

Supplementary Materials for

Sex-specific glucose homeostasis and anthropometric responses to sleeve gastrectomy in obese patients

Mark A. Taylor, Lukasz Szczerbinski, Anna Citko, Magdalena Niemira, Maria Gorska, Hady Razak Hady and Adam Kretowski

Author for correspondence : Lukasz Szczerbinski
Email: lukasz.szczerbinski@umb.edu.pl

Table S1 Quantile regression for response parameters. We implemented three of five possible quantile regression models to estimate median and IQR adjusted for: 1) age by model 1; 2) age and smoking status by model 2; 3) age, smoking status, baseline diet (total kCal intake), and baseline IPAQ by model 3; 4) age, smoking status, and baseline BMI by my model 4; and 5) age, smoking status, baseline BMI, baseline diet, and baseline IPAQ by model 5. Models 1, 2, and 3 were used for continuous variables based upon or highly correlated to BMI (such as weight), while models 1, 4, and 5 were used for all others

parameter (unit)	model	male	female
Total body mass (DXA) (kg)		145 (135.6-160.6)	121.5 (107.95-139.4)
	1	143.08 (139.43-146.37)	121.04 (116.71-126.29)
	2	143.06 (139.73-146.64)	119.27 (114.7-123.39)
	3	146.54 (139.26-154.13)	120.73 (114.19-126.22)
Fat mass (DXA) (g)		66181 (56380-77634)	63613 (53221-71379)
	1	66015.52 (63534.65-68248.3)	61563.2 (57810.92-66119.54)
	2	65794.41 (63259.59-67906.76)	61518.38 (57858.56-64106)
	3	67604.26 (62543.18-72295.38)	61278.26 (56677.64-64365.77)
Lean body mass (DXA) (g)		77020 (72785-83776)	56492 (51464.5-62619)
	1	78053.89 (76407.05-79536.05)	56290.2 (55140.8-57685.9)
	2	77795.47 (76057.81-79243.53)	55942.86 (55146.57-57660.61)
	3	77195.21 (75106.82-78950.18)	55314.04 (53467.38-57172.79)
Visceral adipose tissue mass (DXA) (g)		5116 (4198-5644)	2510 (2065.75-3364.5)
	1	5549.73 (4897.73-6083.18)	2681 (2476.19-2885.81)
	2	5544.39 (4886.71-6082.5)	2597.8 (2398.33-2819.13)
	3	5408.48 (4930.23-5771.83)	2649.43 (2505.75-2847.43)
Body weight (kg)		146.75 (136.05-162.97)	122.8 (108-139.3)
	1	145.24 (140.35-149.9)	122.34 (119.02-126.13)
	2	145.44 (139.41-149.61)	119.21 (115.15-122.9)
	3	154.22 (145.46-162.37)	120.71 (113.94-126.19)
BMI (kg/m ²)		46.18 (43.38-51.49)	44.54 (39.76-49.62)
	1	46.3 (45.95-46.62)	44.33 (43.9-44.81)
	2	46.47 (46.23-47.29)	44.21 (42.9-44.87)
	3	47.98 (46.03-49.47)	44.16 (43.37-45.27)
Leptin (ng/ml)		30.09 (20.73-47.36)	51.97 (38.28-68.48)
	1	30.79 (26.66-34.65)	50.56 (48.8-51.77)
	2	32.13 (27.39-36.52)	49.59 (46.92-52.31)
	3	35.29 (31.97-41.08)	50.03 (47.04-56.26)
Daily kcal intake (kcal)		2072.37 (1465.93-2461.11)	1477.02 (1204.74-1935.54)
	1	1874.35 (1649.42-2109.5)	1474.67 (1470.56-1478.77)
	2	1887.56 (1668.34-2172.21)	1476.14 (1470.04-1483.12)
	3	2024.62 (1464.02-2449.58)	1465.76 (1202.66-1952.08)
Daily protein intake (g)		89.9 (67.94-115.95)	67.47 (53.49-80.18)
	1	86.91 (79.88-94.27)	68.95 (67.8-70.11)
	2	91.47 (83.9-99.59)	67.87 (64.41-69.02)
	3	85.3 (70.29-105.11)	66.42 (55.48-81.81)
Daily fat intake (g)		65.79 (45.23-85.01)	50.41 (35.36-67.46)

	1	59.59 (54.44-64.97)	49.49 (48.4-50.57)
	2	65.06 (57.46-73.86)	49.57 (48.53-50.51)
	3	66.37 (46.08-86.16)	49.81 (37.13-68.27)
		260.13 (187.69-357.19)	211.38 (163.08-261.59)
Daily carbs intake (g)	1	254.75 (224.8-286.05)	209.07 (198.89-219.24)
	2	251.56 (223.77-279.71)	209.32 (197.75-217.5)
	3	276.6 (203.09-342.7)	205.78 (177.82-260.99)
		114 (107-134)	114 (106-127)
Glucose at 0 minute of OGTT (mg/dl)	1	117.89 (110.67-125.11)	114.44 (110-118.33)
	4	116.26 (110.61-122.73)	115.25 (110.24-121.24)
	5	118.97 (110.99-126.04)	116.43 (110.66-121.55)
		37.42 (27.31-51.44)	23.86 (16.68-31.89)
Insulin at 0 minute of OGTT (U/mL)	1	37.7 (35.57-39.84)	23.9 (23.43-24.44)
	4	38.51 (34.05-43.83)	22.18 (20.19-25.21)
	5	36.9 (28.9-44.6)	23.82 (21.47-25.82)
		5.9 (5.5-6.5)	5.8 (5.5-6.35)
Glycated hemoglobin (%)	1	5.86 (5.77-5.96)	5.84 (5.72-5.95)
	4	5.87 (5.7-5.96)	5.79 (5.67-5.88)
	5	5.96 (5.77-6.12)	5.98 (5.76-6.06)
		236.35 (168.95-350.78)	160.16 (112.94-223.94)
HOMA-beta	1	252.43 (207.73-297.14)	158.95 (144.35-175.63)
	4	246.18 (210.23-287.72)	160.47 (142.3-177.05)
	5	247.53 (202.51-319.14)	157.98 (133.47-181.6)
		11.38 (7.8-16.09)	6.76 (4.54-9.83)
HOMA-IR	1	11.68 (11.19-12.17)	7.36 (7.09-7.6)
	4	11.83 (10.43-12.73)	6.41 (5.65-7.56)
	5	11.92 (9.93-13.68)	7.2 (6.54-7.42)
		192 (160-219)	191 (165-223)
Total Cholesterol(mg/dl)	1	186.62 (181.23-192)	191.2 (186.4-195.4)
	4	188.89 (186.64-191.57)	189.15 (184.2-194.69)
	5	182.96 (175.81-193.64)	186.64 (178.74-200.57)
		143 (114-189)	135 (99-167)
Triglycerides (mg/dl)	1	143.86 (134.79-152.93)	130 (122-137)
	4	144.64 (131.56-156.05)	135.05 (124.71-145.04)
	5	154.55 (136.46-180.95)	129.06 (121.5-137.37)
		39 (34-45)	49 (41-57)
HDL Cholesterol(mg/dl)	1	38.85 (37.1-40.6)	49.4 (46.84-51.64)
	4	39.15 (37.89-40.85)	50.41 (46.12-53.39)
	5	38.16 (36.43-40.71)	49.14 (46.81-50.84)
		122 (95-143)	120 (97-145)
LDL Cholesterol(mg/dl)	1	123.03 (119.37-126.7)	119.91 (119.16-120.77)
	4	122.76 (119.9-125.09)	116.42 (111-119.66)
	5	116.79 (108.48-124.75)	118.34 (113.39-125.14)
		27.5 (22.1-35.8)	20.5 (17.2-26.2)
Aspartate transaminase (U/l)	1	26.85 (25.44-28.26)	20.54 (19.7-21.27)
	4	26.14 (24.11-28.02)	20.43 (19.63-21.3)
	5	26.49 (25.12-28.16)	19.75 (18.94-20.47)
		42 (32.6-55.3)	25.2 (19-31.9)
Alanine transaminase (U/l)	1	43.53 (38.07-49)	25.45 (23.87-26.83)
	4	42.67 (38.01-48.24)	25.24 (23.4-27.92)
	5	42.79 (37.54-48.54)	24.92 (23.96-25.79)

		5.15 (3.14-9.65)	6.25 (3.28-9.61)
C Reactive Protein (mg/l)	1	5.4 (4.55-6.26)	5.96 (4.9-7.17)
	4	5.21 (4.61-6)	6.02 (4.37-7.32)
	5	5.19 (4.28-6.33)	6.31 (4.99-7.66)
		5772 (2590.5-10314)	4227 (2292-11257.5)
Physical activity (METs- minutes/week)	1	6612.47 (5485.11-7686.16)	4687.7 (3938.06-5597.99)
	4	6569.88 (5572.05-7814.08)	4558.92 (3227.18-5630.87)
	5	6148.5 (2539.5-10374)	4242 (2524.5-11257.5)
		116.08 (64.24-159.83)	91.81 (66.8-123.84)
Mean insulin concentration during OGTT (U/mL)	1	112.78 (105.21-120.35)	87.06 (81.58-93.33)
	4	114.07 (97.57-132.97)	86.01 (80.57-95.15)
	5	108.68 (92.49-125.4)	86.74 (77.91-99.97)
		156 (138-193)	160.5 (138.25-196.25)
Mean glucose concentration during OGTT (mg/dl)	1	157.38 (149.56-165.19)	162.88 (149.59-174.51)
	4	156.5 (148.52-165.01)	165.51 (153.45-177.91)
	5	160.02 (149.21-167.3)	166.16 (152.53-182.24)
		1.16 (0.73-1.94)	1.6 (1-2.31)
MATSUDA index	1	1.18 (1.15-1.2)	1.58 (1.53-1.64)
	4	1.14 (0.98-1.27)	1.74 (1.53-1.84)
	5	1.12 (0.87-1.27)	1.67 (1.49-1.79)
		339.5 (307-422.5)	344.25 (296.75-422.25)
Glucose AUC	1	334.08 (316.04-357.27)	352.06 (320.6-379.59)
	4	331.52 (316.64-352.47)	351.98 (327.65-379.52)
	5	343.06 (320.54-364.06)	356.17 (328-380.57)
		272.88 (205.3-392.15)	231.01 (162.66-319.8)
Insulin AUC	1	275.83 (268.63-281.43)	215.25 (201.83-230.11)
	4	267.27 (238.58-299.63)	213.81 (202.3-238.06)
	5	280.69 (222.62-346.31)	208.18 (188.93-234.47)

Supplementary Appendix 1: Anthropometric Generalized Linear Mixed Models

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waist circumference

Figure 1. Distribution of waist circumference in time - linear fit

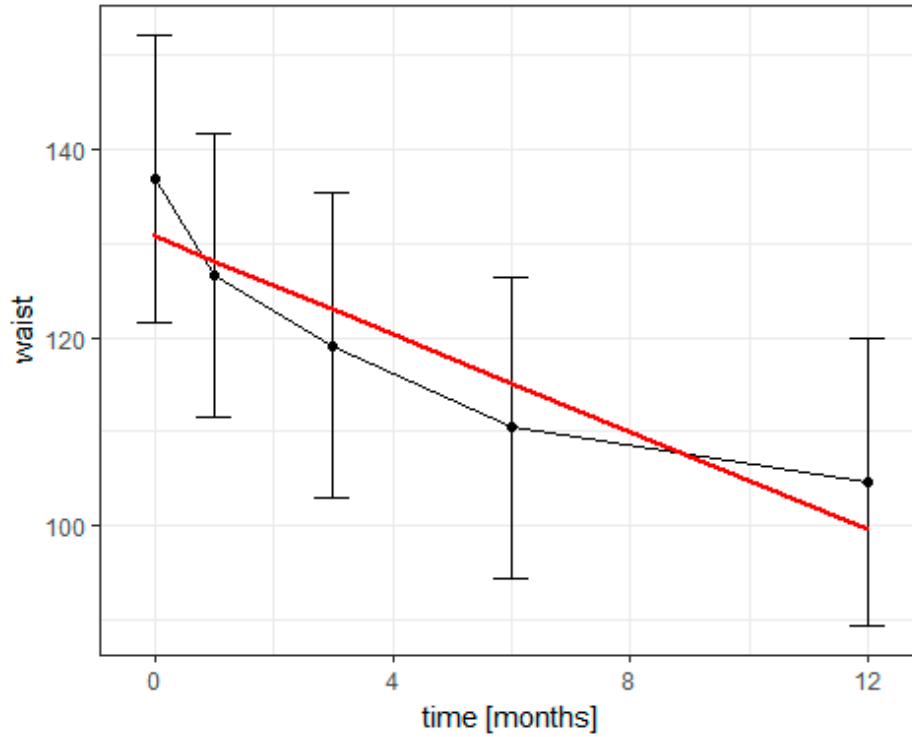


Table 1. Results of linear models for waist circumference

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	130.8***	130.9***	125.6***	125.4***	125.8***	125.2***	120.8***	120.8***
time	-2.593***	-	-2.596***	-	-2.553***	-	-2.469***	-2.405***
		2.554***		2.465***		2.402***		
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			11.374***		11.459***		10.118***	10.008***
diet_kcal				0.005***		0.005***	0.005***	0.005***
no. of observations	596	576	596	558	576	540	558	540
REML	4511.3	4384.3	4485.2	4159.1	4356.8	4040.1	4137.7	4018.4

Figure 2. Distribution of waist circumference in time - quadratic fit

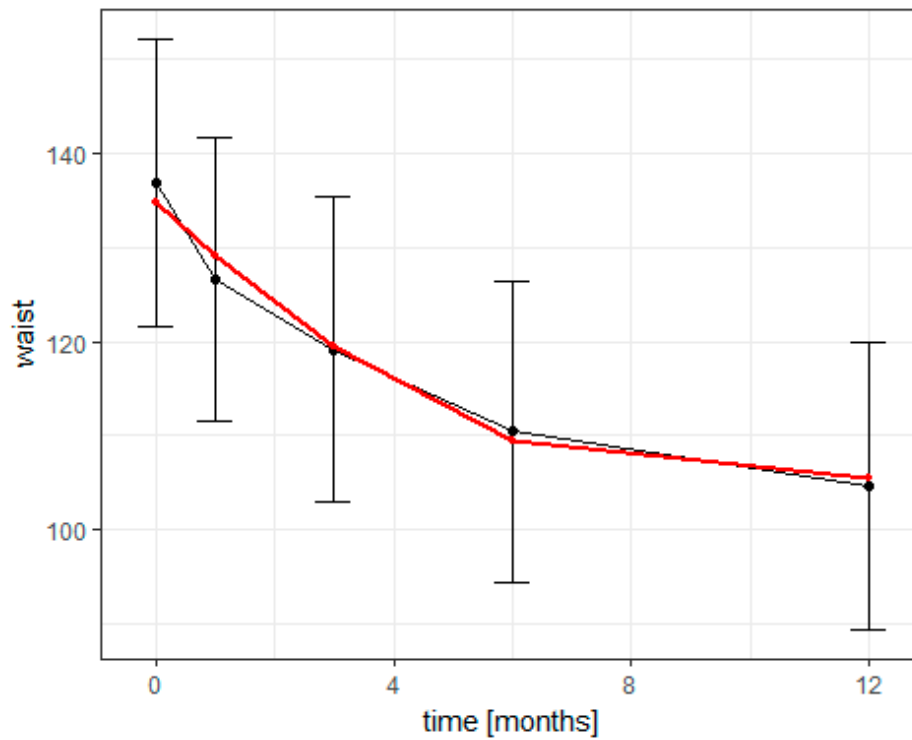


Table 2. Results of quadratic models for waist circumference

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	134.8***	134.8***	129.6***	131.2***	129.6***	130.8***	126.4***	126.1***
time_sq	0.299***	0.298***	0.299***	0.243***	0.298***	0.234***	0.245***	0.236***
time	-6.026***	-	-6.031***	-	-5.999***	-	-5.351***	-5.195***
		5.999***		5.323***		5.166***		
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			11.468***		11.516***		10.776***	10.686***
diet_kcal				0.003***		0.003***	0.003***	0.003***
no. of observations	596	576	596	558	576	540	558	540
REML	4308.9	4194.1	4282.4	4043.2	4166.5	3938.6	4019.5	3914.5

hip circumference

Figure 3. Distribution of hip circumference in time - linear fit

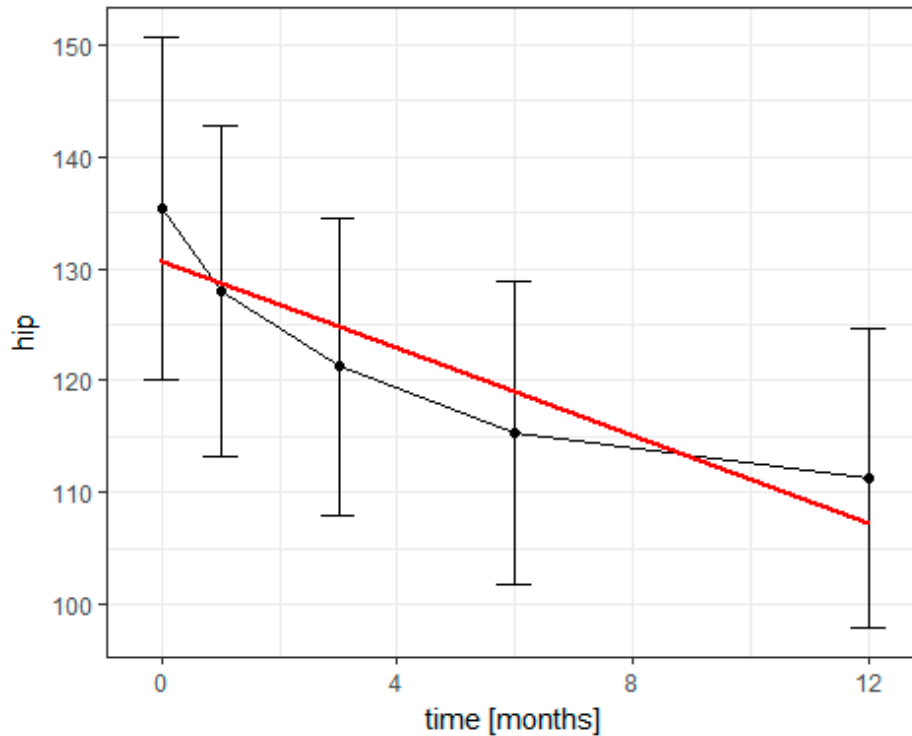


Table 3. Results of linear models for hip circumference

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	130.7***	130.4***	131.3***	127.1***	131***	126.3***	128.1***	127.3***
time	-1.964***	-	-	-	-	-	-	-
		1.937***	1.963***	1.886***	1.937***	1.860***	1.886***	1.859***
IPAQ		0.000			0.000	0.000		0.000
sexM			-1.327		-1.206		-2.329	-2.271
diet_kcal				0.004***		0.004***	0.004***	0.004***
no. of observations	596	576	596	558	576	540	558	540
REML	4364.9	4230	4361.1	4055.5	4226.2	3934.5	4050.9	3930

Figure 4. Distribution of hip circumference in time - quadratic fit

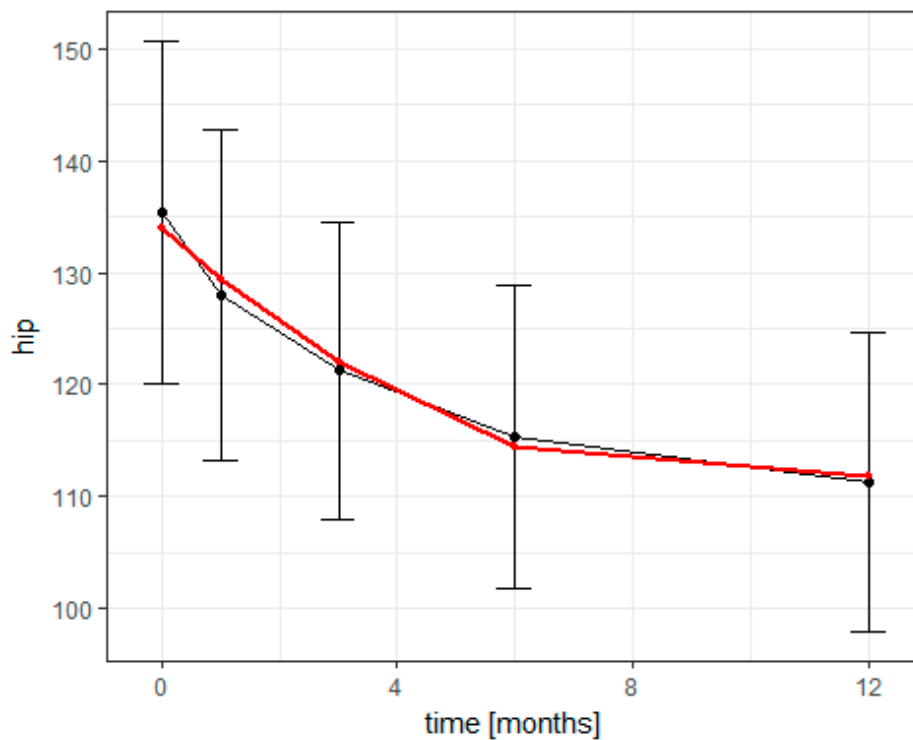


Table 4. Results of quadratic models for hip circumference

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	133.9***	133.5***	134.5***	131.9***	134***	131***	132.7***	131.8***
time_sq	0.236***	0.234***	0.236***	0.202***	0.234***	0.196***	0.202***	0.196***
time	-4.676***	-	-	-	-	-	-	-
		4.644***	4.675***	4.264***	4.644***	4.184***	4.259***	4.179***
IPAQ		0.000			0.000	0.000		0.000
sexM			-1.247		-1.155		-1.783	-1.700
diet_kcal				0.002***		0.002***	0.002***	0.002***
no. of observations	596	576	596	558	576	540	558	540
REML	4209.8	4077.8	4206	3961.2	4074	3847.2	3957.1	3843.1

