet and Health: Implications for Reducing Chronic Disease Risk. Washington DC. National Academy Pr. 1989 and Hu FB, Stampfer MJ etc Dietary Fat intake and the risk of coronary disease in women. N Eng J Med. 1997)

Fact: Dr Uffe Ravnskov states, "Man's diet possibly includes factors of importance to the vessels or heart but there is little evidence that saturated fatty acids as a group are harmful or that polyunsaturated fatty acids as a group are beneficial."

(Ravnskov U. The Questionable role of saturated and polyunsaturated fatty acids in Cardiovascular disease. J Clin Epidemiol 1998; 51:443-460)

Fact: Dr Mary Enig, Consulting Editor to the Journal of the American College of Nutrition, President of the Maryland Nutritionists Association and an expert on fats and oils states, **“The idea that saturated fats cause heart disease is completely wrong, but the statement has been “published” so many times over the last three or more decades that it is very difficult to convince people otherwise unless they are willing to take the time to read and learn what produced the anti-saturated fat agenda.”**

(Enig M. Diet, serum cholesterol and coronary heart disease. in Mann G, ed Coronary Heart Disease. 1993.)

She came to the conclusion that the causative factor was more likely to be the inordinate increase in trans fatty acid consumption from vegetable margarines and cooking oils. Saturated and monounsaturated fats have never been shown to cause heart disease.

Q: What is the connection between fats and gallstones?

A: Gallstones are caused by eating too little fat in the diet. Missing breakfast may also increase the risk of gallstones. If you already have gallstones eating fat will promote contraction of the gall bladder which can cause pain.

(www.theperfectweight.com. Ref 24, 25)

Saturated fat intake among tribal populations.

(www.theomnivore.com/commonmythsaboutlowcarbdiets.html)

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The Truth About Saturated Fat.

The best oils to use are: organic butter for cooking and on vegetables, extra virgin olive oil for salads and stir frying vegetables, and small quantities of expeller pressed flax oil in opaque containers that have been refrigerated for salad dressings.

(Article 3 P 5/5 with reasoning why and description of other options.)

Dangers of Polyunsaturates, Benefits of Saturated Fats, what beneficial effects cholesterol has on the body, the causes and treatments of heart disease, problems caused by modern methods of fat extraction.

(Article 2)

The Lipid Hypothesis, Primitiv Diet, studies erroneously said to have supported the low fat hypothesis, studies supporting use of saturated fat in disease prevention, effects of rancidity of fats.

(Article 1)

Referenced Article by Mary Enig and Sally Fallon.

(www.diabetes-normalsugars.co/articles)

Trans fatty Acids/ Eicosanoids/ Arachidonic Acid:

Trans fatty acids are made when polyunsaturated fats are partially hydrogenated. The role of good and bad fats in the body is explained.

(Protein power P382)

(Erasmus P106)

Polyunsaturated oils are implicated in tumour growth.

(www.freenet.tlh.fl.us/blomard/eating.htm to see references P 5/16)

Article: The Killer in our Food = Hydrogenated Vegetable Oil

“It is important to understand that trans fats and saturated fats are completely different from one another and actually have opposite effects on health. The food industry’s latest gimmick is to imply that both are bad and should be avoided. This is a dangerous deception given that fats in fresh meats and dairy foods are important nutritionally. the lower the most significant factors for heart disease- including BP, lipoprotein a and homocysteine- they raise protective HDL, and they reduce the risk for inflammatory disorders such as asthma and arthritis. The only fats we truly need to be worried about are the oils made into margarine and shortening and used for deep frying. These are added fats, they are not part of any natural food, and they are the only fats linked to any disease.

