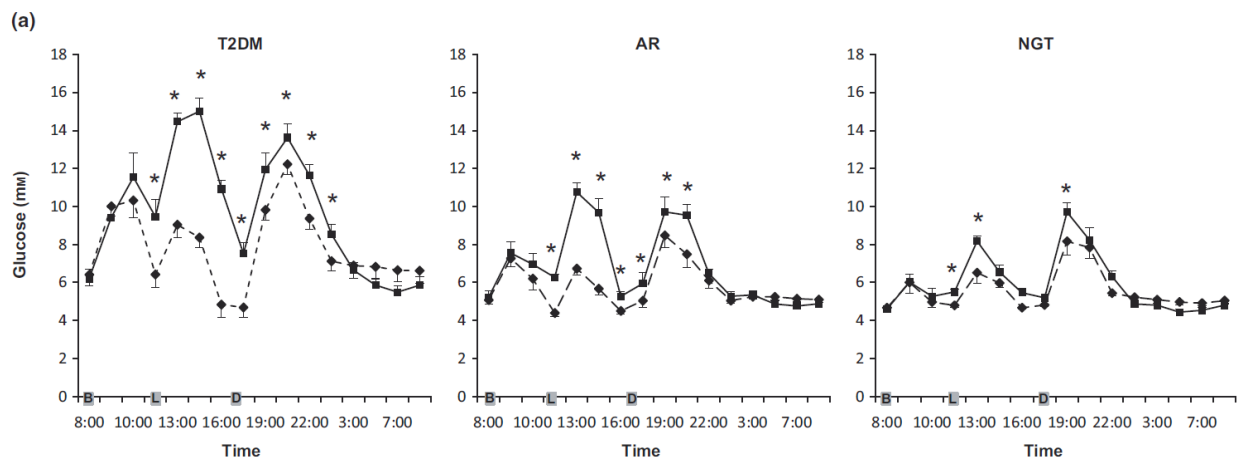
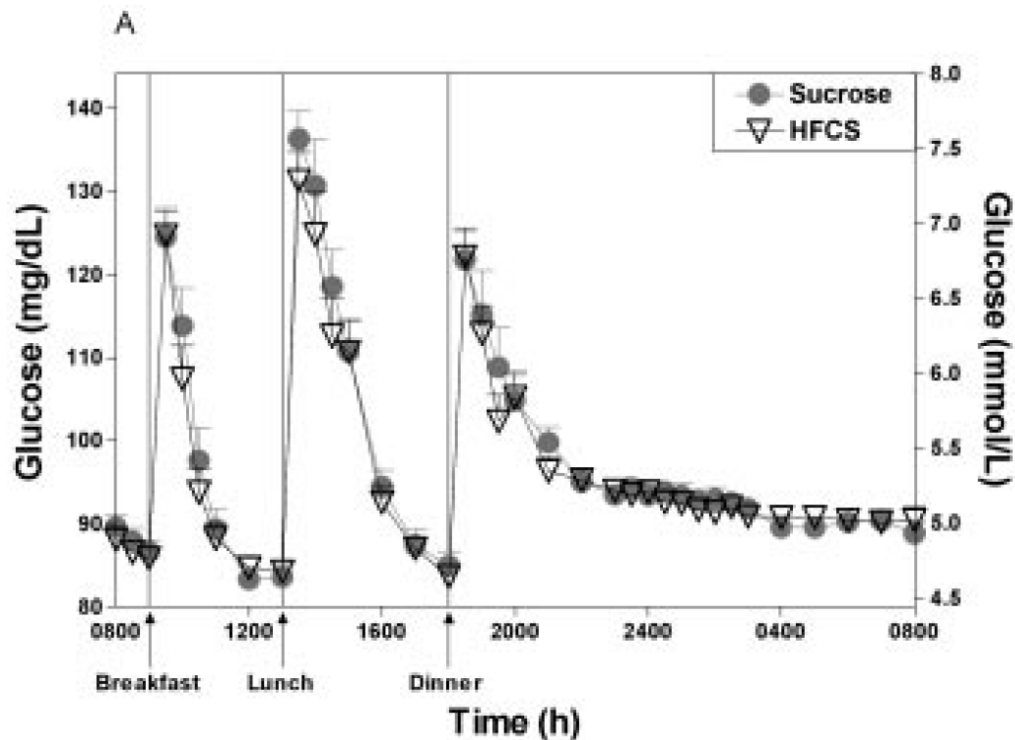