WAIST-TO-HIP RATIO (WHR)

Figure 5. Distribution of WAIST-TO-HIP RATIO (WHR) in time - linear fit

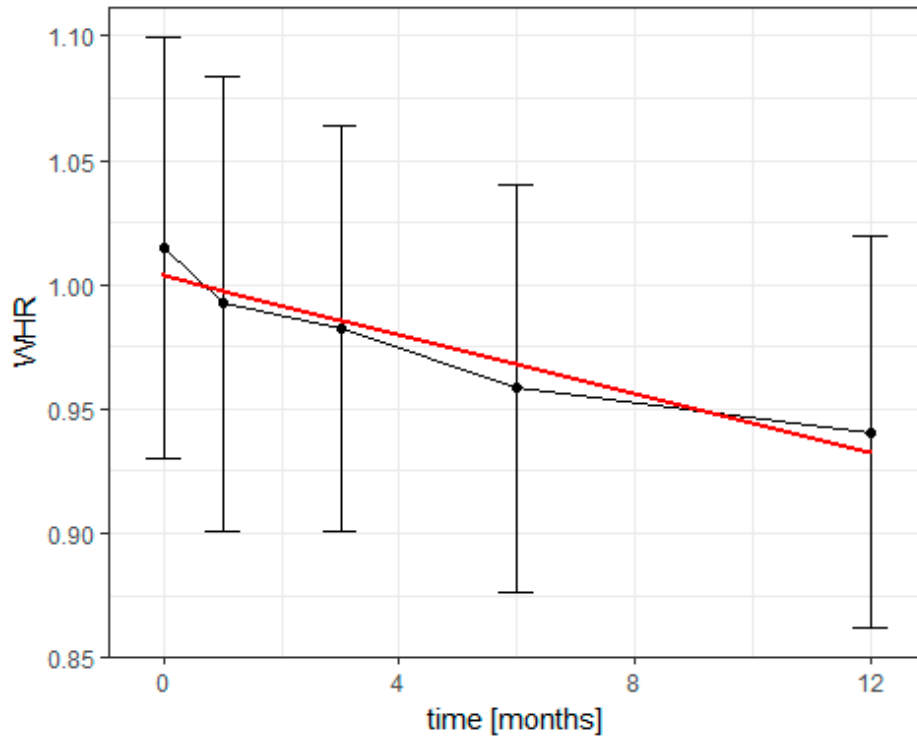


Table 5. Results of linear models for WAIST-TO-HIP RATIO (WHR)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	1***	1***	1***	1***	1***	1***	0.9***	1***
time	-0.006***	-	-	-	-	-	-	-
		0.006***	0.006***	0.006***	0.006***	0.005***	0.006***	0.005***
IPAQ		-0.000			-0.000	-0.000*		-0.000*
sexM			0.103***		0.103***		0.101***	0.101***
diet_kcal				0.000***		0.000**	0.000**	0.000**
no. of observations	596	576	596	558	576	540	558	540
REML	-1648.6	-1582.4	-1729.8	-1529.4	-1662.9	-1449.5	-1606	-1524.7

Figure 6. Distribution of WAIST-TO-HIP RATIO (WHR) in time - quadratic fit

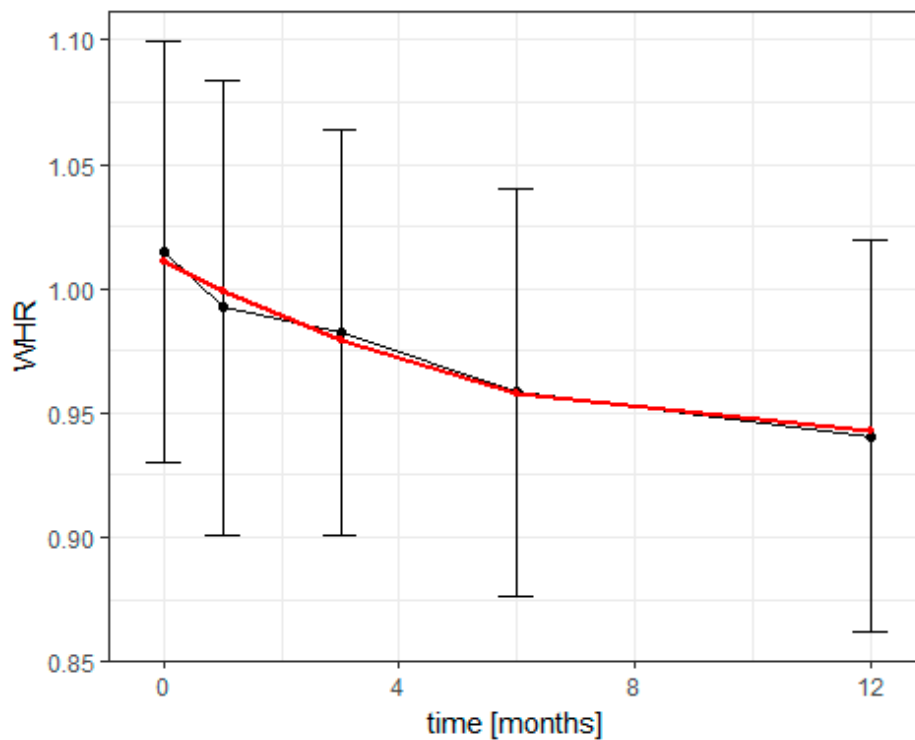


Table 6. Results of quadratic models for WAIST-TO-HIP RATIO (WHR)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	1***	1***	1***	1***	1***	1***	1***	1***
time_sq	0.001***	0.001***	0.001***	0.000*	0.001***	0.000*	0.000**	0.000**
time	-0.012***	-	-	-	-	-	-	-
		0.012***	0.012***	0.010***	0.012***	0.009***	0.010***	0.010***
IPAQ		-0.000			-0.000	-0.000*		-0.000*
sexM			0.103***		0.103***		0.102***	0.102***
diet_kcal				0.000*		0.000*	0.000	0.000
no. of observations	596	576	596	558	576	540	558	540
REML	-1649.1	-1584.3	-1730.6	-1520	-1665.2	-1439.1	-1598	-1516

Total body mass (DXA)

Figure 7. Distribution of Total body mass (DXA) in time - linear fit

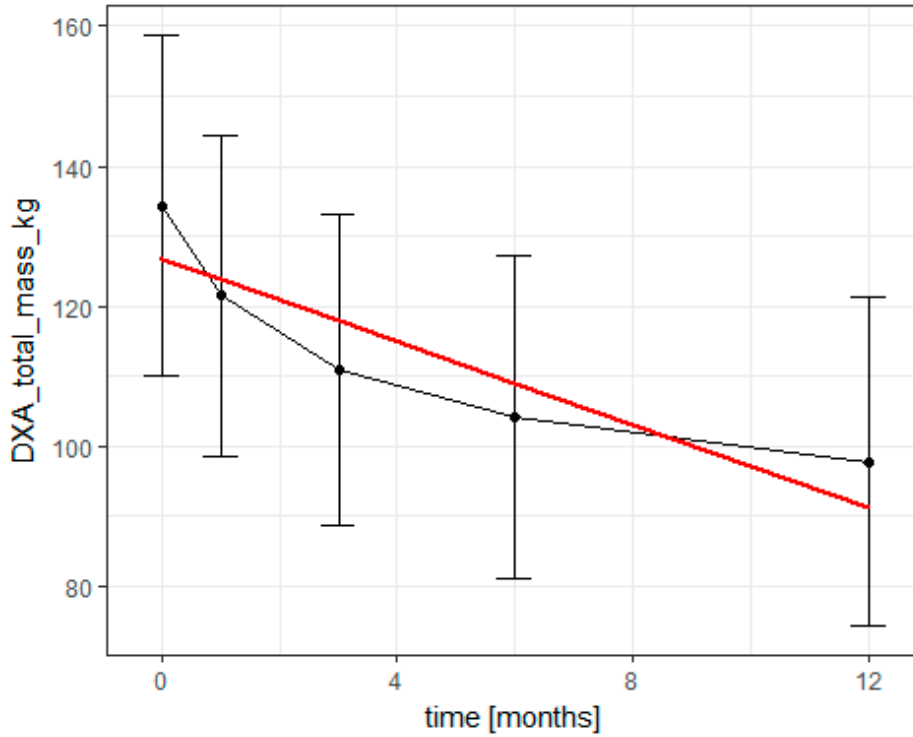


Table 7. Results of linear models for Total body mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	126.8***	126.9***	115.5***	118.6***	115.5***	118.5***	108.4***	108.4***
time	-2.953***	-	-2.953***	-	-2.938***	-	-2.773***	-2.730***
		2.942***		2.770***		2.728***		
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			24.565***		24.761***		22.346***	22.337***
diet_kcal				0.008***		0.008***	0.007***	0.008***
no. of observations	594	576	594	556	576	540	556	540
REML	4796.2	4683.4	4745	4368.6	4631.3	4267.5	4325.4	4223.8

Figure 8. Distribution of Total body mass (DXA) in time - quadratic fit

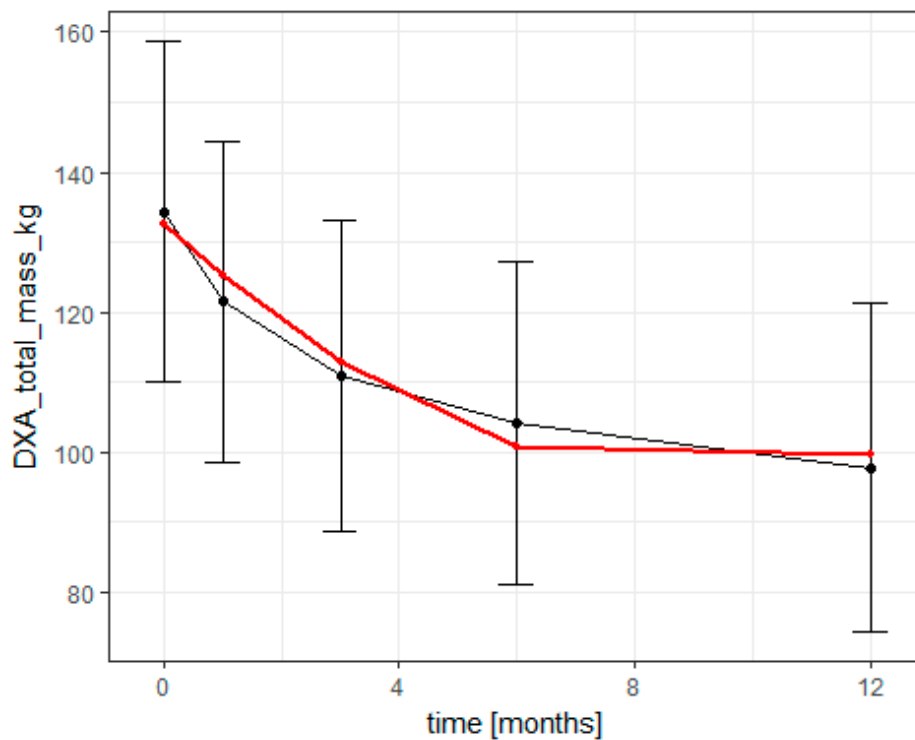


Table 8. Results of quadratic models for Total body mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	132.7***	132.5***	121.3***	126.9***	121.1***	126.7***	116.3***	116.1***
time_sq	0.423***	0.423***	0.423***	0.341***	0.422***	0.334***	0.343***	0.336***
time	-7.830***	-	-7.827***	-	-7.833***	-	-6.814***	-6.708***
		7.842***		6.790***		6.686***		
IPAQ		0.000			0.000	-0.000		-0.000
sexM			24.747***		24.834***		23.366***	23.389***
diet_kcal				0.004***		0.004***	0.004***	0.004***
no. of observations	594	576	594	556	576	540	556	540
REML	4492.8	4395.4	4442.1	4176.2	4344.5	4091.9	4130.1	4045.6

Fat mass (DXA)

Figure 9. Distribution of Fat mass (DXA) in time - linear fit

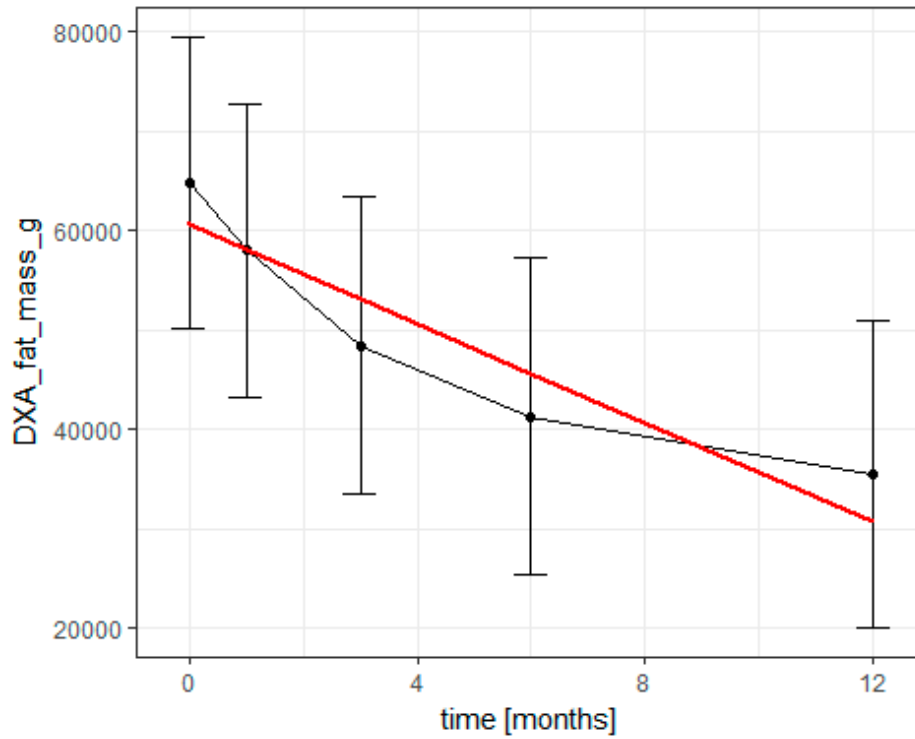


Table 9. Results of linear models for Fat mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	60615.9***	60981.8***	59184.9***	56160.8***	59500.2***	56221.7***	55355.1***	55439.3***
time	-	-	-	-	-	-	-	-
	2486.723* **	2451.535* **	2487.064* **	2381.993* **	2451.573* **	2329.766* **	2382.396* **	2330.278* **
IPAQ		-0.053			-0.053	-0.063		-0.063
sexM			3116.978		3244.651		1790.427	1749.025
diet_kcal				4.085***		4.412***	4.069***	4.394***
no. of observations	591	573	591	554	573	538	554	538
REML	12575.7	12202	12556.6	11746.9	12182.8	11406.9	11728.9	11388.9

Figure 10. Distribution of Fat mass (DXA) in time - quadratic fit

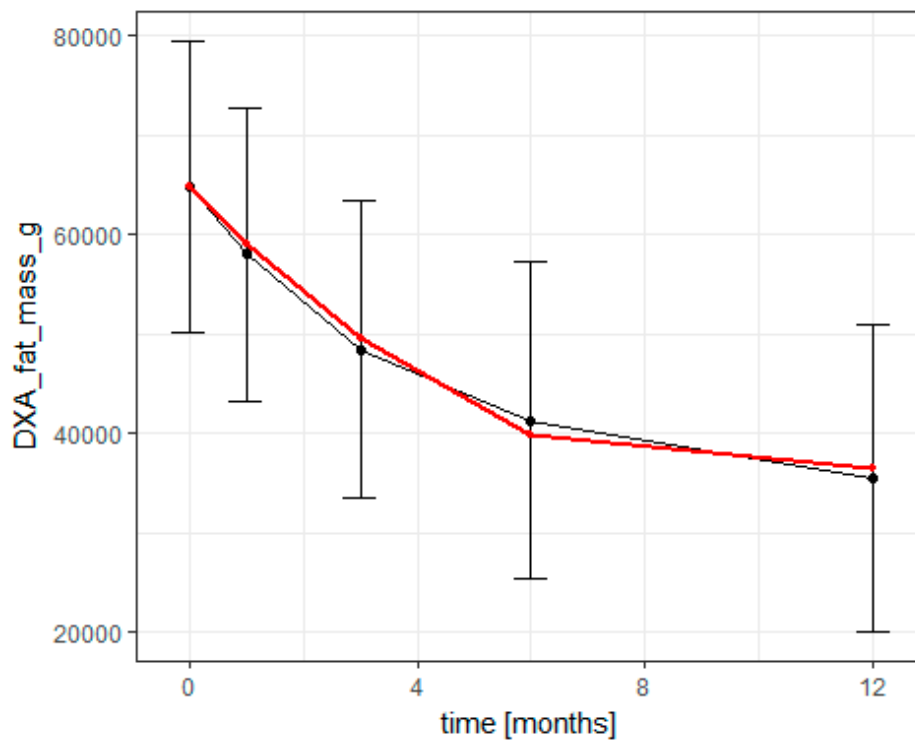


Table 10. Results of quadratic models for Fat mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	64749.4***	64901.4***	63272.3***	62708.6***	63414***	62487.1***	61549.8***	61358.1***
time_sq	298.063***	295.207***	298.097***	269.426***	295.179***	258.542***	269.910***	259.062***
time	-	-	-	-	-	-	-	-
	5923.126*	5874.118*	5923.736*	5555.696*	5873.817*	5394.596*	5561.823*	5401.256*
	**	**	**	**	**	**	**	**
IPAQ		-0.029			-0.029	-0.040		-0.040
sexM			3216.420		3247.883		2584.916	2533.155
diet_kcal				1.516**		1.838***	1.495**	1.814***
no. of observatio ns	591	573	591	554	573	538	554	538
REML	12343.3	11984.3	12324.2	11588.2	11965.1	11265.3	11569.6	11246.7

Lean mass (DXA)

Figure 11. Distribution of Lean mass (DXA) in time - linear fit

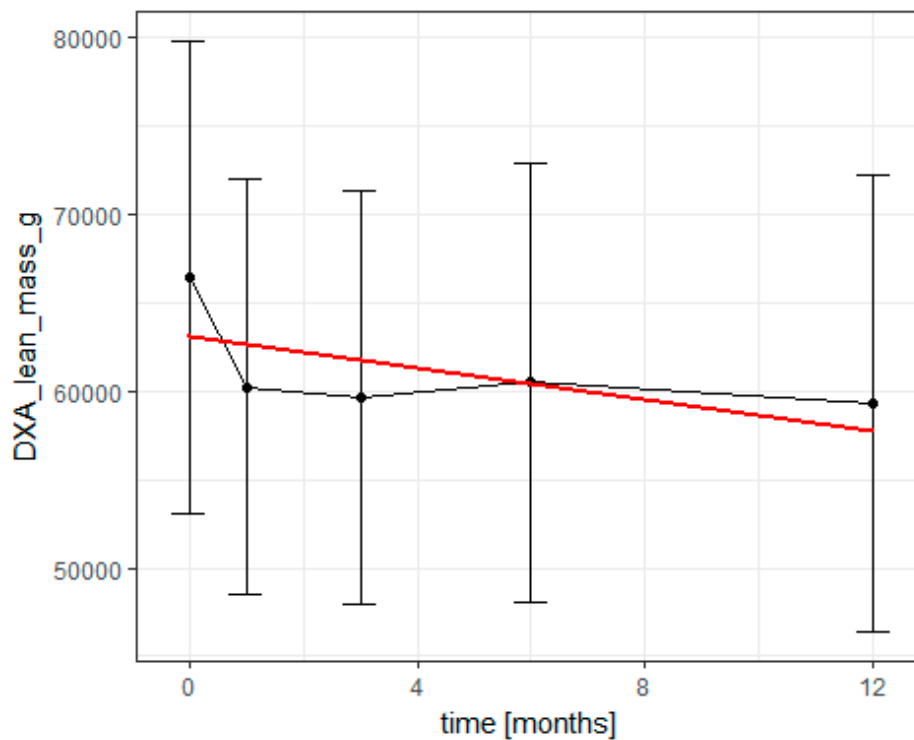


Table 11. Results of linear models for Lean mass (DXA)

variable	without covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	63113.4** *	62992.8** *	53741.9***	59324***	53568.6***	59362.9** *	50442.8***	50457.7***
time	- 446.114** *	- 461.754** *	-444.111***	- 364.074** *	-459.225***	- 364.021** *	-364.347***	-364.427***
IPAQ		0.024			0.024	0.003		0.004
sexM			20366.844* **		20457.442* **		19412.243* **	19464.163* **
diet_kcal				3.499***		3.452***	3.457***	3.402***
no. of observations	593	575	593	555	575	539	555	539
REML	11881.5	11531.1	11704.2	10866.7	11353.8	10569.4	10696.3	10399.4