(Thomas Anderson PhD BC quoted on www.bbc.co.uk/dna/ican/A3160630 p6/10)

Ketosis:

A criticism of Atkin’s diet is that ketosis is dangerous and to be avoided at all costs. When I interviewed ketosis experts however they universally sided with Atkins. Dr

Richard Veech and NIH researcher who studied medicine at Harvard and then got his doctorate at Oxford with the Nobel laureate Hans Krebs stated, “ **Doctors are scared of ketosis. They are always worried about diabetic ketoacidosis. But ketosis is a normal physiological state. I would argue it is the normal state of man. It’s not normal to have a McDonalds and a delicatessen round every corner. It’s normal to starve.** Simply put ketosis is evolution’s answer to the thrifty gene. We may have evolved to efficiently store fat for times of famine but we also evolved ketosis to efficiently live off that fat when necessary. They make the body run more efficiently and provide a backup source of fuel for the brain” Veech has shown that both the heart and brain run 25 % more efficiently on ketones than on blood sugar.

(Big fat lie. P 10/12)

The Good Fats and Oils:

Olive oil, extra virgin, virgin or pure.

Nut oils, walnut, macadamia, hazelnut.

Peanut Oil.

Sesame seed oil, (light)

Avocado and avocado oil.

Unsalted butter or clarified butter (saturated source)

(Protein Power, P 111)

The Healing Essential Fatty Acids

(Fats, Erasmus P43)

Fact: Willett states, “In large prospective trials total fat intake does not predict cancer risk.”

(Hunter DJ, Spiegelman D, Adami HO, etc Cohort studies of fat intake and the risk of breast cancer-a pooled analysis. N Engl J Med. 1996;334/356-61.

Fact: Willett states, “In addition dietary fat per se does not predict the risk for coronary heart disease in ecological or prospective studies or clinical trials. However intake of specific fatty acids is important.

(US National Research Council, Committee on Diet and Health. Diet and Health: Implications for Reducing Chronic Disease Risk. Washington DC. National Academy Pr. 1989 and Hu FB, Stampfer MJ etc Dietary Fat intake and the risk of coronary disease in women. N Eng J Med. 1997)

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Protein:

The energy lost to heat and entropy is over 20% greater for the digestion and metabolism of protein than for equal amounts of carbohydrate.

(Carbohydrate Awareness Council)

Fact: “Our data do not support the hypothesis that a high protein intake increases the risk of ischaemic heart disease. In contrast our findings suggest that replacing carbohydrates with protein may be associated with a lower risk of ischaemic heart disease.”

(Hu. FB, Stampfer MJ etc Dietary Protein and risk of ischaemic heart disease in women. Am J Clin Nutr 1999; 70: 221-7)

Question: Will eating more protein and less carbohydrate damage my kidneys?

Answer: Not unless you already have diseased kidneys. Kidney stones are also not caused by a high protein diet. Protein restricted diets are helpful for men who already have diseased kidneys but for women protein restriction does not make any difference. The fat soluble vitamins and saturated fatty acids found in animal foods are necessary for properly function of the kidneys. On the other hand sugar has been implicated in kidney disease.

(www.theperfectweight.com References 5, 6, 7, 8 from Mary Enig, Saturated Fat and the Kidneys. www.westonaprice.org. 6. Blum M. Protein intake and kidney function in humans: its effect on “normal ageing”. Arch Intern Med 1998; 149:211-2 7. Yudkin J Effects of high dietary sugar. BMJ 1980; 261:1396 8. Blacklock NJ Sucrose and idiopathic renal stone. Nutr Health 1987; 5: 9-17)

Q. Can a reduced carbohydrate /higher protein plan lead to osteoporosis?

A: No. A low carb diet reduces the risk of osteoporosis provided the protein and fat taken is from largely animal sources.

(www.theperfectweight.com references 9-17)

Q. I’ve heard there is a link between meat and cancer. Is this true?

A: No.

(References 18,19 perfect weight)

Q: Doesn’t the latest research prove that a high animal fat diet increases the risk of breast cancer?

A: No, it doesn’t.

(references 20-22 perfect weight)

Overweight and Constipation:

(Erasmus p 343)

Recommendations for Health:

(Erasmus P 399)

Anthropology:

Ludwig: “Grain products and concentrated sugars were essentially absent from human nutrition until the development of agriculture which was only 10,000 years ago.”

(big fat lie P 4/12)

Failure Rate with Sulphonureas:

Sulphonureas work by making your pancreas release more insulin.