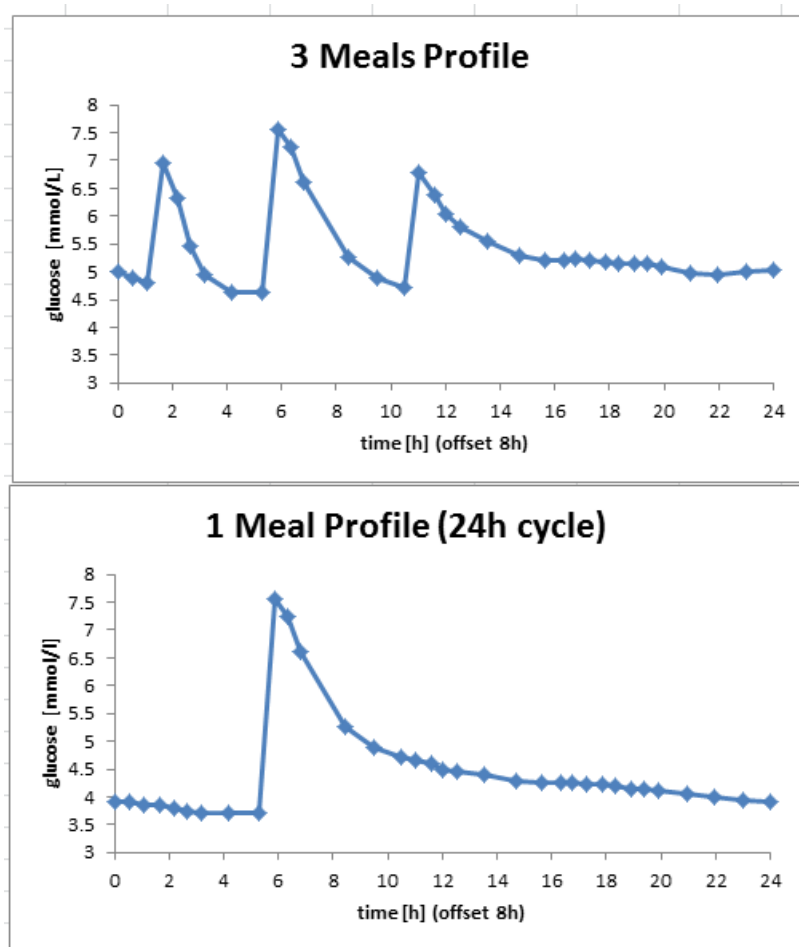
## Daily glucose profile as model input

Matthias König

Glucose profiles (humans) based on published daily profiles of blood glucose ([Stanhope, et al., 2008](#); [Yuen, et al., 2012](#)) have been created. These profiles will be used as periportal glucose input. The 3-meal profile corresponds to normal daily blood glucose variation with breakfast, lunch and dinner, the 1-meal profile is an adapted profile corresponding to one large meal during the day (can be used to simulate 24h glycogen cycles).



3 Meals		1 Meal	
time [h]	glucose [mmol/L]	time [h]	glucose [mmol/L]
0	5	0	3.9
0.55468	4.891391111	0.55468	3.9
1.07862	4.812352222	1.07862	3.85
1.64674	6.942371667	1.64674	3.85
2.16743	6.324215556	2.16743	3.8
2.65573	5.449657222	2.65573	3.75
3.17714	4.949843889	3.17714	3.7
4.19315	4.620835	4.19315	3.7
5.27296	4.640262778	5.27296	3.7
5.84591	7.572385	5.84591	7.572385
6.33758	7.256668333	6.33758	7.256668333
6.82719	6.599072778	6.82719	6.599072778
8.42317	5.250839444	8.42317	5.250839444
9.46975	4.875799444	9.46975	4.875799444
10.48679	4.71773	10.48679	4.71773
11.02362	6.775437778	11.02362	4.65
11.57655	6.387383889	11.57655	4.6
12.00633	6.038811667	12.00633	4.5
12.56029	5.821697778	12.56029	4.45
13.54573	5.538719444	13.54573	4.4
14.68561	5.288571111	14.68561	4.3
15.61058	5.209422778	15.61058	4.25
16.32013	5.215802778	16.32013	4.25
16.75216	5.241982778	16.75216	4.25
17.27631	5.195816667	17.27631	4.24
17.83146	5.175941111	17.83146	4.22
18.29402	5.149515556	18.29402	4.2
18.91095	5.142772222	18.91095	4.15
19.37367	5.142645556	19.37367	4.15
19.89774	5.083330556	19.89774	4.1
20.97675	4.971266667	20.97675	4.05
21.96378	4.951272222	21.96378	4
22.98217	5.016739444	22.98217	3.95
23.96935	5.023043333	23.96935	3.9



## REFERENCES

Stanhope, K.L., *et al.* (2008) Twenty-four-hour endocrine and metabolic profiles following consumption of high-fructose corn syrup-, sucrose-, fructose-, and glucose-sweetened beverages with meals, *Am J Clin Nutr*, **87**, 1194-1203.

Yuen, K.C., McDaniel, P.A. and Riddle, M.C. (2012) Twenty-four-hour profiles of plasma glucose, insulin, C-peptide and free fatty acid in subjects with varying degrees of glucose tolerance following short-term, medium-dose prednisone (20 mg/day) treatment: evidence for differing effects on insulin secretion and action, *Clinical endocrinology*, **77**, 224-232.