Figure 12. Distribution of Lean mass (DXA) in time - quadratic fit

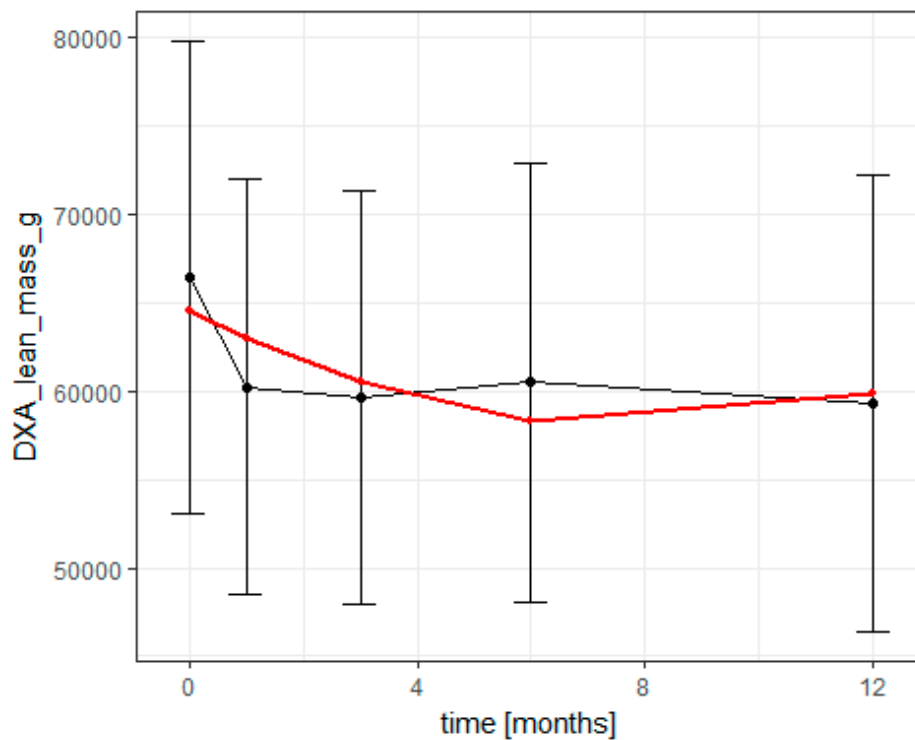


Table 12. Results of quadratic models for Lean mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	64605.6** *	64449.9** *	55208.6***	60500.6* **	55017***	60566.7* **	51558.7***	51596.4***
time_sq	108.048** *	109.243** *	107.656***	48.080***	108.648***	49.092***	48.556***	49.584***
time	- 1691.303* **	- 1726.566* **	- 1685.569** *	- 930.634* **	- 1717.722** *	- 945.762* **	-936.511***	-951.875***
IPAQ		0.031			0.030	0.007		0.007
sexM			20414.718* **		20476.583* **		19558.795* **	19620.486* **
diet_kcal				3.031***		2.953***	2.989***	2.904***
no. of observations	593	575	593	555	575	539	555	539
REML	11754.3	11402.3	11577.8	10829.1	11226.4	10531.3	10657.9	10360.6

Visceral adipose tissue mass (DXA)

Figure 13. Distribution of Visceral adipose tissue mass (DXA) in time - linear fit

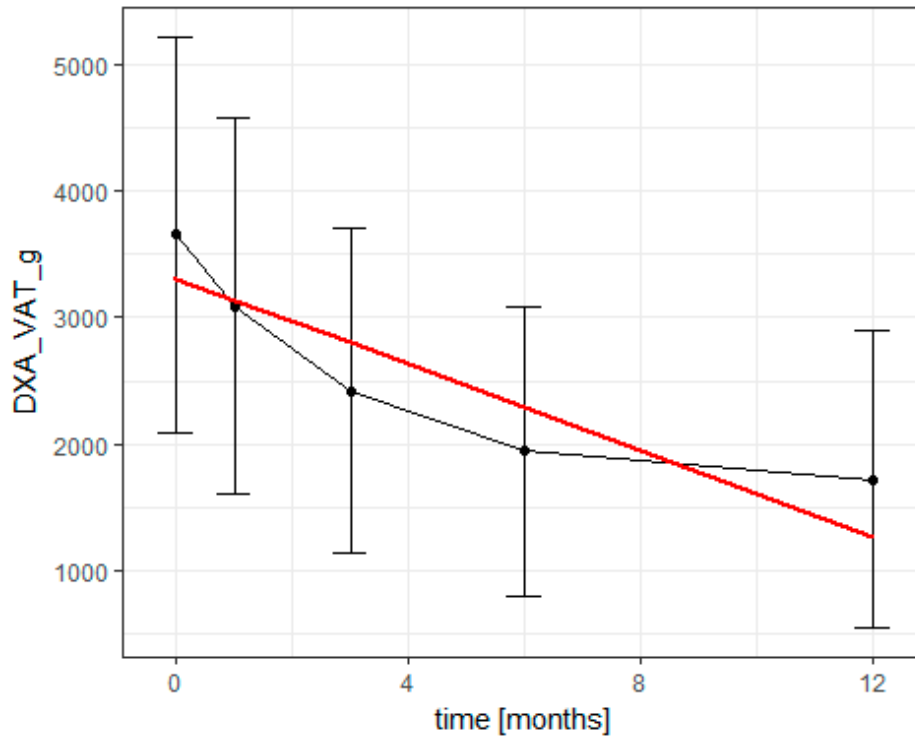


Table 13. Results of linear models for Visceral adipose tissue mass (DXA)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	3305.9***	3327***	2646***	2954.9***	2662.6***	2966.9***	2350.5***	2363.3***
time	-	-	-	-	-	-	-	-
	169.413** *	165.922** *	169.355***	163.757** *	165.457***	158.022** *	163.898***	157.939***
IPAQ		-0.003			-0.004	-0.007		-0.007*
sexM			1488.624** *		1509.009** *		1393.073** *	1393.517** *
diet_kcal				0.347***		0.386***	0.335***	0.373***
no. of observations	522	506	522	492	506	478	492	478
REML	8576.1	8290.3	8510	8049.5	8221.7	7780	7988.5	7717.6

Figure 14. Distribution of Visceral adipose tissue mass (DXA) in time - quadratic fit

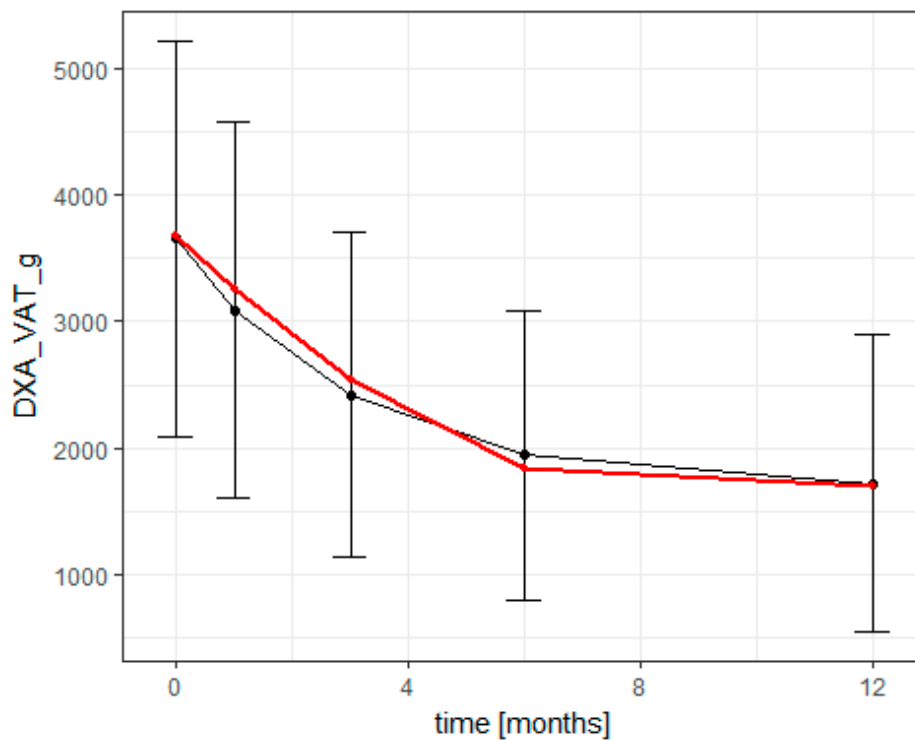


Table 14. Results of quadratic models for Visceral adipose tissue mass (DXA)

variable	without covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	3674.6***	3677.8***	3008.2***	3495.9***	3008.6***	3470.4***	2865.9***	2841.2***
time_sq	23.475***	22.801***	23.556***	21.405***	22.855***	19.742***	21.669***	19.977***
time	-	-	-	-	-	-	-	-
	446.199**	436.265**	447.151***	419.184**	436.575***	394.915**	422.439***	397.642***
	*	*		*		*		
IPAQ		-0.002			-0.003	-0.006		-0.006*
sexM			1506.722**		1517.417**		1457.454**	1453.446**
			*		*		*	*
diet_kcal				0.141**		0.187***	0.130**	0.176***
no. of observations	522	506	522	492	506	478	492	478
REML	8416.8	8131	8349	7935.2	8061.2	7673.2	7870.6	7607.6

Total body mass (bioimpedence)

Figure 15. Distribution of Total body mass (bioimpedence) in time - linear fit

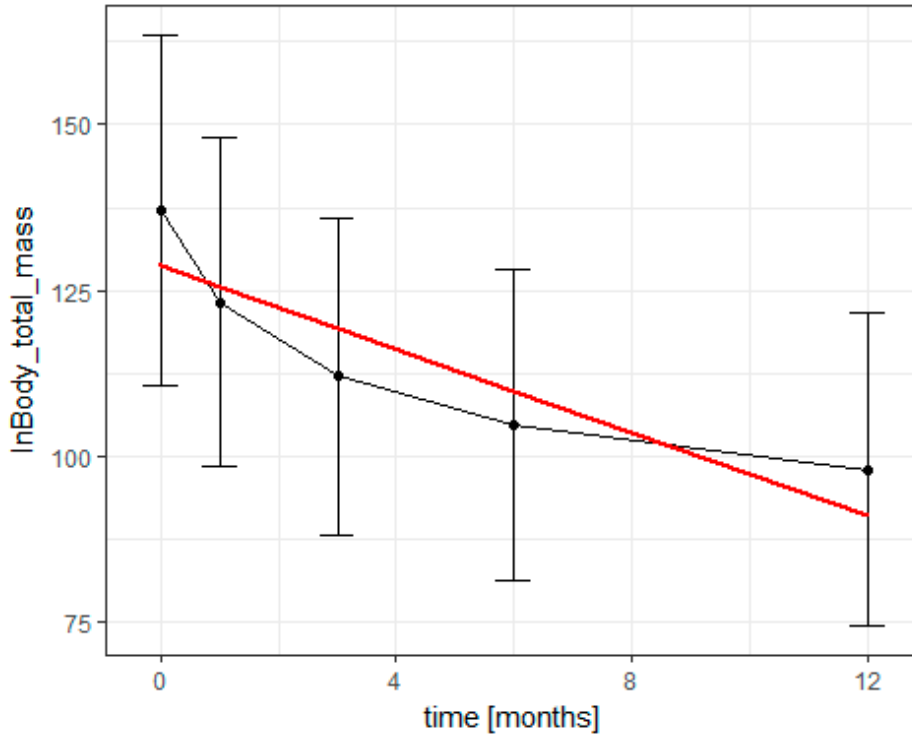


Table 15. Results of linear models for Total body mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	128.7***	128.7***	117.1***	120.1***	117.1***	119.9***	109.7***	109.6***
time	-3.139***	-	-3.140***	-	-3.111***	-	-2.934***	-2.875***
		3.115***		2.930***		2.873***		
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			25.471***		25.484***		23.264***	23.002***
diet_kcal				0.008***		0.008***	0.008***	0.008***
no. of observations	601	582	601	562	582	545	562	545
REML	4888	4763	4838.3	4453.7	4711.9	4337.6	4411.2	4294.4

Figure 16. Distribution of Total body mass (bioimpedence) in time - quadratic fit

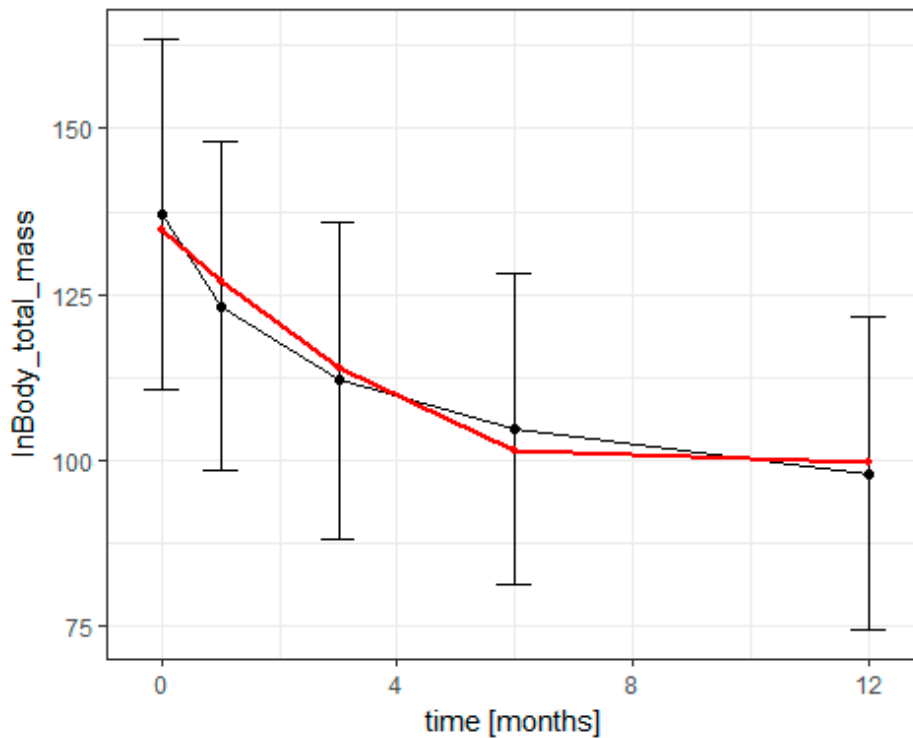


Table 16. Results of quadratic models for Total body mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	134.7***	134.5***	123***	128.9***	122.9***	128.5***	118***	117.7***
time_sq	0.441***	0.439***	0.441***	0.360***	0.438***	0.350***	0.362***	0.352***
time	-8.205***	-	-8.204***	-	-8.176***	-	-7.185***	-7.035***
		8.184***		7.163***		7.015***		
IPAQ		0.000			0.000	-0.000		-0.000
sexM			25.568***		25.500***		24.230***	24.050***
diet_kcal				0.004***		0.005***	0.004***	0.004***
no. of observations	601	582	601	562	582	545	562	545
REML	4562.6	4458.6	4513.1	4244.5	4408.5	4149.3	4199.3	4103.6

Muscle mass (bioimpedence)

Figure 17. Distribution of Muscle mass (bioimpedence) in time - linear fit

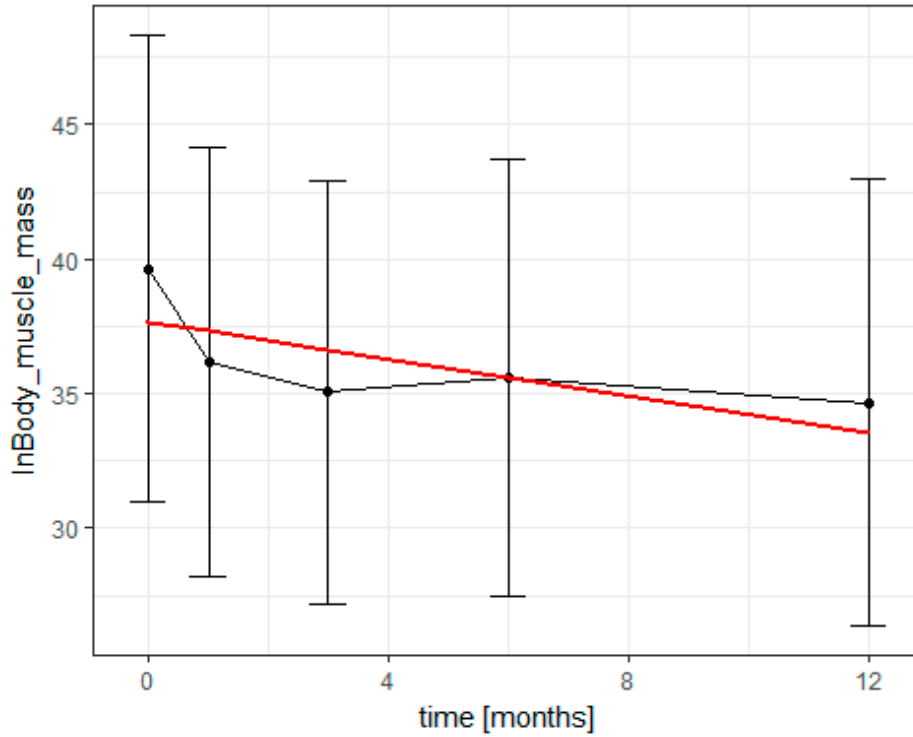


Table 17. Results of linear models for Muscle mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	37.7***	37.5***	31.5***	35.5***	31.3***	35.5***	29.6***	29.5***
time	-0.341***	-	-0.340***	-	-0.351***	-	-0.294***	-0.299***
		0.351***		0.294***		0.298***		
IPAQ		0.000			0.000*	0.000		0.000
sexM			13.492***		13.586***		12.977***	13.033***
diet_kcal				0.002***		0.002***	0.002***	0.002***
no. of observations	601	582	601	562	582	545	562	545
REML	3160.1	3084.7	2995.7	2771.7	2918.4	2714.5	2614.2	2555.8

Figure 18. Distribution of Muscle mass (bioimpedence) in time - quadratic fit

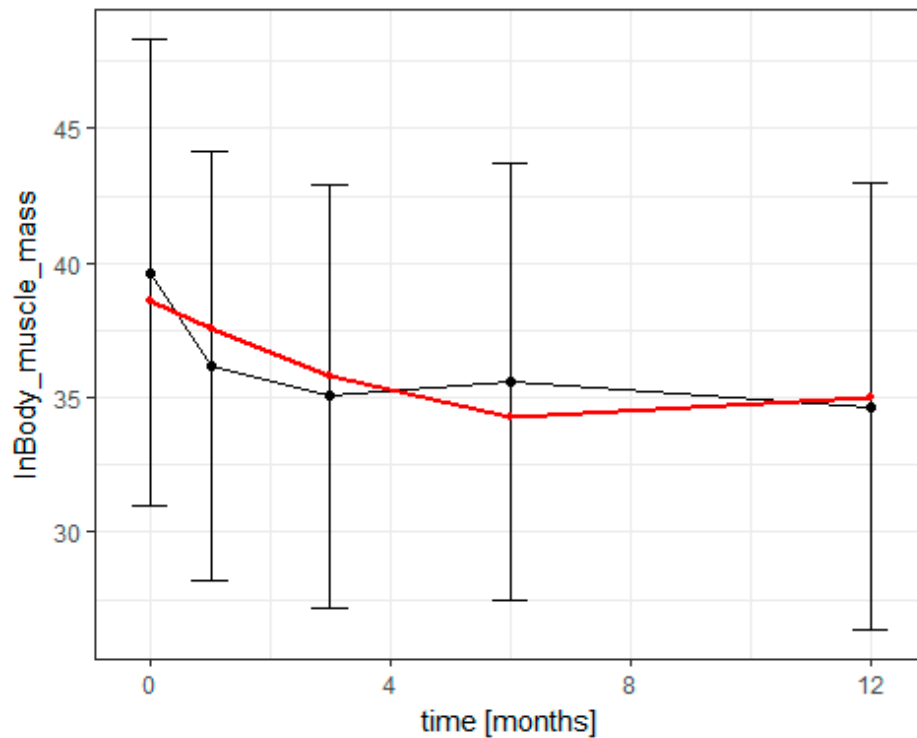


Table 18. Results of quadratic models for Muscle mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	38.6***	38.5***	32.5***	36.5***	32.3***	36.5***	30.6***	30.5***
time_sq	0.071***	0.072***	0.071***	0.040***	0.071***	0.041***	0.040***	0.041***
time	-1.155***	-	-1.153***	-	-1.176***	-	-0.763***	-0.782***
		1.180***		0.760***		0.779***		
IPAQ		0.000**			0.000**	0.000		0.000
sexM			13.504***		13.582***		13.083***	13.153***
diet_kcal				0.002***		0.002***	0.002***	0.002***
no. of observations	601	582	601	562	582	545	562	545
REML	3009.1	2929.7	2845.4	2722.9	2765.1	2663.4	2564.4	2503.8

Fat mass (bioimpedence)

Figure 19. Distribution of Fat mass (bioimpedence) in time - linear fit

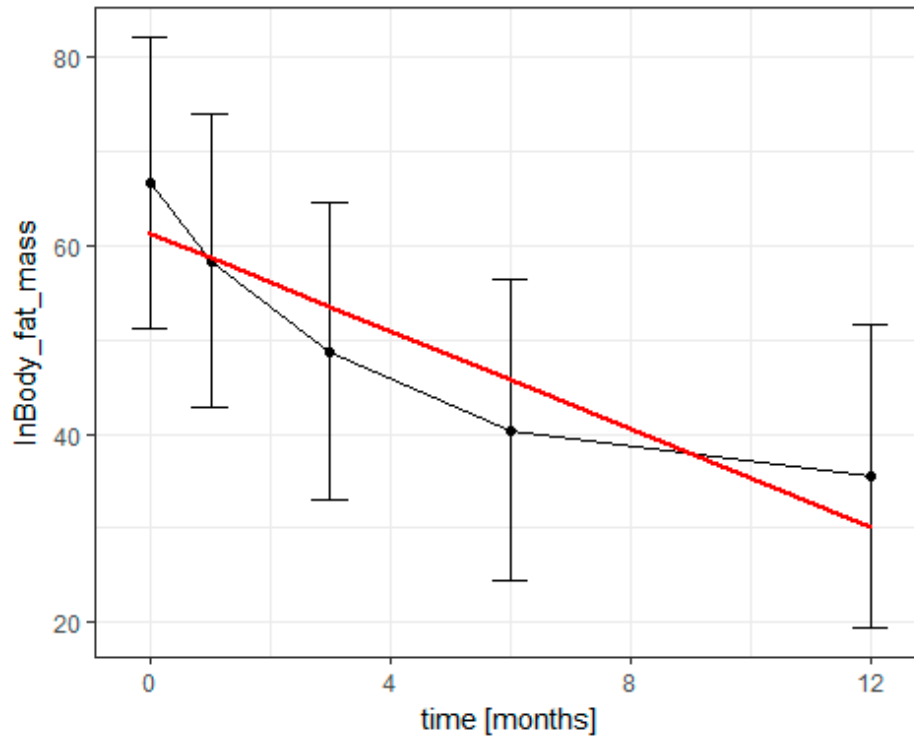


Table 19. Results of linear models for Fat mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	61.3***	61.6***	60***	56.2***	60.4***	56.3***	55.6***	55.8***
time	-2.604***	-	-	-	-	-	-	-
		2.556***	2.604***	2.470***	2.556***	2.399***	2.470***	2.399***
IPAQ		-0.000			-0.000	-0.000*		-0.000*
sexM			2.828		2.685		1.426	1.064
diet_kcal				0.005***		0.005***	0.005***	0.005***
no. of observations	601	582	601	562	582	545	562	545
REML	4509.9	4382.5	4505	4167.5	4377.7	4042.6	4163.5	4038.8