Although sulphonureas sometimes don't work when first given they almost always stop working later on. Every year secondary sulphonurea failure occurs in about 5 to 10 per cent of people taking them.

(P 177 Diabetes for Dummies)

Long Term Problems with Sulphonureas.

(Bernstein P 225)

Questions regarding increased cardiac mortality with the use of sulphonureas remain unanswered. An epidemiologic association between hyperinsulinaemia and cardiovascular disease has raised concern about the safety of sulphonureas.

(Willett and Albright article from diabetes in control site P2/6)

Metformin:

Metformin does not tend to cause weight gain which is important for many people with type 2 diabetes. It is particularly useful when fasting hyperglycaemia is present. It causes some beneficial effects on blood lipids. It lowers blood glucose mainly by reducing the production of glucose from the liver. It may increase the sensitivity of the muscle cells to insulin and slow the uptake of glucose from the intestine. It does

not depend on stimulating insulin to work as the sulphonureas do. About ten per cent of patients fail to respond to it when it is first used and the secondary failure rate is 5-10 per cent a year.

(Diabetes for Dummies P179/180)

Metformin therapy in the prediabetic patient reduced the onset of DM2 by 31%. Visceral fat is reduced in metformin therapy. Visceral fat is more metabolically active and produces adipocytokines which contribute to insulin resistance. **Metformin has benefits outweighing the lowered hbaic compared to sulphonureas and insulin.** Gastrointestinal side effects can be minimised by starting with a single dose of 500mg after the evening meal. The maximum glucose lowering dose is 2g daily. Important though uncommon adverse effects include lactic acidosis and vitamin B12 deficiency.

(Willett and Albright. Diabetes in control article P4/6)

The Glitazones:

The Glitazones are the first group of drugs for diabetics that directly reverse insulin resistance. Rosiglitazone and pioglitazone were released in Europe in 2000. Neither drug has been linked to liver damage. They cause changes in the muscle and fat cells where the insulin resistance resides. They also enhance the actions of insulin in the liver.

The glitazones have their greatest effect on the blood glucose after eating rather than the first morning glucose. Glitazones are insulin sparing meaning that the body does not have to make as much insulin to control the blood glucose when a glitazone is given. So far secondary failure does not seem to be a problem. Glitazones take 12 weeks to give the maximum benefit. You should only be given a glitazone in combination with a sulphonurea if you can't tolerate metformin or there is some other reason why you can't take it. You should be offered a glitazone in addition to metformin and a sulphonurea if your blood sugars aren't well controlled enough as an alternative to starting on insulin. They can cause hypoglycaemia if used with a sulphonurea or insulin.

Glitazones have demonstrated beta cell preservation which delays or prevents progression to insulin therapy. This has not been seen in patients treated with sulphonureas or metformin. Glitazones directly improve insulin resistance and reduce hyperinsulinaemia. They also raise HDL and give a less dense LDL, give improved endothelial function and slightly reduce diastolic blood pressure. The Glitazones become less effective as diabetes progresses and endogenous insulin production wanes. **The data for beta cell preservation is compelling and makes glitazones a favourable choice early in the course of DM2.**

(Willett and Albright article. Diabetes in Control P 5/6)

Meglitinides (The Prandial Glucose Regulators):

Repaglinide (Novonorm) and Nateglinide (Starlix) are chemically unrelated to sulphonureas, but they work by squeezing more insulin out of the pancreas. They are taken just before meals to stimulate insulin just before that meal. They are usually taken three times a day. They are not used with sulphonureas but can be used with metformin. They can cause gut upset and hypoglycaemia.

Diuretics and Beta Blockers:

Diuretics and beta blockers actually increased insulin levels as they decreased blood pressure. More Glucose intolerant people will progress to diabetes if they are on these drugs.

(Protein power p 30 plus research article I cannot lay my hands on ? The New Generalist)

The Business and Politics of Health:

How the low fat theory got political backing.

(Big Fat Lie. 5/12)

Profits in food industry.

(Big fat lie. P6/12)
(Erasmus P389)

Failure of ADA to report on Gannons Positive Trial Results for low carb diet in type 2 diabetics.

(diabetes.org/diabetes-forecast/dec2003/research and diabetesjournals.org and defeatdiabetes.org/Articles/lowcarb040721.htm)

Quote: All adults with diabetes will receive high quality care throughout their lifetime, including support to optimise the control of their blood glucose, blood pressure and other risk factors for developing the complications of diabetes.

(Standard 4. National Service Framework for Diabetes P 24)

Quote: Diabetes has the potential to cause the NHS serious capacity problems if not tackled effectively and mismanagement will lead to a drain on NHS resources. To address this the targets for reducing the impact of diabetes are, to improve blood glucose control, reduce cholesterol levels in people with diabetes,

regular recall and review of people with diabetes, encouraging patients to give up smoking. 18 months into the publication of the NSF Delivery Strategy, do you feel progress is being made in meeting these targets?

(www.tellparliament.net/diabetes)

Quote: Tony Barnett Professor of Medicine University of Birmingham, **“Hitting blood glucose targets will be more difficult for a number of reasons...there is still a lack of knowledge amongst both health professionals and patients which mitigate against the above targets being met.**

(www. tell parliament)

Opinion: Nigel H. “But How to deviate the juggernaut?”

“Until someone with enough authority has the guts to make a decision and show the way forward, the NHS cannot set a lead on this issue. Until they do, **no one else is going to shift their dietary recommendations for diabetics or anyone else for that matter, so we’re just going to create more type 2 diabetics to further worsen the load on the NHS.**”

(tellparliament)

Opinion: Dr Katharine Morrison, “If you want a lotta chocolate on your biscuit join our club!”

“Honest advertising by Diabetes UK backed by government funding could help deviate the juggernaut.”

(tell parliament)

Opinion: moyeyns, “Support for glucose control”.

My PCT believes that good control is represented by an aic of 7.5% and won’t prescribe test strips for Type 2s under that. How is this policy acting to optimise the control of my blood glucose when it denying me access to the tools I need to do the job?

(tellparliament)

Article: Just How Far will the anti low carb crowd go? Misleading claims and biased research reviews- all in a day’s work for opponents of low carbohydrate diets.

A thoroughly researched article from Anthony Colpo which discusses and gives the accurate information on many claims made by those who wish to discredit low carb diets. Includes: weight loss, nutritional adequacy, cardiac issues, kidney issues, bone issues, meat and cancer research, and glycaemic control.

(www.theomnivore.com)

Article: Wheat Industry Sponsors Anti-Atkins Researchers to Discredit Low Carb Diets.

This article explains problems with a high grain diet, advantages of low carb diets, and the connection between the views expressed by Dr Susan Jebb and her sponsors.

(www.theomnivore.com/Flour...)

Article: The Ties that Bind. The financial influences behind the diet and health advice issued by “impartial” health authorities.

“Are health authorities prostituting themselves for corporate money? You be the judge...”

The American Dietetic Association is sponsored by among others, the National Soft Drink Association, Potato Board, National Pasta Association, National Dairy Council.

The American Diabetic Association “Fact Sheets” are sponsored by at least 100,000 dollars each from Coca Cola, Kellogg, Kraft Foods, Weight Watchers International, Campbell Soup, Nestle USA, General Mills, Nabisco and Uncle Bens.

The American Heart Association obtains money from food companies to endorse their products as low in fat and cholesterol. In 2002 it earned the ADA approximately 2 million dollars from such endorsements including, cheerios, cocoa puffs, cookie crisp, low fat ice creams, milk chocolate drinks, honey graham squares, kellogs nutri grain cereal bars and microwave popcorn.

Lipid drug lowering manufacturers who sponsor the ADA for as much as 400,000 dollars on some programmes include Merck, Pfizer, Astra Zeneca, and Bristol Myers Squibb.

Many other drug manufacturers and makers of fat free high carbohydrate foods are among the sponsors.