Figure 20. Distribution of Fat mass (bioimpedence) in time - quadratic fit

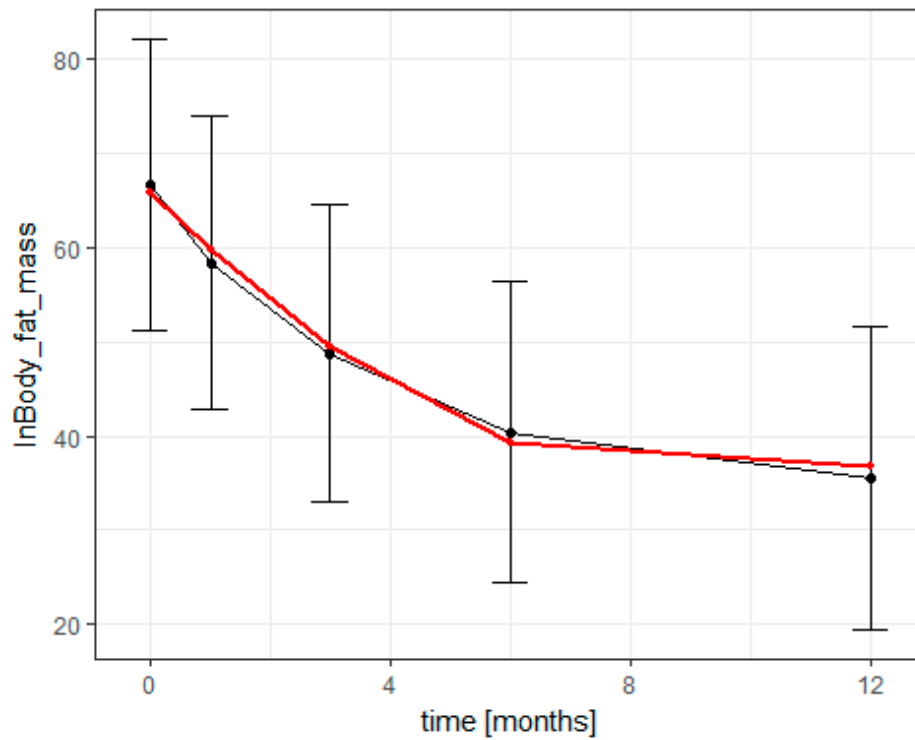


Table 20. Results of quadratic models for Fat mass (bioimpedence)

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	65.9***	65.9***	64.5***	63.6***	64.7***	63.4***	62.6***	62.5***
time_sq	0.334***	0.330***	0.334***	0.305***	0.330***	0.293***	0.306***	0.293***
time	-6.436***	-	-	-	-	-	-	-
		6.366***	6.436***	6.056***	6.366***	5.868***	6.060***	5.872***
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			2.909		2.697		2.251	1.941
diet_kcal				0.002***		0.002***	0.002***	0.002***
no. of observations	601	582	601	562	582	545	562	545
REML	4190.8	4083.1	4185.8	3939.2	4078.3	3836.8	3934.7	3832.5

BMI

Figure 21. Distribution of BMI in time - linear fit

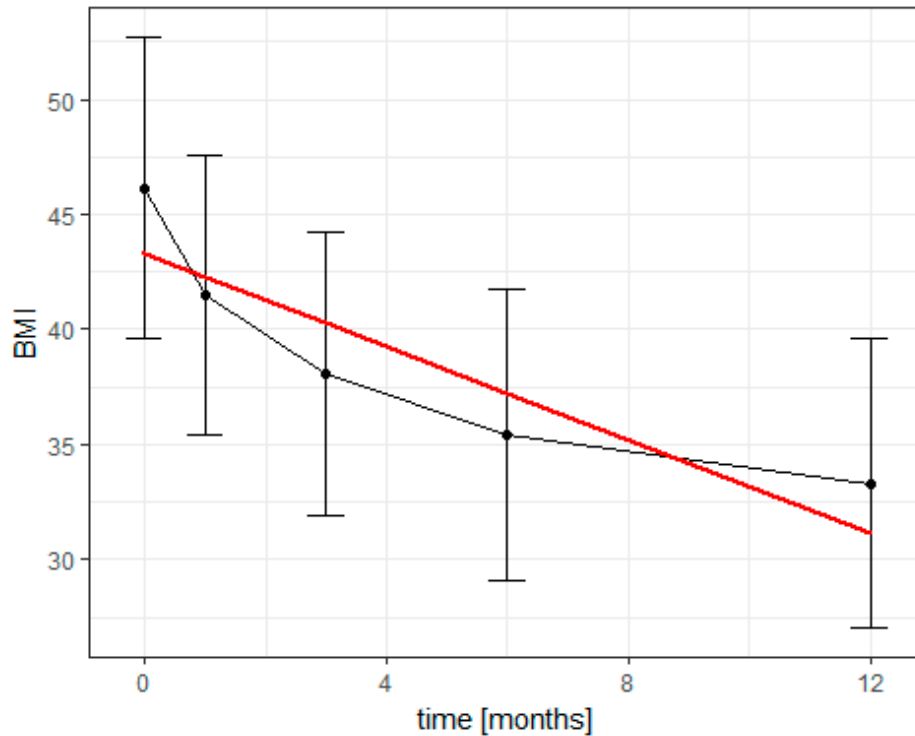


Table 21. Results of linear models for BMI

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	43.3***	43.4***	42.7***	40.6***	42.7***	40.6***	40.3***	40.3***
time	-1.017***	-	-	-	-	-	-	-
		1.008***	1.017***	0.955***	1.008***	0.938***	0.955***	0.938***
IPAQ		-0.000			-0.000	-0.000		-0.000
sexM			1.402		1.475		0.688	0.698
diet_kcal				0.003***		0.003***	0.003***	0.003***
no. of observations	601	583	601	562	583	546	562	546
REML	3464.8	3391.5	3461	3116.5	3387.5	3052.3	3114.1	3049.9

Figure 22. Distribution of BMI in time - quadratic fit

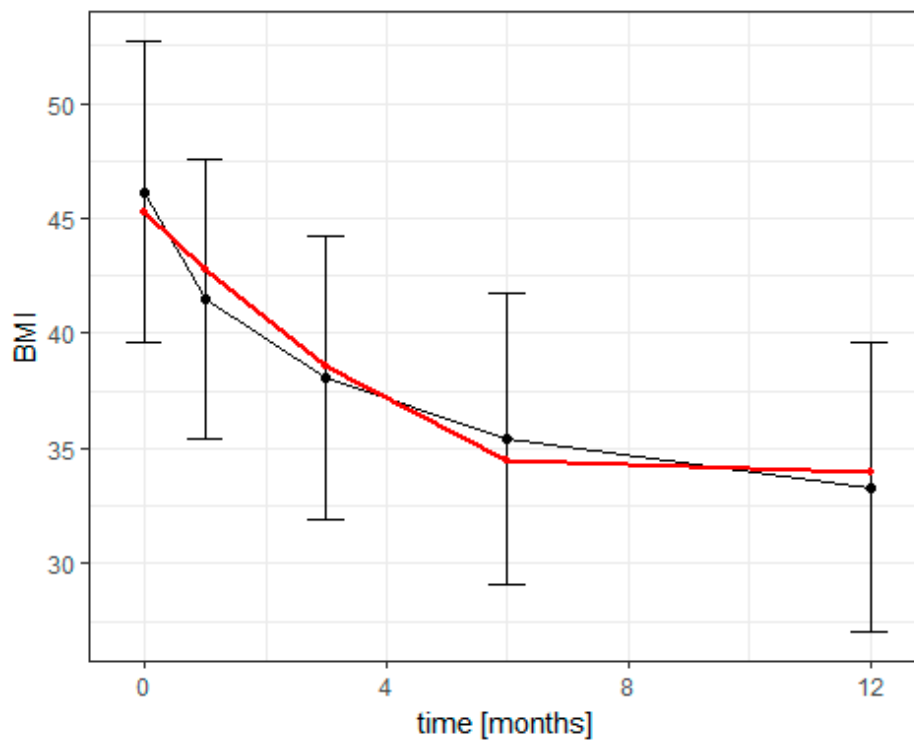


Table 22. Results of quadratic models for BMI

variable	without covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7
(Intercept)	45.3***	45.2***	44.6***	43.4***	44.6***	43.4***	43***	42.9***
time_sq	0.143***	0.143***	0.143***	0.117***	0.143***	0.115***	0.117***	0.115***
time	-2.665***	-	-	-	-	-	-	-
		2.667***	2.666***	2.332***	2.667***	2.302***	2.334***	2.304***
IPAQ		0.000			0.000	-0.000		-0.000
sexM			1.447		1.479		1.014	1.036
diet_kcal				0.001***		0.001***	0.001***	0.001***
no. of observations	601	583	601	562	583	546	562	546
REML	3133.3	3076.1	3129.5	2897.3	3072.1	2851	2894.4	2848.1

Supplementary Appendix 2 : Metabolic Generalized Linear Mixed Models

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GLUCOSE CONCENTRATION AT 0' (OGTT)

Figure 23. Distribution of GLUCOSE CONCENTRATION AT 0' (OGTT) in time - linear fit

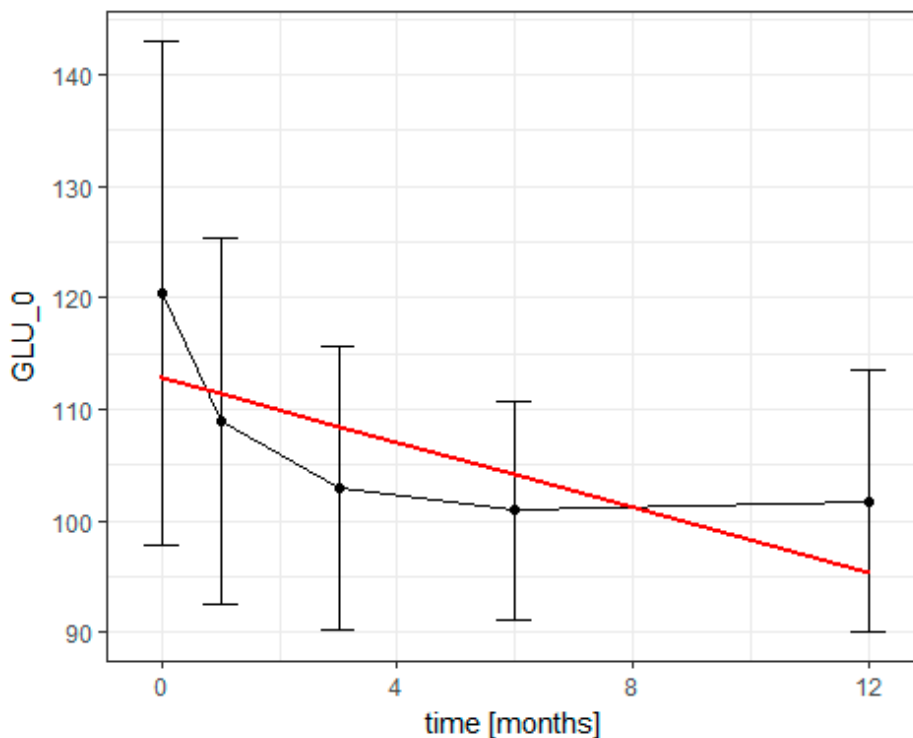


Table 23. Results of linear models for GLUCOSE CONCENTRATION AT 0' (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	112.8***	77.7***	113.3**	112.6**	105.4**	78.1***	74.8***	84.5***	113.1**	105.7**	106***	75.1***	85.5***	82**	106.3**	82.8***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.456***	0.640*	1.444*	1.456*	1.263*	0.644*	0.491*	0.781*	1.444*	1.237*	1.262*	0.494*	0.778*	0.657*	1.236*	0.649*
total_mass_kg		0.277*				0.276*	0.326*	0.174*				0.327*	0.170*	0.217*		0.215*
IPAQ			-			-			-	-		-	-		-	-
			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				0.450			-		0.443		-	-		-	-	-
							10*					52	42*		37*	32
							*					*	*			73*

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					07*			06*		07*	07*		06*	06*	07*	06*
					**			**		**	**		**	**	**	**
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	4927.9	4863.6	4782.8	4924.4	4535.1	4742.4	4851.4	4499	4779.3	4405.5	4531.4	4730	4393.3	4489.1	4401.7	4383.2

Figure 24. Distribution of GLUOCSE CONCETRATION AT 0' (OGTT) in time - quadratic fit

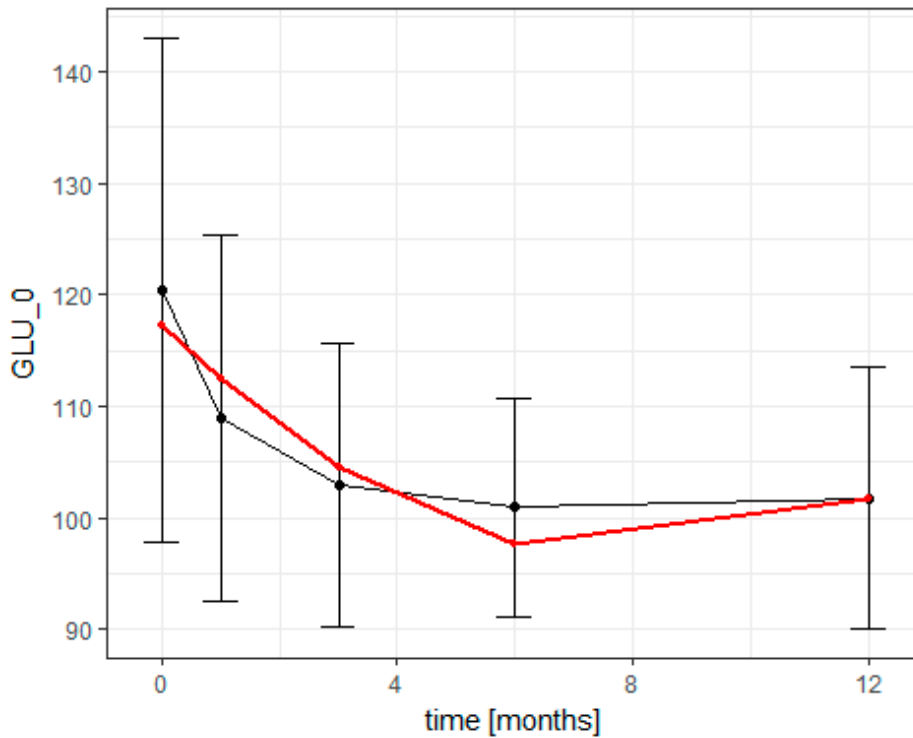


Table 24. Results of quadratic models for GLUOCSE CONCETRATION AT 0' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	117.3***	101***	117.6**	117.1**	111.5**	101.4**	98.8***	100.8**	117.4**	111.8**	111.7**	99.1***	101.5**	98.8***	112.1**	99.3***
time_sq	0.326***	0.275**	0.332**	0.327**	0.255**	0.280**	0.264**	0.227**	0.332**	0.257**	0.255**	0.269**	0.231**	0.217**	0.256**	0.220**
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5.221***	4.263**	5.283**	5.222**	4.268**	4.332**	4.049**	3.709**	5.284**	4.275**	4.263**	4.113**	3.751**	3.511**	4.269**	3.540**

total_																
mass_																
kg	0.1					0.1	0.1	0.0				0.1	0.0	0.1		0.1
	23*					23*	50*	83*				51*	82	08*		10*
	*					*	*					*				
IPAQ																
	-					-			-	-		-	-		-	-
	0.0					0.0			0.0	0.0		0.0	0.0		0.0	0.0
	00					00			00	00		00	00		00	00
sexM																
				0.4			-		0.3			-	-		-	-
				95			3.2		98			0.5	3.3		3.0	0.7
							15					61	26		85	27
																90
diet_kc																
al					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					04*			04*		05*	04*		04*	04*	05*	04*
					**			**		**	**		**	**	**	**
no. of																
observ																
ations																
AIC	4839.	481	469	483	448	469	480	446	469	436	448	468	436	446	435	435
	5	3.3	5.9	6	8.3	1.7	8	7.3	2.5	0.8	4.8	6.3	1.5	2.1	7.3	6

GLUCOSE CONCENTRATION AT 30' (OGTT)

Figure 25. Distribution of GLUCOSE CONCENTRATION AT 30' (OGTT) in time - linear fit

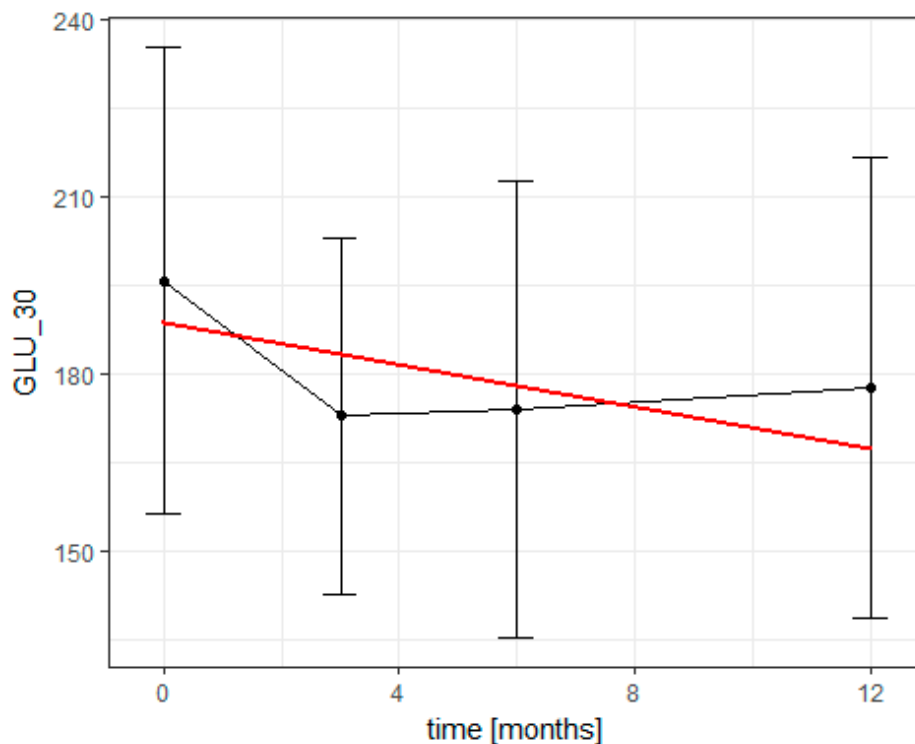


Table 25. Results of linear models for GLUCOSE CONCENTRATION AT 30' (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	188.6***	162.1***	190.8***	190.3***	169.2***	16.8**	155.9***	167.2***	192.5***	168.6***	171.7***	16.2**	173.4***	163.***	171.2***	169.3***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.769***	1.148*	1.678***	1.747***	0.860*	1.132*	0.819	0.823	1.657***	0.718	0.806*	0.826	0.822	0.600	0.660	0.613
total_mass_kg		0.204*				0.174	0.289**	-0.003				0.254*	-0.041	0.059		0.017
IPAQ			-0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				-3.634			-10.547		-3.526		-6.261	-9.704		-7.418	-6.506	-6.888
diet_kcal					0.014***			0.016***		0.016***	0.014***		0.016***	0.015***	0.016***	0.016***

no. of observations	386	384	378	386	355	37	384	353	378	348	355	37	348	353	348	348
AIC	3810	3791	3749.2	3804.3	3485.3	3749.5	3782.8	3466.1	3743.5	3430.1	3478.8	3741.7	3432.6	3459.2	3423.4	3425.9

Figure 26. Distribution of GLUOCSE CONCETRATION AT 30' (OGTT) in time - quadratic fit

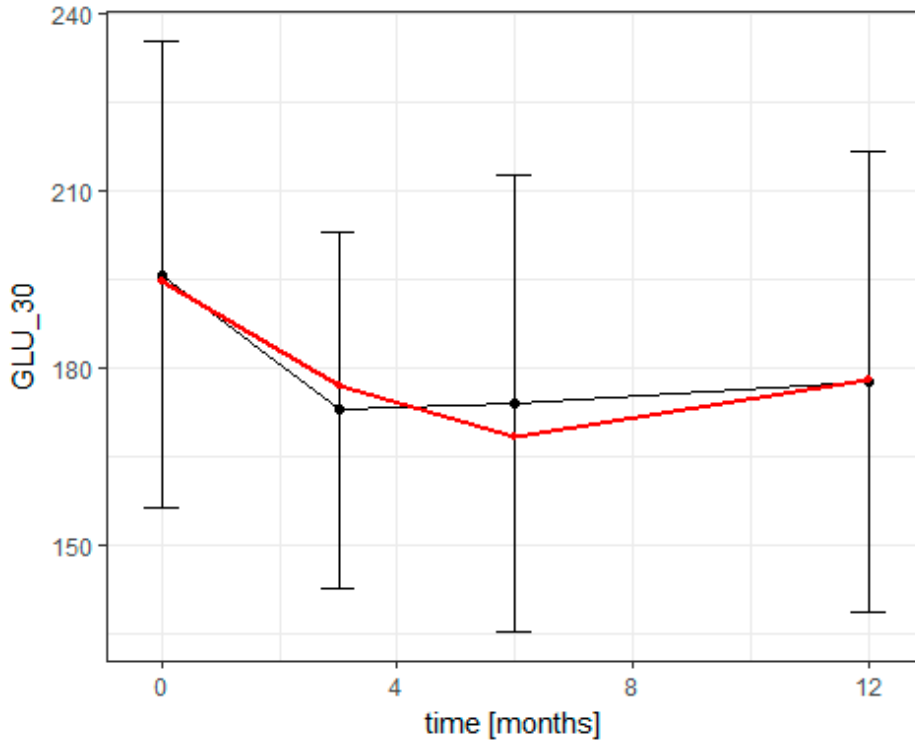


Table 26. Results of quadratic models for GLUOCSE CONCETRATION AT 30' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	194.6***	202.6**	196.8**	195.9**	182***	208.8**	201.1**	190.8**	198.1**	180.8**	183.2**	207.8**	197.3**	188.4**	182.2**	195.2**
time_sq	0.501***	0.523*	0.491*	0.500*	0.351*	0.528*	0.515*	0.344*	0.490*	0.310*	0.341*	0.523*	0.349*	0.330*	0.298*	0.337*
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7.395***	7.851*	7.198*	7.369*	5.208*	7.898*	7.700*	5.332*	7.172*	4.561*	5.050*	7.805*	5.380*	5.065*	4.374*	5.158*

total_	-															
mass_	0.0					0.0	0.0	0.0				0.0	0.1	0.0		0.1
kg	59					89	42	93				78	30	68		08
IPAQ																
sexM																
diet_kc																
al																
no. of	386	384	378	386	355	378	384	353	378	348	355	378	348	353	348	348
observ																
ations																
AIC	3780.	376	372	377	347	372	376	346	371	342	347	371	342	345	341	342
	7	5.7	2.4	5.2	7.7	4.4	0.1	0	6.8	5.3	1.9	8.8	6.5	4.3	9.3	0.9

GLUCOSE CONCENTRATION AT 60' (OGTT)

Figure 27. Distribution of GLUCOSE CONCENTRATION AT 60' (OGTT) in time - linear fit

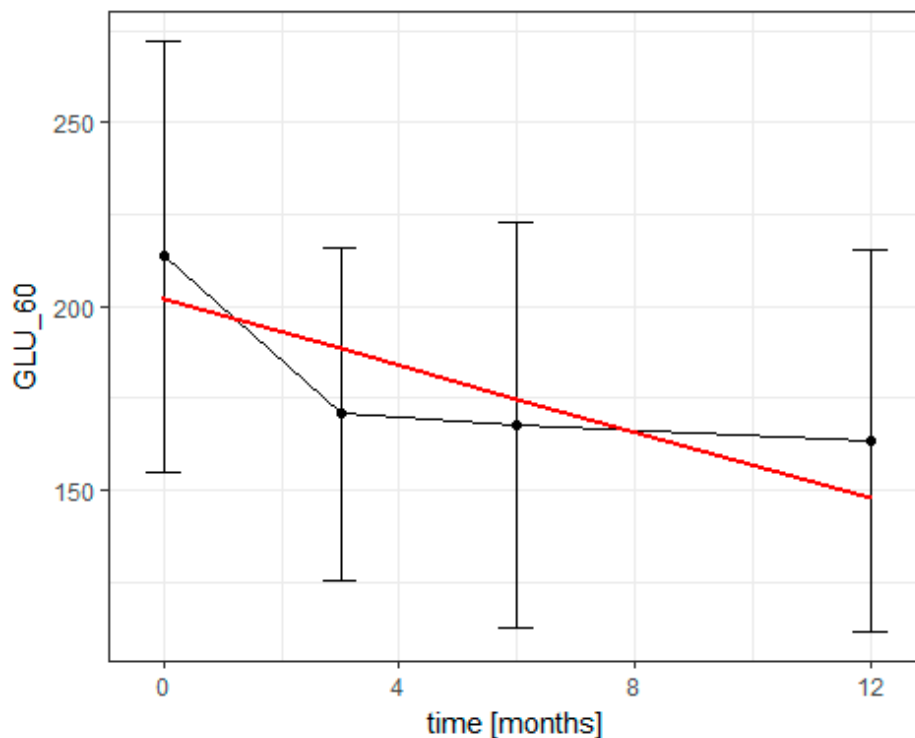


Table 27. Results of linear models for GLUCOSE CONCENTRATION AT 60' (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	202*	131	205	202	175	136	123	132	206	176	176	128	137	125	178	131
	**	.1**	.8**	.3**	***	.5**	.5**	.1**	.2**	.1**	.8**	.1**	.9**	.9**	***	***
		*	*	*		*	*	*	*	*	*	*	*	*		
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.500	2.8	4.4	4.4	3.2	2.7	2.3	2.3	4.4	3.1	3.2	2.2	2.2	1.9	3.0	1.8
	***	28*	45*	96*	49*	65*	68*	47*	41*	34*	10*	94*	88*	82*	93*	98*
		**	**	**	**	**	**	**	**	**	**	**	*	*	*	*
total_mass_kg		0.5				0.5	0.6	0.3				0.6	0.3	0.4		0.4
		47*				29*	64*	45*				51*	27*	46*		37*
		**				**	**	*				**	*	*		*
IPAQ			-			-			-	-		-	-		-	-
			0.0			0.0			0.0	0.0		0.0	0.0		0.0	0.0
			00			00			00	00		00	00		00	00
sexM			-			-			-	-		-	-		-	-
			0.7			16.			0.8			4.5	16.		13.	4.7
			72			310			53			73	568		575	58

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					19*			18*		21*	19*		18*	18*	21*	18*
					**			**		**	**		**	**	**	**
no. of observations	383	381	376	383	352	376	381	350	376	346	352	376	346	350	346	346
AIC	4058.5	4025.2	3999.1	4052.5	3715.7	3988.8	4015.8	3687.3	3993.1	3661.9	3709.3	3979.3	3659.7	3678.9	3655.6	3651.1

Figure 28. Distribution of GLUCOSE CONCENTRATION AT 60' (OGTT) in time - quadratic fit

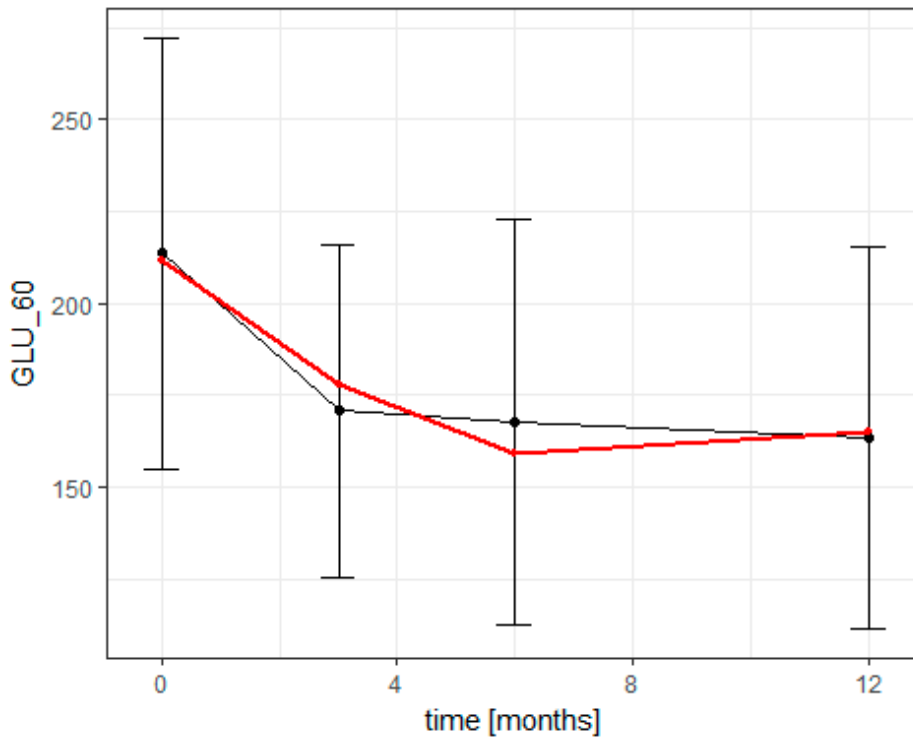


Table 28. Results of quadratic models for GLUCOSE CONCENTRATION AT 60' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	211.5***	189.5***	215.4***	211.2***	201.2***	197.1***	186.5***	175.7***	215.2***	204.2***	201.1***	194.***	186.1***	171.8**	204.3***	181.9***
time_sq	0.806***	0.728***	0.816***	0.807***	0.713***	0.759***	0.712***	0.608***	0.816***	0.717***	0.713***	0.742***	0.673***	0.584**	0.716***	0.649***
time	-13.543**	-12.214**	-13.614**	-13.551**	-12.085**	-12.544**	-11.898**	-10.357**	-13.619**	-12.030**	-12.090**	-12.225**	-11.127**	-9.915*	-12.014**	-10.672**

total_																	
mass_																	
kg																	
IPAQ																	
sexM																	
diet_k																	
cal																	
no. of																	
obser																	
vation																	
s																	
AIC																	

GLUCOSE CONCENTRATION AT 120' (OGTT)

Figure 29. Distribution of GLUCOSE CONCENTRATION AT 120' (OGTT) in time - linear fit

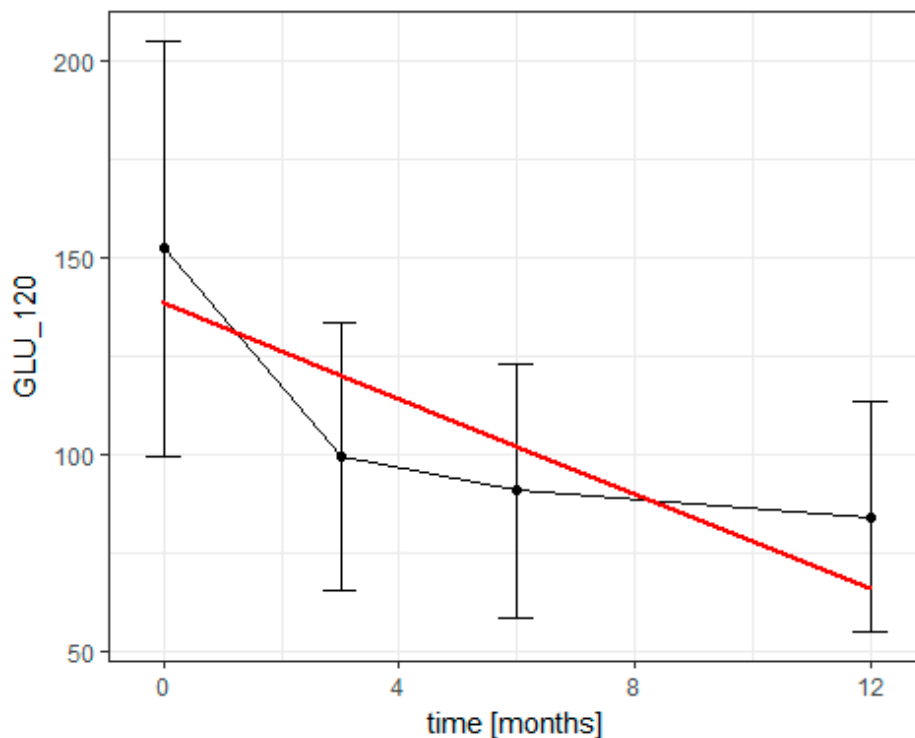


Table 29. Results of linear models for GLUCOSE CONCENTRATION AT 120' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15	
(Intercept)	138.3***	76.3***	139.6** *	142.***	111.6** *	78.2***	62.6***	80.3***	143.5** *	110.8** *	116.1** *	63.8***	82.3***	68.6***	115.6** *	70.***	
time	6.028***	4.545*	5.956*	5.960*	4.863*	4.511*	3.764***	4.184*	5.880*	4.839*	4.710*	3.725***	4.226*	3.499***	4.676*	3.523***	
total_mass_kg		0.477**				0.469**	0.668***	0.256*				0.666***	0.242*	0.427***		0.420**	
IPAQ			-0.000			-0.000			-0.000	-0.000		-0.000	-0.000		-0.000	-0.000	
sexM				-7.928			-24.038** *		-8.459			-12.023	-24.372** *		-21.242* *	-12.432 *	-21.740* *

diet_kal					0.0			0.0		0.0	0.0		0.0	0.01	0.0	0.01
					18*			17*		19*	19*		17*	6***	20*	7***
					**			**		**	**		**		**	
no. of observations	384	382	376	384	352	376	382	350	376	346	352	376	346	350	346	346
AIC	3947.4	3914.6	3884.4	3940.2	3590.9	3872.5	3896.8	3569	3876.9	3546.9	3581.3	3854.6	3545.5	3553.2	3537.1	3529.3

Figure 30. Distribution of GLUOCSE CONCETRATION AT 120' (OGTT) in time - quadratic fit

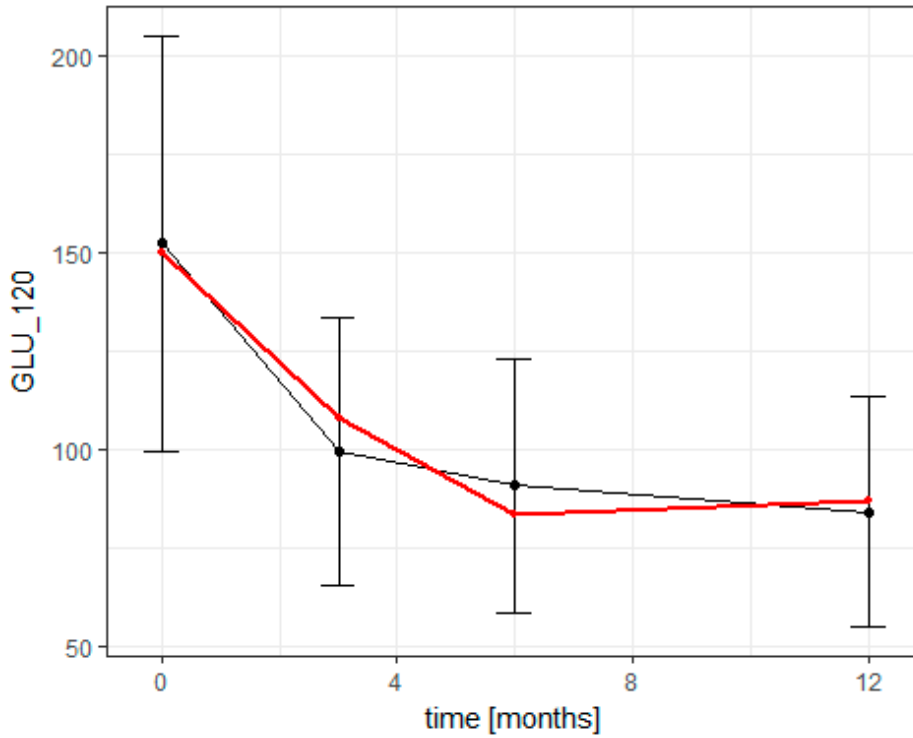


Table 30. Results of quadratic models for GLUOCSE CONCETRATION AT 120' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	150.1***	134.9***	151.4***	152.9***	143.1***	138.1***	125.7***	130.8***	154.6***	145.3***	144.8***	128.3***	135.1***	120.5***	147.2***	124.2***
time_sq	0.975***	0.925***	0.982***	0.971***	0.891***	0.941***	0.874***	0.860***	0.978***	0.918***	0.868***	0.887***	0.895***	0.792***	0.894***	0.824***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16.968**	16.053**	17.012**	16.888**	15.825**	16.246*	15.055*	15.204*	16.925*	16.161*	15.473*	15.205*	15.675*	13.961*	15.774*	14.391*
	*	*	*	*	*	**	**	**	**	**	**	**	**	**	**	**

total_	0.11					0.09	0.21	0.09				0.21	0.08	0.20		0.19
mass_	2					8	9	6				1	0	1		0
kg																
IPAQ		-				-			-	-		-	-		-	-
		0.00				0.00			0.00	0.00		0.00	0.00		0.00	0.00
		0				0			0	0		0	0		0	0
sexM																
			-				-		-		-	-		-	-	-
			6.03				11.5		6.94		6.58	12.1		11.4	7.36	11.9
			8				85		5		4	32		48	4	35
diet_k				0.00				0.00		0.00	0.00		0.00	0.00	0.00	0.00
cal				5				4		4	5		4	5	5	5
no. of	384	382	376	384	352	376	382	350	376	346	352	376	346	350	346	346
obser																
vation																
s																
AIC	3872	385	381	386	355	381	384	353	380	350	354	380	351	352	350	350
	.6	6	2.6	6.1	1.8	4.4	7.4	5.4	5.8	8.3	5.2	5.5	0.3	6.9	1.3	1.5

INSULIN CONCETRATION AT 0' (OGTT)

Figure 31. Distribution of INSULIN CONCETRATION AT 0' (OGTT) in time - linear fit

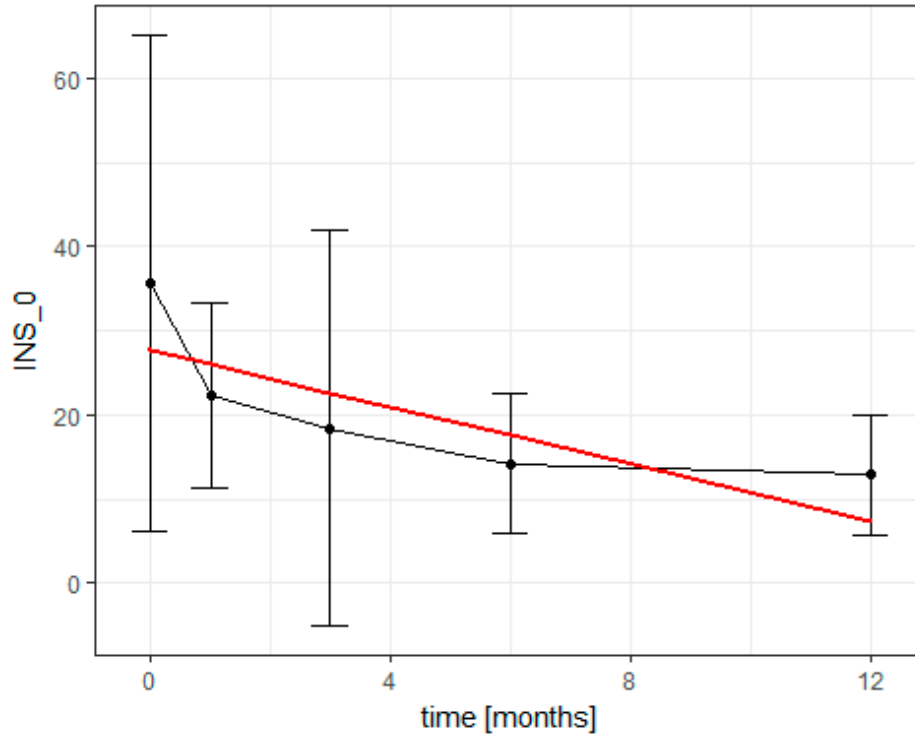


Table 31. Results of linear models for INSULIN CONCETRATION AT 0' (OGTT)

variable	with covariate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15	
(Intercept)	27.7**	-	28.5***	23.5***	19.2***	-	-	-	24.4***	20.2***	16.3***	-	-	-	17.6***	-9.3	
time	1.692***	-	0.701**	1.638*	1.695*	1.468*	0.670*	0.741*	0.720*	1.634*	1.373*	1.482*	0.714*	0.665*	0.765*	1.389*	0.713*
total_mass_kg		0.331*				0.331*	0.318*	0.268*				0.316*	0.260*	0.253*		0.244*	
IPAQ			-			-			-	-		-	-		-	-	
			0.000			0.000			0.000	0.000*		0.000	0.000		0.000*	0.000	
sexM				9.293*			1.377		9.344*		7.301*	1.555		1.540	7.219*	1.660	
				**					**		**				**		

diet_kcal					0.0				0.0		0.0	0.0		0.0	0.0	0.0	0.0
al					08*				06*		08*	07*		06*	06*	08*	06*
					**				**		**	**		**	**	**	**
no. of observations	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541	
AIC	5220.3	5125.4	5071.3	5197.9	4848.3	5006.9	5121.6	4785	5048.6	4716.4	4832.5	5003	4679.9	4781.2	4700.7	4676	

Figure 32. Distribution of INSULIN CONCETRATION AT 0' (OGTT) in time - quadratic fit