(To see more visit [www.theomnivore.com/Lift the veil.html](http://www.theomnivore.com/Lift%20the%20veil.html))

The Soft Science of Dietary Fat.

Article by Gary Taubes.

Includes: The history of the low fat means a healthy heart hypothesis.

([www.diabetes-normalsugars.com/articles p1-7/11](http://www.diabetes-normalsugars.com/articles%20p1-7/11))

Dietary Carbohydrate, Protein and Fat for People with Glucose Metabolism Disorders: Just What is Optimal.

Dr Katharine Morrison.
February 2005

Summary: Benefits of Low Carb Diets

There is well researched evidence that low carb diets cause more weight loss and have improved compliance compared to high carb diets. The low carb diets also have lipid and other cardiovascular benefits, can prevent type 2 diabetes and are safe for adults and children who wish to modify these factors or lose weight.

For people with glucose metabolism disorders low carb diets give lower and more even blood sugar patterns after eating with both postprandial hyperglycaemia and hypoglycaemia being reduced. They markedly improve the achievement of blood sugar targets and cardiovascular targets. There is less need for medications and insulin compared to a high carbohydrate diet. The low carb diet gives a markedly better outcome for mother and baby in gestational diabetes.

For people with insulin dependent diabetes they can achieve normal blood sugars with a low carb diet without the severity and frequency of hypoglycaemia associated with the high amount of insulin used on high carb diets. This results in better weight control and mood. The complications of diabetes can be stabilised and sometimes reversed if adherence to the diet is good. Despite the fact that there are no nutrients present in high carb foods that cannot be obtained from other sources, the low carb diet is not yet routinely promoted in the NHS. This is a source of tremendous frustration for those people who want to improve their lives while living with diabetes.

Summary: Detrimental Effects of the High Carbohydrate Diet.

The High Carbohydrate Diet promotes weight gain mainly due to causing more hunger than the low carb diet for any given calorie quantity. In a land of abundance more gets eaten. In addition the lipid profiles of even normal healthy people can be adversely affected by a high carb diet. High Carb diets promote insulin resistance which causes Glucose Intolerance and Type 2 diabetes and also a variety of degenerative diseases including cancer, cataracts and cardiovascular disease.

High Carb Diets promote the Metabolic Syndrome and lipid abnormalities that promote cardiovascular disease. A diet high in refined grains and starch tends to be low in essential nutrients. The high blood sugars particularly after meals are

associated with an increase in the rate permanent death of insulin producing cells in the pancreas and hasten the progression to diabetes, insulin requirement and complications such as neuropathy, blindness and kidney disease. Some prominent doctors who specialise in diabetes consider that given the knowledge we now have that it is unethical to continue to ask patients to follow a high glycaemic/carbohydrate diet.

For Insulin Dependent Diabetics who no longer have responsive pancreatic beta cells, it is impossible for them to accurately mimic the body's normal response to anything other than a very low starch/sugar meal with any current insulin even in pump form.

The high sugar load generated by the high carb diet necessitates the use of very large doses of synthetic insulin. On the one hand this does not cover the peaks of blood glucose produced causing the complications of diabetes. Later once the blood glucose has entered the cells, residual insulin that is no longer needed causes dangerously low blood sugars. This can be offset by snacks up to a point, but the blood sugar control achievable on a low carb diet far surpasses what can be achieved on a high carb diet.

Other Sections of Interest:

Patient Empowerment Statement from Diabetes UK

Information about the onset of Glucose Intolerance, Insulin resistance and Pancreatic Cell Burnout.

Blood Sugars and Blood Lipid levels to aim for to reduce or eliminate diabetic complications.

Resource sites and articles that help the established Diabetic or person with Metabolic Syndrome to understand and manage their condition.

Why the standard high carb diet advocated for diabetics is a poor option and what a variety of researchers and patients have discovered about eating to give more success with diabetes.

Everything you ever wanted to know about fat and how it is metabolised in the body.

Common Drugs Used in Type 2 Diabetes.

How Business and Political interests have got in the way of delivering information about what is a healthier diet for diabetics.