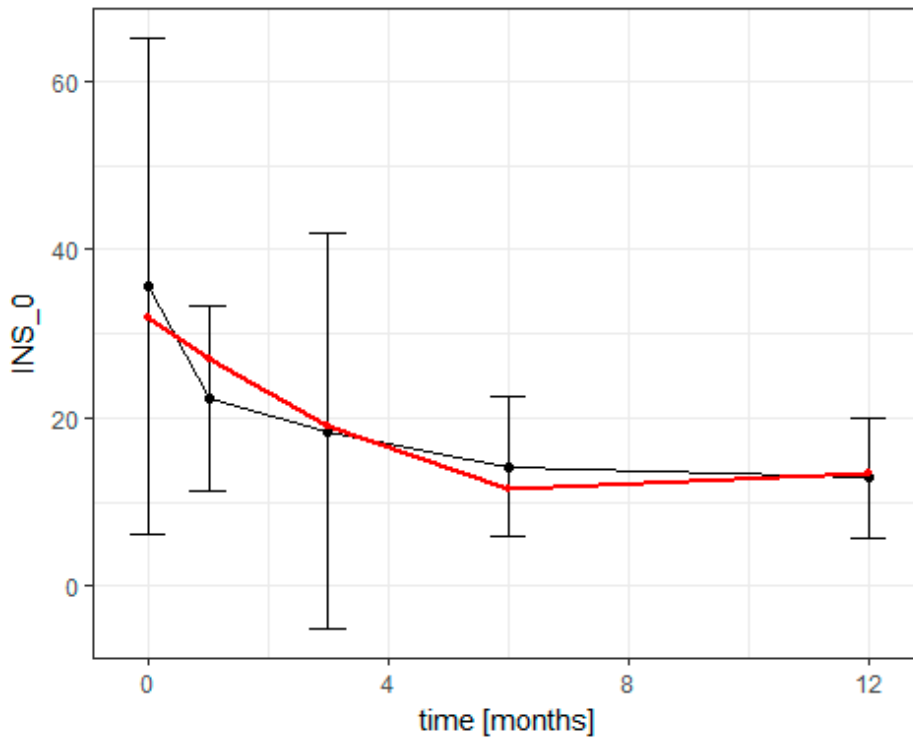


Table 32. Results of quadratic models for INSULIN CONCETRATION AT 0' (OGTT)

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	31.8**	-6.3	32.5***	27.6***	23.3***	-5.5	-3.6	-8.6	28.4***	24.2***	20.5***	-2.5	-6.9	-6.3	21.7***	-4.6
time_sq	0.304***	0.182**	0.301*	0.304*	0.176*	0.182**	0.195*	0.098	0.300*	0.168*	0.188*	0.195*	0.093	0.110	0.180*	0.106
time	-5.193***	-2.9	5.117*	5.201*	3.538*	2.905*	3.160*	1.908*	5.105*	3.354*	3.697*	3.151*	1.801*	2.120*	3.523*	2.019*

total_		0.2				0.2	0.2	0.2				0.2	0.2	0.2		0.2
mass_		87*				87*	57*	54*				54*	48*	30*		23*
kg		**				**	**	**				**	**	**		**
IPAQ		-				-			-	-		-	-		-	-
		0.0				0.0			0.0	0.0		0.0	0.0		0.0	0.0
		00				00			00	00*		00	00		00*	00
sexM			9.3				2.9		9.3		7.7	3.0		2.3	7.6	2.4
			26*				00		16*		93*	49		49	87*	13
			**						**		**				**	
diet_kc				0.0				0.0		0.0	0.0		0.0	0.0	0.0	0.0
al				06*				05*		06*	06*		05*	05*	06*	05*
				**				**		**	**		**	**	**	**
no. of	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541
observ																
ations																
AIC	5187	511	504	516	484	499	511	478	501	471	482	499	468	478	469	467
		6.8	0.8	4.3	2.2	8.8	1.6	5.9	8.1	1.7	4.8	3.5	1.2	1.4	4.6	6.5

INSULIN CONCETRATION AT 30' (OGTT)

Figure 33. Distribution of INSULIN CONCETRATION AT 30' (OGTT) in time - linear fit

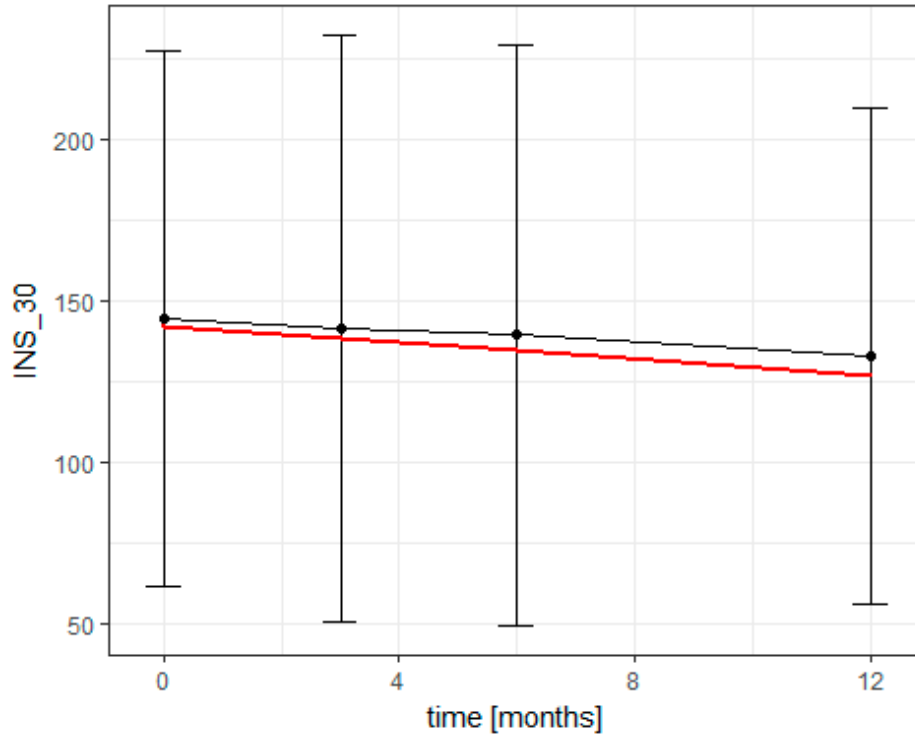


Table 33. Results of linear models for INSULIN CONCETRATION AT 30' (OGTT)

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	142.1***	55.9*	148.2***	127.8***	124.3***	64*	61.2*	64.3*	133.2***	128.8***	111.9***	70*	73.5*	72*	115.9***	81.7**
time	-	0.84	-	-	-	1.0	0.4	0.7	-	-	-	0.5	0.9	0.2	-	0.4
	1.261	9	1.060	1.374*	0.492	20	44	44	1.177	0.228	0.677	76	88	23	0.416	39
total_mass_kg		0.663***				0.645*	0.560*	0.515*				0.529*	0.482*	0.366		0.323
IPAQ			-			-			-	-		-	-		-	-
			0.001			0.001			0.001	0.001		0.001	0.001		0.001	0.001
			1			01			1	1		01	01		1	01
sexM				30.864*			17.576		32.185*		29.952*	19.463		22.665	30.946*	23.973
diet_kcal					0.012*			0.008		0.014**	0.011*		0.009	0.009	0.013*	0.010
no. of observations	380	378	373	380	349	373	378	347	373	343	349	373	343	347	343	343

AIC	4277.	424	421	426	393	420	423	391	419	388	392	419	387	390	387	386
	7	7.3	2.2	4.9	8.3	3.2	8.6	2.5	8.9	3.2	6.1	4.1	9.9	2.8	0.7	9.9

Figure 34. Distribution of INSULIN CONCETRATION AT 30' (OGTT) in time - quadratic fit

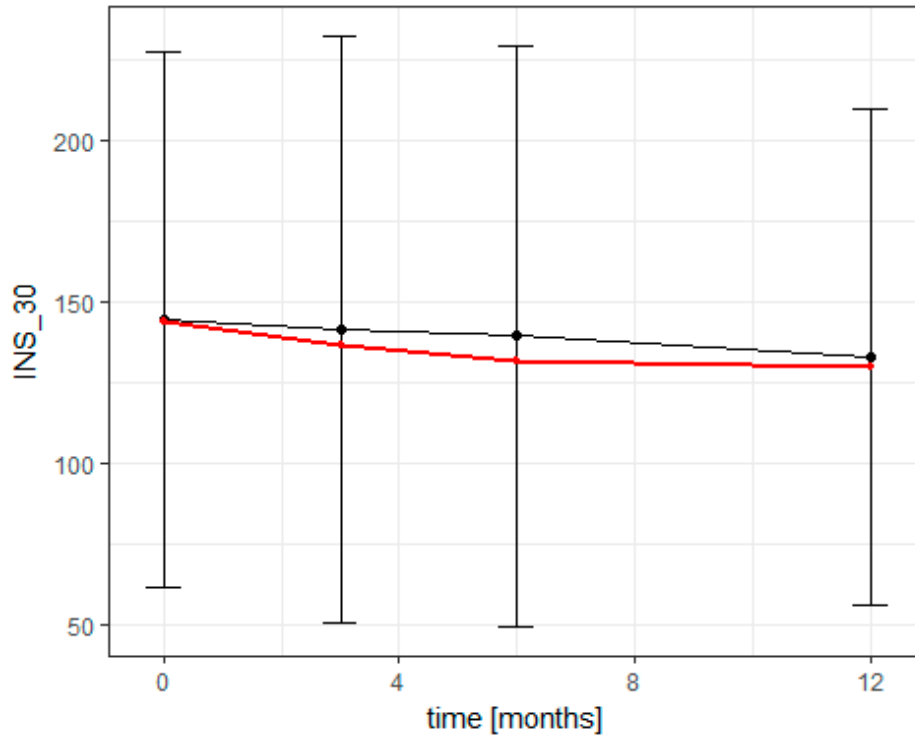


Table 34. Results of quadratic models for INSULIN CONCETRATION AT 30' (OGTT)

variabl	with	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo	mo
e	out	del	del	del	del	del	del	del	del	del	del	del	del	del	del	del
	cova	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	riate															
	s															
(Intercept)	143.8***	37.8	149.6***	129.4***	115.5***	45.2	47.2	27.2	134.7***	115.1***	105.8***	56	32.8	38.2	105.1***	44.3
time_sq	0.146	-	0.12	0.15	-	-	-	-	0.12	-	-	-	-	-	-	-
		0.205	0	4	0.231	0.210	0.148	0.495*	7	0.340	0.176	0.148	0.541*	0.423	0.285	0.466
time	-	3.539	-	-	2.402	3.794	2.457	7.331*	-	4.024	1.524	2.585	8.176*	5.995	3.164	6.790
total_mass_kg		0.784***				0.769***	0.663*	0.668*				0.633*	0.646*	0.539*		0.510
IPAQ			-			-			-	-		-	-		-	-
			0.001			0.001			0.001	0.001		0.001	0.001		0.001	0.001
sexM				31.138*			14.815		32.374*		28.771*	16.762		16.203	29.203*	17.093

diet_kc					0.01			0.0		0.02	0.01		0.0	0.0	0.01	0.0
al					6**			15*		0**	4*		17*	15*	8**	16*
no. of observations	380	378	373	380	349	373	378	347	373	343	349	373	343	347	343	343
AIC	4278.7	4247.6	4213.4	4265.8	3938.4	4203.5	4239.4	3909.3	4200.1	3882.1	3926.6	4195	3876	3900.8	3870.2	3867.4

INSULIN CONCETRATION AT 60' (OGTT)

Figure 35. Distribution of INSULIN CONCETRATION AT 60' (OGTT) in time - linear fit

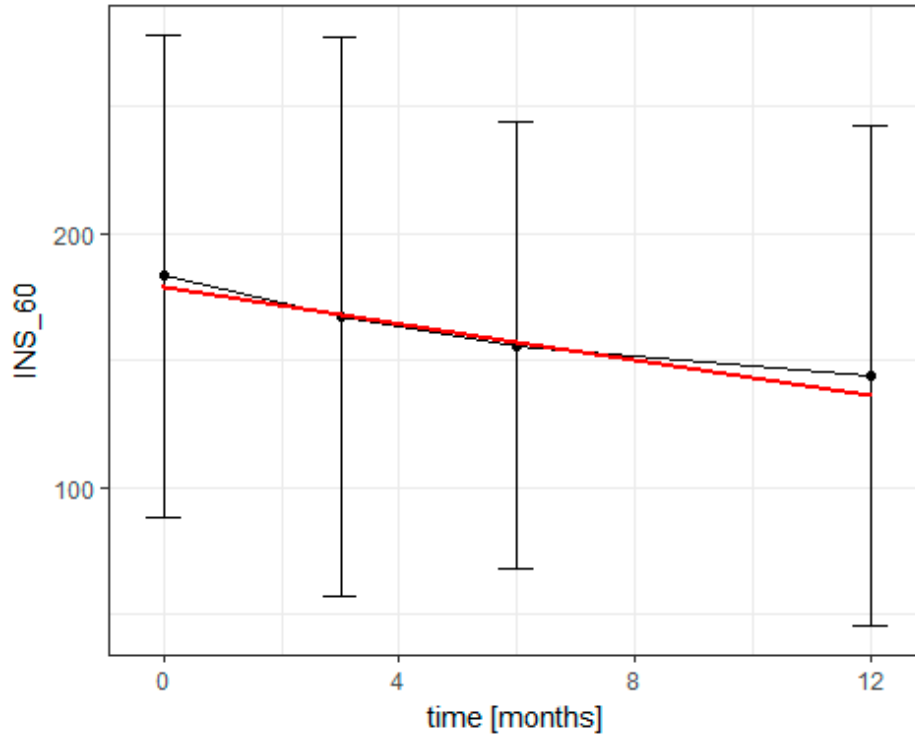


Table 35. Results of linear models for INSULIN CONCETRATION AT 60' (OGTT)

variable	with covariate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	179**	103.5**	188.3***	170.5***	158.6***	113.9***	105.9**	107.1**	179.6***	166.1***	151.6***	116.6***	118.6***	11.2**	159.1***	123.3***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3.587***	1.779	3.271***	3.690***	2.779**	1.484	1.936	1.704	3.381***	2.272*	2.937**	1.652	1.253	2.004	2.432*	1.535
total_mass_kg		0.582*				0.569*	0.543*	0.425				0.527*	0.412	0.345		0.335
IPAQ			-			-			-	-		-	-		-	-
			0.001*			0.001*			0.001*	0.001*		0.001*	0.001*		0.001*	0.001*
sexM				18.190			5.539		18.509		17.675	5.916		10.802	17.387	10.110
diet_kcal					0.015*			0.013		0.017*	0.014*		0.013	0.013	0.016*	0.013

no. of observations	379	377	372	379	348	372	377	346	372	342	348	372	342	34	342	342
AIC	4446.9	4420.7	4379.8	4438.1	4087	4375.4	4413.2	4062.6	4371	4028.7	4078.4	4367.9	4027.2	4054.8	4020.1	4019.4

Figure 36. Distribution of INSULIN CONCETRATION AT 60' (OGTT) in time - quadratic fit

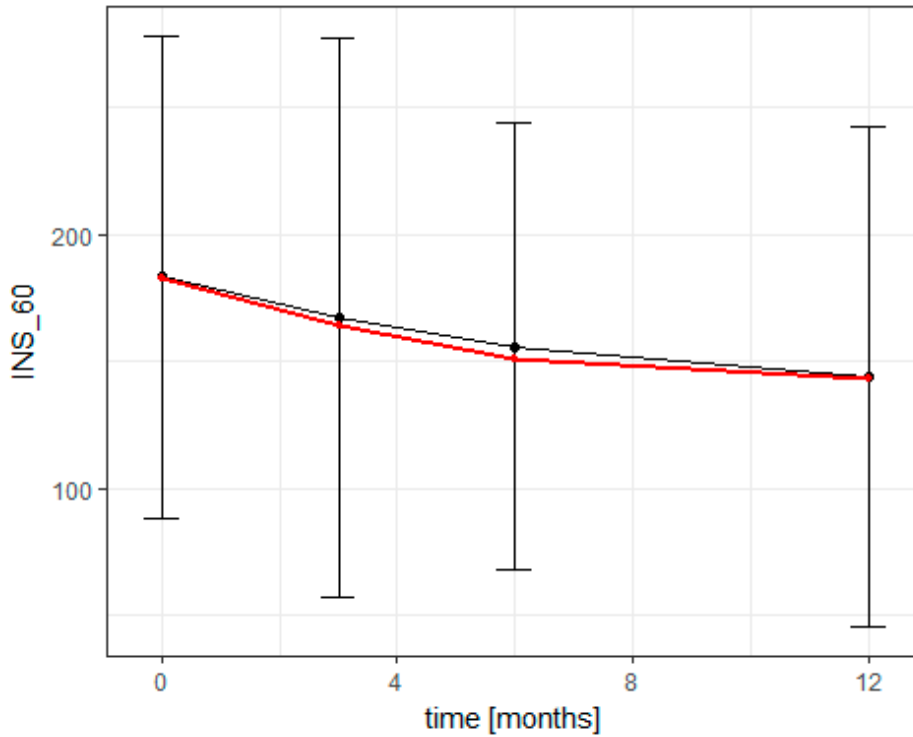


Table 36. Results of quadratic models for INSULIN CONCETRATION AT 60' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	183**	111.3**	192.5***	174.3***	161.6***	123.7**	117**	99.4*	183.7***	167.6***	156.2***	130.2**	113.1**	107.3*	162.3***	120.9**
time_sq	0.338	0.111	0.354	0.346	0.081	0.140	0.143	-0.120	0.361	0.039	0.132	0.176	-0.087	-0.067	0.087	-0.035
time	-7.386**	-3.178	-7.255*	-7.583**	-3.789	-3.258	-3.811	-0.138	-7.446**	-2.752	-4.590	-3.953	-0.128	-1.107	-3.522	-1.066
total_mass_kg	-	0.532*	-	-	-	0.506	0.463	0.452	-	-	-	0.429	0.430	0.366	-	0.346
IPAQ	-	-	0.001*	-	-	0.001*	-	-	0.001*	0.001*	-	0.001*	0.001*	-	0.001*	0.001*

sexM				18.7				7.6	19.0		18.5	8.4		9.9	17.8	9.6
				66				86	06		25	76		12	92	66
diet_kc					0.01			0.0	0.01	0.01			0.0	0.0	0.01	0.0
al					4			15	7	2			14	14	5	14
no. of	379	377	372	379	348	372	377	346	372	342	348	372	342	346	342	342
observ																
ations																
AIC	4445.	442	437	443	408	437	441	406	436	402	407	436	402	405	402	401
	9	1.4	8.7	6.9	7.5	5.9	3.8	2.9	9.7	9.2	8.7	8.3	7.5	5.1	0.5	9.7

INSULIN CONCETRATION AT 120' (OGTT)

Figure 37. Distribution of INSULIN CONCETRATION AT 120' (OGTT) in time - linear fit

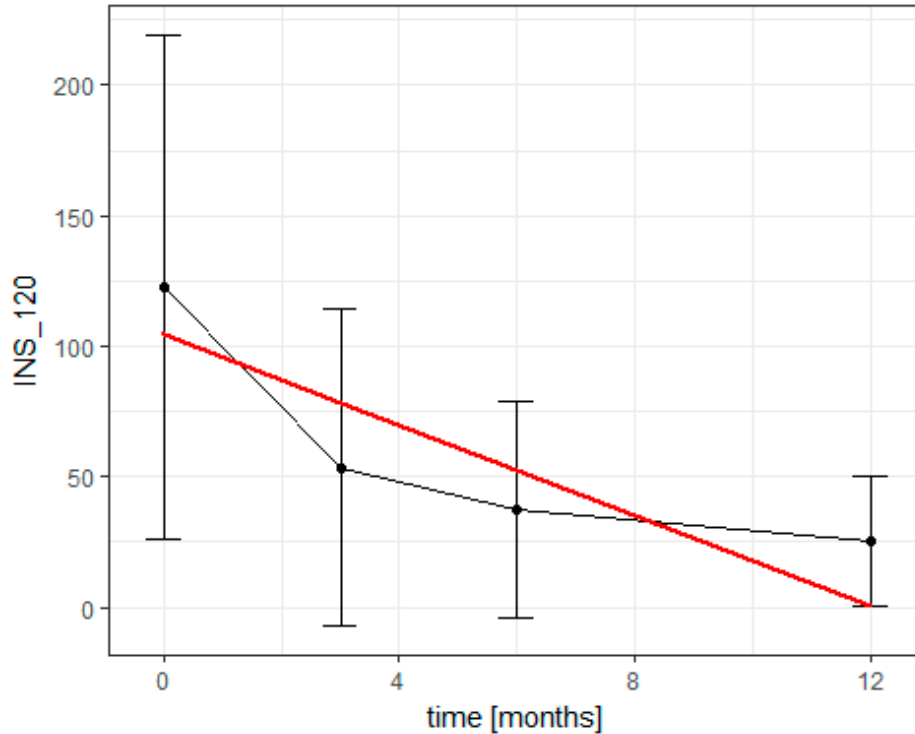


Table 37. Results of linear models for INSULIN CONCETRATION AT 120' (OGTT)

variable	with covariate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	104.2***	30.3	108.9**	104.7**	77.5***	35.9	17.4	29.1	109.3**	77.7***	79.1***	22.6	37.9	16.7	79.5***	25.1
time	-8.641***	-7.018*	-8.446**	-8.630**	-7.539**	-6.888**	-6.324*	-6.525*	-8.440*	-7.179*	-7.431*	-6.206*	-6.408*	-5.827*	-7.056*	-5.700*
total_mass_kg		0.572*				0.553*	0.736*	0.375*				0.719*	0.336	0.529*		0.493*
IPAQ			-0.000			-0.000			-0.000	-0.001		-0.000	-0.000		-0.001	-0.000
sexM				-0.971			-0.1723		-0.057		-0.5232	-0.17558		-0.16720	-0.5655	-0.16706

diet_kcal					0.0					0.0					0.0	0.0	0.0	0.0
					19*					19*					20*	19*	23*	20*
					**					*					*	*	**	*
no. of observations	381	379	373	381	349	373	379	347	373	343	349	373	343	347	343	343	343	343
AIC	4326.3	4296.4	4254.3	4320.2	3964.2	4246.5	4286.8	3937.4	4248.2	3909.9	3957.7	4237.1	3908.1	3928.2	3903.3	3898.9		

Figure 38. Distribution of INSULIN CONCETRATION AT 120' (OGTT) in time - quadratic fit

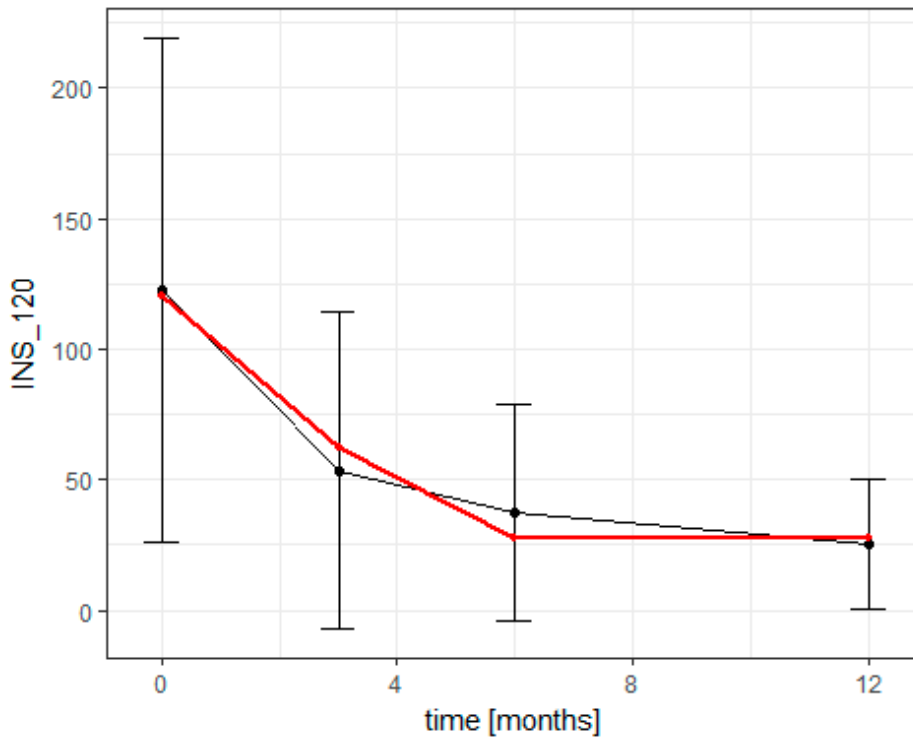


Table 38. Results of quadratic models for INSULIN CONCETRATION AT 120' (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	120.1***	83.1***	124.6***	119.7***	119.7***	89.5***	76.7**	82.5**	124.2***	120.6***	119.5***	82.7**	91.9***	75.3**	120.6***	84.2**
time_sq	1.277***	1.175***	1.296***	1.278***	1.259***	1.190***	1.141***	1.141***	1.296***	1.226***	1.268***	1.156***	1.170***	1.093***	1.228***	1.119***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23.023**	21.095**	23.122**	23.043**	22.914**	21.187**	20.424*	20.762*	23.144*	22.194*	23.046*	20.503*	20.987*	19.889*	22.224*	20.065*

total_		0.27				0.25	0.35	0.26				0.33	0.22	0.32		0.29
mass_		8				7	0	3				1	8	8		8
kg																
IPAQ		-				-			-	-		-	-		-	-
		0.00				0.00			0.00	0.00		0.00	0.00		0.00	0.00
		0				0			0	1		0	0		1	0
sexM			0.87				-		0.78		1.47			-	0.20	-
			5				7.01		8		7	7.19		6.56	8	6.96
							0				1		1		5	
diet_k				0.00				0.00		0.00	0.00		0.00	0.00	0.00	0.00
cal				2				3		4	1		3	4	4	4
no. of	381	379	373	381	349	373	379	347	373	343	349	373	343	347	343	343
obser																
vation																
s																
AIC	4292	426	422	428	394	422	426	392	421	389	393	421	389	391	388	388
	.1	9.8	0.9	6	4	0.5	2.9	1.6	4.8	2.1	7.8	3.5	2.2	4.7	6	5.2

HbA1c

Figure 39. Distribution of HbA1c in time - linear fit

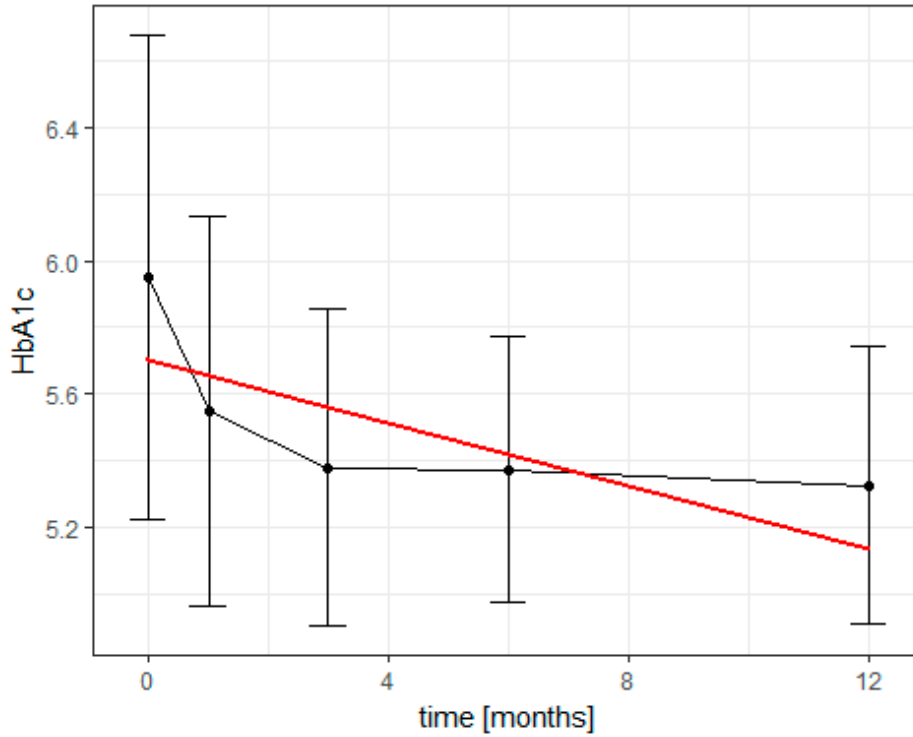


Table 39. Results of linear models for HbA1c

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	5.7**	4.5*	5.7*	5.7*	5.5*	4.5*	4.5*	4.9*	5.7*	5.5*	5.5*	4.5*	5***	4.9*	5.5*	4.9*
time	0.047***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
total_mass_kg		0.09**				0.09**	0.11**	0.04*				0.11**	0.04*	0.06**		0.06**
IPAQ			0.00			0.00			0.00	-0.00		0.00	-0.00		-0.00	-0.00
sexM				-0.031		-0.02*			-0.022		-0.090	-0.092*		-0.020*	-0.081	-0.011*

diet_kcal					0.0				0.0			0.0	0.0	0.0	0.0	0.0	0.0
					00*				00*			00*	00*	00*	00*	00*	00*
					**				**			**	**	**	**	**	**
no. of observations	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541	
AIC	837.8	806	842	840	735	818	799	737	845	751	737	812	755	735	753	752	
			.2	.9	.3	.3	.5	.8	.3	.3	.2	.5	.2		.5	.9	

Figure 40. Distribution of HbA1c in time - quadratic fit

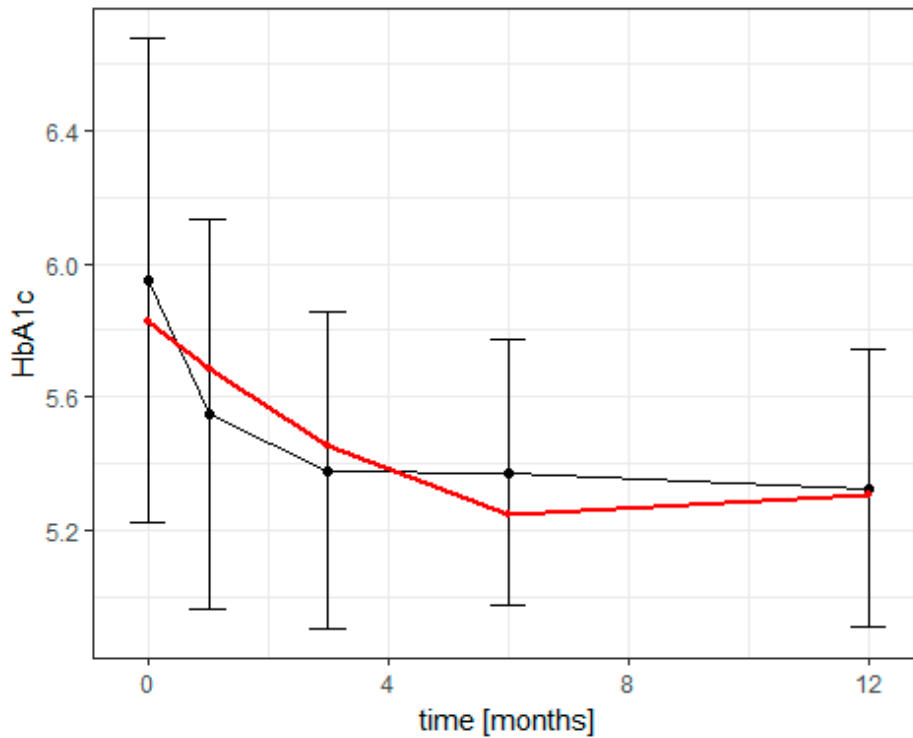


Table 40. Results of quadratic models for HbA1c

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	5.8**	5.3*	5.8*	5.8*	5.6*	5.3*	5.2*	5.4*	5.8*	5.6*	5.6*	5.2*	5.4*	5.3*	5.6*	5.3*
	*	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
time_sq	0.009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	***	07*	09*	09*	06*	07*	07*	06*	09*	06*	06*	07*	06*	05*	06*	05*
		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.150	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0
	***	18*	52*	50*	15*	21*	07*	06*	52*	17*	15*	11*	07*	98*	17*	99*
		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

total_																
mass_																
kg																
IPAQ																
sexM																
diet_kc																
al																
no. of	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541
observ																
ations																
AIC	787	786	792	790	720	797	786	729	795	737	722	798	747	730	739	748
		.3	.8	.1	.1	.9	.2	.7	.9	.1	.5	.2	.3	.5	.7	.5

HOMA-beta

Figure 41. Distribution of HOMA-beta in time - linear fit

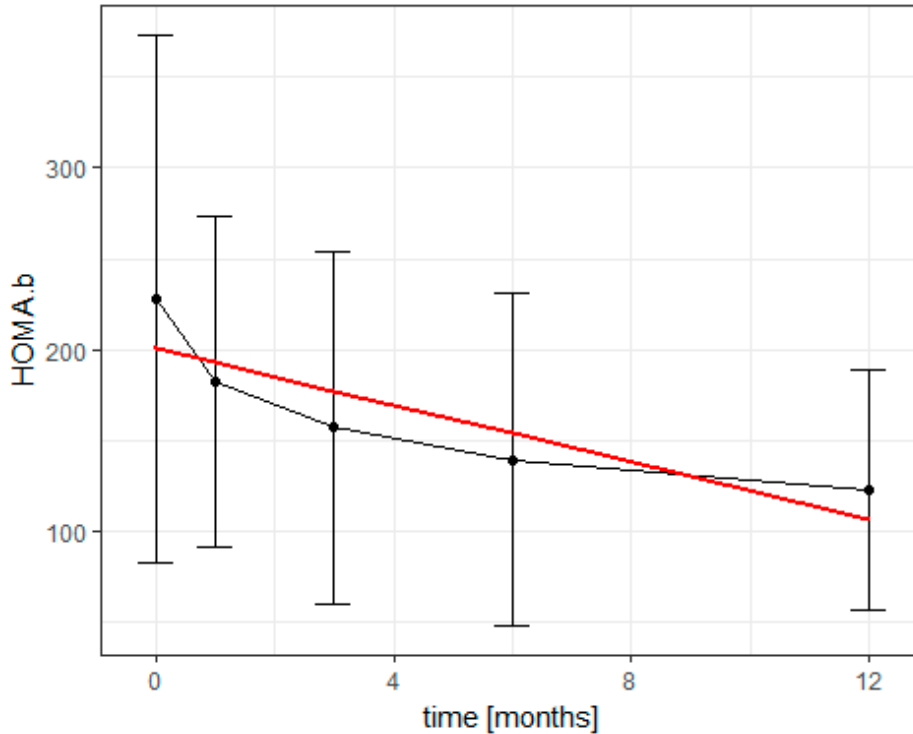


Table 41. Results of linear models for HOMA-beta

variable	with covariates	month 1 del	month 2 del	month 3 del	month 4 del	month 5 del	month 6 del	month 7 del	month 8 del	month 9 del	month 10 del	month 11 del	month 12 del	month 13 del	month 14 del	month 15 del
(Intercept)	201.1***	-98.8***	203.4**	173.6***	170.6**	-96.1***	-97.8***	-68.2*	175.6***	173.2**	147.7***	-94.5**	-57.9*	65.5*	150.5***	-54.5*
time	-7.864***	-0.869	-7.778*	-7.889***	-6.569**	-0.847	-0.927	-1.042	-7.785***	-6.172*	-6.601***	-0.932	-0.861	-1.204	-6.207***	-1.051
total_mass_kg		2.363*				2.355*	2.344*	2.004*				2.326*	1.948*	1.948*		1.882*
IPAQ			-0.000			-0.000			-0.000	-0.001*		-0.000	-0.001		-0.001*	-0.001
sexM				60.450**			3.133		61.904**		52.242**	4.545		9.103	52.502**	10.418

diet_kal					0.0			0.0		0.0	0.02		0.0	0.0	0.02	0.0
					23*			10*		26*	2***		11*	10*	5***	11*
					**					**						
no. of observations	595	592	575	595	556	575	592	553	575	538	556	575	538	553	538	538
AIC	6996.6	685.7	677.9.2	697.2.5	633.9.9	667.3.3	684.8.5	622.5.9	675.3.9	614.9.5	631.9	666.6	607.4.9	621.8.4	612.8.2	606.7.2

Figure 42. Distribution of HOMA-beta in time - quadratic fit

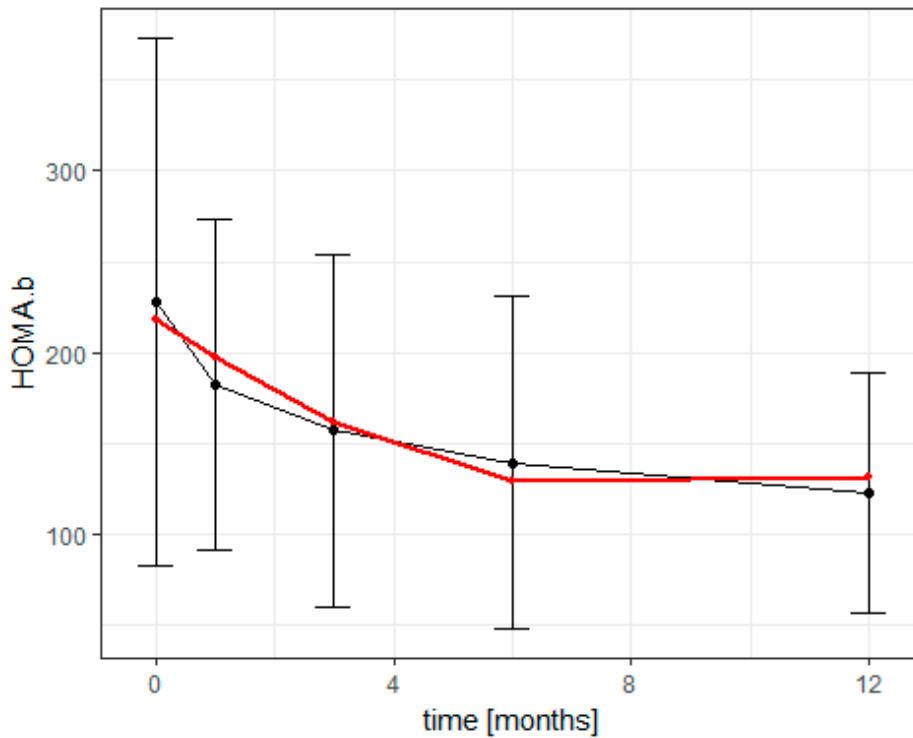


Table 42. Results of quadratic models for HOMA-beta

variable	with covariate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	218.3***	-69.6*	220.***	190.6***	189.3***	-67.4*	-63.7	-58.2	192.1***	191.***	165.8***	-60.3	-49.3	-52	167.8***	-42.1
time_sq	1.268***	0.361	1.267***	1.266***	0.778***	0.360	0.394	0.124	1.261***	0.727***	0.798***	0.396	0.111	0.159	0.18***	0.150
time	-22.414**	-5.585	-22.405**	-22.427**	-15.716**	-5.552	-6.189*	-2.657	-22.351**	-14.767**	-15.979**	-6.242*	-2.310	-3.323	-15.057**	-3.048
	*		*	*	*				*	*	*				*	

total_		2.1				2.1	2.0	1.9				2.0	1.8	1.8		1.8
mass_		72*				66*	95*	46*				77*	99*	57*		00*
kg		**				**	**	**				**	**	**		**
IPAQ			-			-			-	-		-	-		-	-
		0.00				0.0			0.00	0.00		0.0	0.0		0.00	0.0
		0				00			0	1*		00	01		1*	01
sexM			60.6				9.3		62.0		54.5	10.		11.	54.8	12.
			83**				30		14**		36**	658		599	18**	695
			*						*		*				*	
diet_k					0.01			0.0		0.01	0.01		0.0	0.0	0.01	0.0
cal					6***			09*		9***	5***		10*	09*	8***	10*
no. of	595	592	575	595	556	575	592	553	575	538	556	575	538	553	538	538
observ																
ations																
AIC	6958	685	674	693	632	667	684	622	671	613	630	666	607	621	611	606
	.5	4.2	2.7	4.4	3.6	1.8	6.5	7	7.8	6.2	1.8	4	6	9.2	3.9	8

HOMA-IR

Figure 43. Distribution of HOMA-IR in time - linear fit

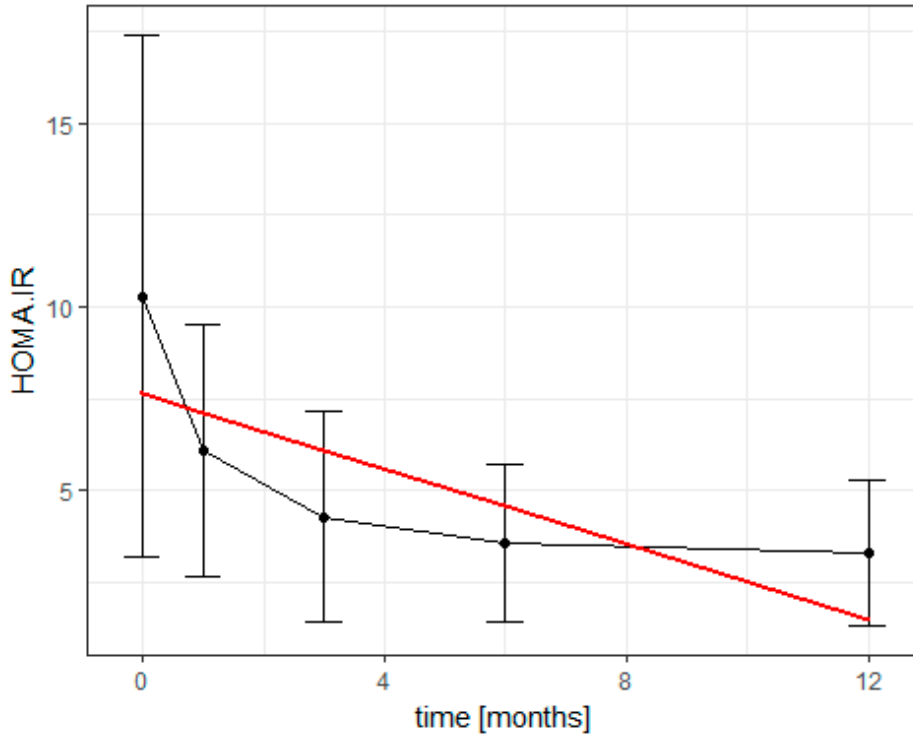


Table 43. Results of linear models for HOMA-IR

variable	with covariate	month 1	month 2	month 3	month 4	month 5	month 6	month 7	month 8	month 9	month 10	month 11	month 12	month 13	month 14	month 15
(Intercept)	7.6**	-	7.8*	6.6*	4.8*	-	-	-	6.8*	5***	4.2*	-	-	-	4.4*	-4**
	*	5.5**	**	**	**	5.4**	5.9**	4.3**	**	**	**	5.8**	3.7*	4.5**	**	
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.511***	0.204**	0.501**	0.512**	0.434**	0.201**	0.190**	0.222**	0.500**	0.416**	0.437**	0.189**	0.215**	0.213**	0.418**	0.208**
total_mass_kg		0.103**				0.104**	0.108**	0.077**				0.108**	0.074**	0.080**		0.077**
IPAQ			-			-			-	-		-	-		-	-
			0.000			0.000			0.000	0.000*		0.000	0.000*		0.000*	0.000*
sexM				2.208**			-		2.218**		1.472*	-		-	1.446*	-
				**			77		**		*	30		28	*	86

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					03*			02*		03*	03*		02*	02*	03*	02*
					**			**		**	**		**	**	**	**
no. of observations	596	593	576	596	557	576	593	554	576	539	557	576	539	554	539	539
AIC	3426.8	329.14	333.13	340.8	307.14	322.41	329.0	299.7.7	331.2.2	299.4.4	306.2.4	322.2.9	293.9.7	299.6.8	298.5.4	293.8.9

Figure 44. Distribution of HOMA-IR in time - quadratic fit

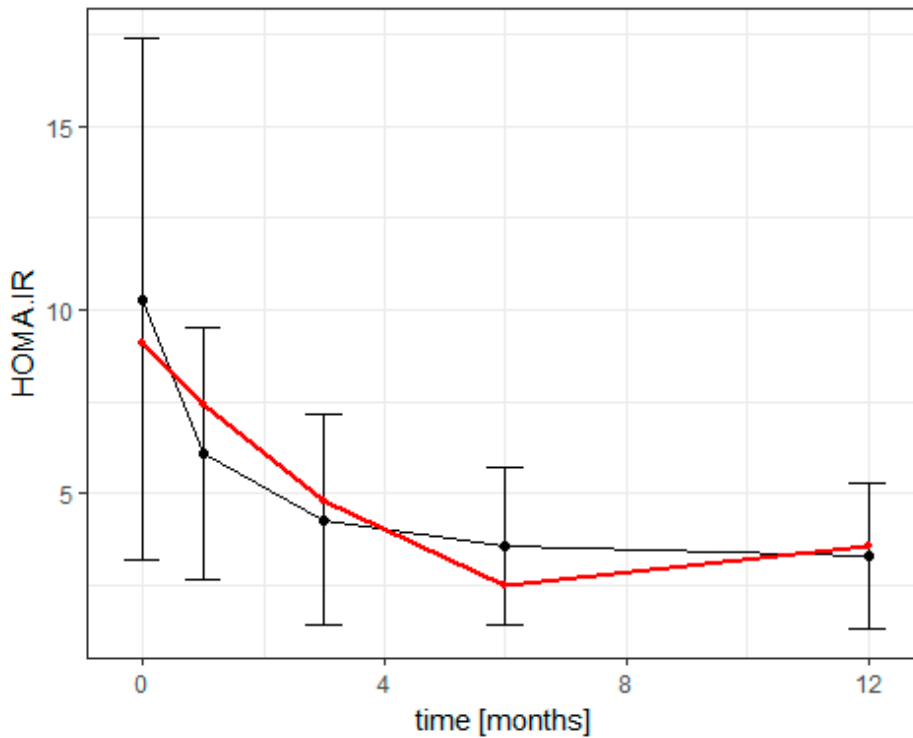


Table 44. Results of quadratic models for HOMA-IR

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	9.1**	-1.4	9.1*	8.1*	6.4*	-1.3	-1.1	-1.9	8.2*	6.6*	5.7*	-1	-1.4	-1.8	6***	-1.3
time_sq	0.107***	0.073*	0.106*	0.107*	0.068*	0.073*	0.074*	0.048*	0.105*	0.067*	0.070*	0.074*	0.047*	0.049*	0.069*	0.048*
time	1.737***	1.112*	1.724*	1.738*	1.236*	1.114*	1.137*	0.816*	1.720*	1.206*	1.258*	1.141*	0.804*	0.827*	1.230*	0.817*

total_																
mass_																
kg	0.0					0.0	0.0	0.0				0.0	0.0	0.0		0.0
	79*					79*	76*	66*				76*	64*	64*		62*
	**					**	**	**				**	**	**		**
IPAQ																
	-					-			-	-		-	-		-	-
	0.0					0.0			0.0	0.0		0.0	0.0		0.0	0.0
	00					00			00	00		00	00		00*	00
sexM																
				2.2				0.3		2.2		1.6	0.3		0.1	1.6
				23*				29		17*		55*	59		51	30*
				**						**		*			*	66
diet_kc																
al					0.0				0.0		0.0	0.0		0.0	0.0	0.0
					02*				02*		02*	02*		02*	02*	02*
					**				**		**	**		**	**	**
no. of	596	593	576	596	557	576	593	554	576	539	557	576	539	554	539	539
observ																
ations																
AIC	3331.	325	324	331	303	318	325	298	322	296	302	318	292	298	295	292
	9	0.9	2.1	3	7	5.4	0	4.7	3.2	4	5.9	4.3	7.7	4.1	2.9	7.1

TOTAL CHOLESTEROL

Figure 45. Distribution of TOTAL CHOLESTEROL in time - linear fit

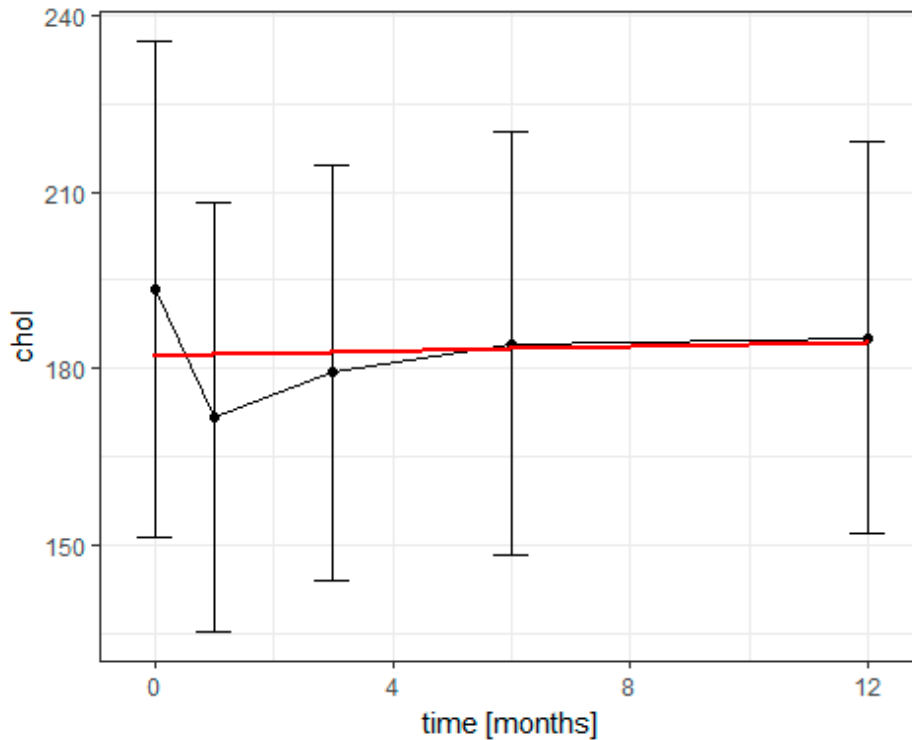


Table 45. Results of linear models for TOTAL CHOLESTEROL

variable	with covariate	month 1 del	month 2 del	month 3 del	month 4 del	month 5 del	month 6 del	month 7 del	month 8 del	month 9 del	month 10 del	month 11 del	month 12 del	month 13 del	month 14 del	month 15 del
(Intercept)	182.2***	178.3***	182.2**	185.1***	171.6***	177.8***	175.4***	194.7***	184.7***	170.8***	175.4***	174.7***	194.9***	192.9***	174.5***	192.9***
time	0.193	0.271	0.133	0.194	0.508	0.231	0.431	-0.082	0.133	0.484	0.511	0.391	-0.076	0.013	0.488	0.024
total_mass_kg		0.031				0.033	0.084	-0.203*				0.086	-0.203*	-0.170		-0.168
IPAQ			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				-6.473			-8.354		-6.022			-8.820	-8.160		-4.827	-8.790
diet_kcal					0.010***			0.012***		0.011***	0.010***		0.012***	0.012***	0.011***	0.012***

no. of observations	602	599	58	602	563	581	599	560	581	544	563	581	544	560	544	544
			1													
AIC	5825.8	5802.2	5646	5819.2	5434	5648.9	5794.8	5400.8	5639.5	5273.3	5426.2	5641.7	5271.6	5394.7	5265.5	5265.5

Figure 46. Distribution of TOTAL CHOLESTEROL in time - quadratic fit

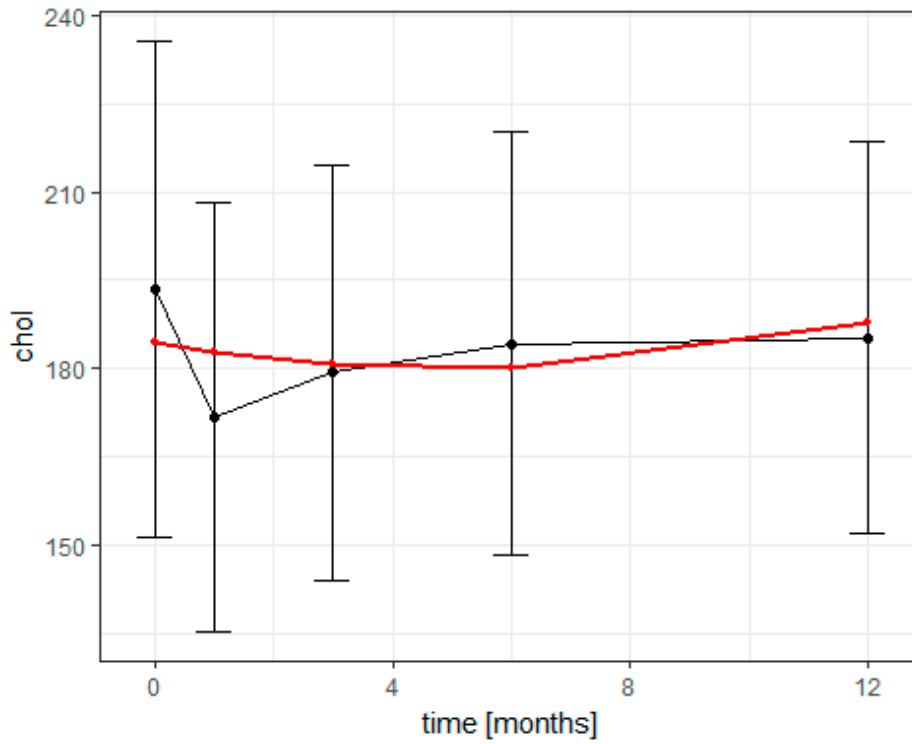


Table 46. Results of quadratic models for TOTAL CHOLESTEROL

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	184.5***	197.9**	184.4**	187.5**	171.5**	197.1**	194.7**	199.3**	187.1**	170.4**	175.2**	193.8**	199.***	196.7**	174.***	196.1**
time_sq	0.173*	0.219*	0.183*	0.173*	-0.005	0.223*	0.202*	0.060	0.183*	-0.016	-0.010	0.206*	0.056	0.046	-0.022	0.041
time	-1.799*	-2.642*	-1.977*	-1.797*	0.561	-2.722*	-2.320	-0.855	-1.979*	0.676	0.623	-2.408*	0.801	0.595	-0.746	-0.524
total_mass_kg	-	0.099	-	-	-	0.096	0.058	0.229*	-	-	-	0.055	0.227*	0.195	-	0.190

IPAQ				0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
				00		00		00	00		00	00		00	00	
sexM				-		-		-	-		-	-		-	-	
				6.4		4.7		6.0		8.8	4.6		4.1	8.8	4.4	
				50		97		44		46	85		41	52	10	
diet_kcal				0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
				10*		12*		11*	10*		12*	12*		11*	12*	
				**		**		**	**		**	**		**	**	
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	5823.4	5798.3	5643.2	5816.8	5437.2	5645.1	5792.3	5403.4	5636.7	5276.5	5429.4	5639.1	5274.2	5397.5	5268.6	5268.3

TRIGLYCERIDES

Figure 47. Distribution of TRIGLYCERIDES in time - linear fit

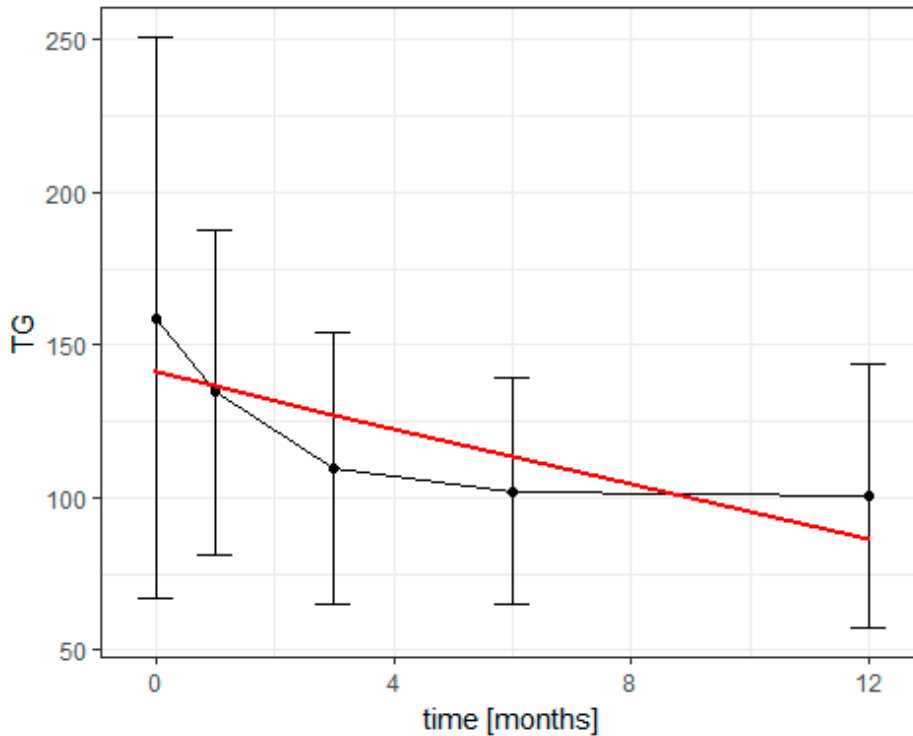


Table 47. Results of linear models for TRIGLYCERIDES

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	140.9***	44.4*	142.7**	134.5**	119.***	45.1*	41*	63.9***	136.3**	118.***	115.4**	41.3*	66.6***	62.9***	114.7**	65.2***
time	-4.548***	-2.324**	-4.544**	-4.552**	-4.030**	-2.292**	-2.185*	-2.824**	-4.546**	-3.862**	-4.035**	-2.140*	-2.677**	-2.784**	-3.870**	-2.624**
total_mass_kg		0.763**			0.766**	0.809**	0.445*				0.818**	0.434*	0.459*		0.453*	
IPAQ			-0.000		-0.000			-0.000	-0.000		-0.000	-0.000		-0.000	-0.000	
sexM			14.099			-5.330		14.312		8.616	-8.632			-8.078		-2.138

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					21*			20*		25*	21*		22*	20*	25*	22*
					**			**		**	**		**	**	**	**
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	6533.6	6476.7	6335.6	6524.3	6009.8	6309.8	6470.1	5962.3	6326.3	5821.1	6002.6	6303.1	5814.1	5956.1	5814.1	5808

Figure 48. Distribution of TRIGLYCERIDES in time - quadratic fit

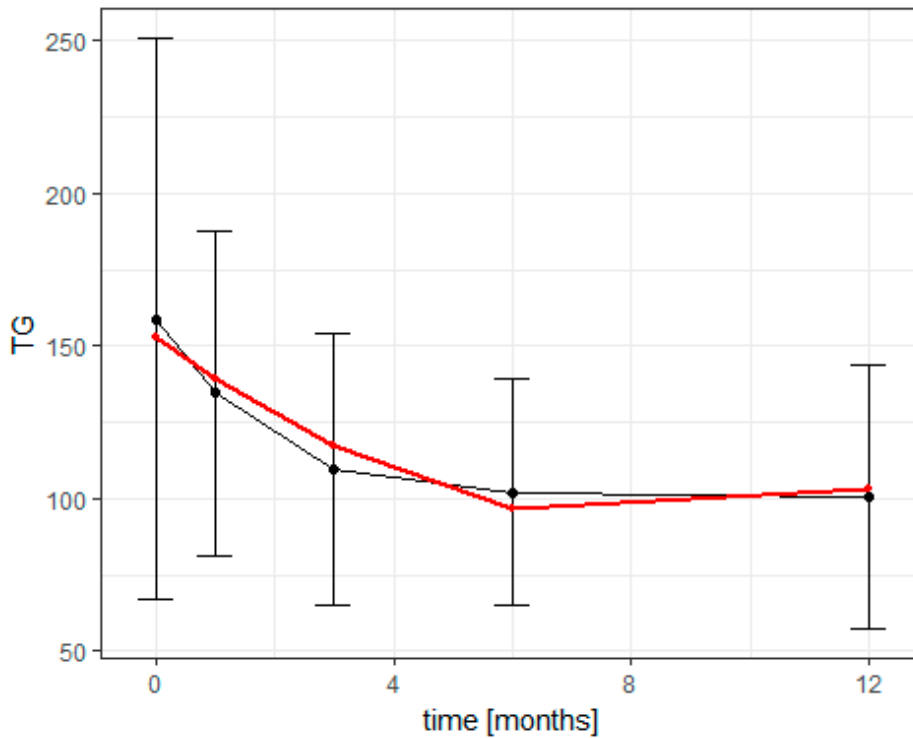


Table 48. Results of quadratic models for TRIGLYCERIDES

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	152.7***	94.1***	154.4***	146.2***	132.2***	94**	97.8***	91.6**	148.1***	130.1**	128.1***	97**	92*	94.6**	126.4**	94.2**
time_sq	0.862***	0.687***	0.886***	0.863***	0.554***	0.696***	0.706***	0.431*	0.885***	0.501*	0.564***	0.710***	0.408*	0.446*	0.510*	0.419*
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14.471**	11.178**	14.773**	14.486**	10.562**	11.243**	11.529**	8.304*	14.772**	9.786**	10.677**	11.516**	7.862*	8.594*	9.903*	8.067*
	*	*	*	*	*	*	*	**	*	**	*	*	**	**	**	**

total_																	
mass_																	
kg																	
IPAQ																	
sexM																	
diet_k																	
cal																	
no. of																	
observ																	
ations																	
AIC																	

HDL CHOLESTEROL

Figure 49. Distribution of HDL CHOLESTEROL in time - linear fit

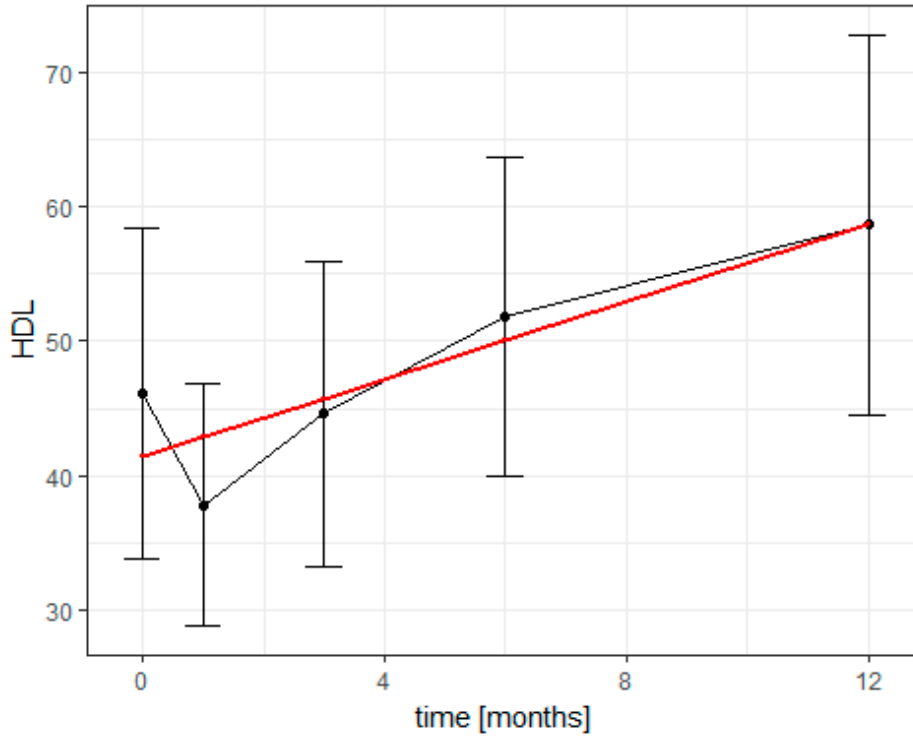


Table 49. Results of linear models for HDL CHOLESTEROL

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15	
(Intercept)	41.4**	55.2***	41.2***	45.1***	36.7***	54.6***	52.7***	61.2***	44.8***	36.6***	40.7***	51.9***	60.8***	59.1***	40.5***	58.6***	
time	1.434***	1.110**	1.399**	1.436**	1.557**	1.085**	1.242**	0.973**	1.399**	1.545**	1.561**	1.218**	0.985**	1.079**	1.549**	1.094**	
total_mass_kg	-	0.108**	-	-	-	0.106**	0.065**	0.208**	-	-	-	0.061**	0.204**	0.171**	-	0.165**	
IPAQ	-	-	0.000	-	-	0.000	-	-	0.000	0.000	-	0.000	0.000	-	0.000	0.000	
sexM	-	-	-	8.195**	-	-	6.569**	-	8.103**	-	-	9.262**	6.582**	-	5.369*	9.207**	5.475**

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					04*			06*		04*	04*		06*	06*	04*	06*
					**			**		**	**		**	**	**	**
no. of observations	598	595	577	598	560	577	595	557	577	541	560	577	541	557	541	541
AIC	4424.1	4395.9	4290.4	4396.3	4095.6	4282.7	4377.2	4023.1	4263	3980.3	4062.4	4264.1	3935.9	4009.4	3947.5	3921.9

Figure 50. Distribution of HDL CHOLESTEROL in time - quadratic fit

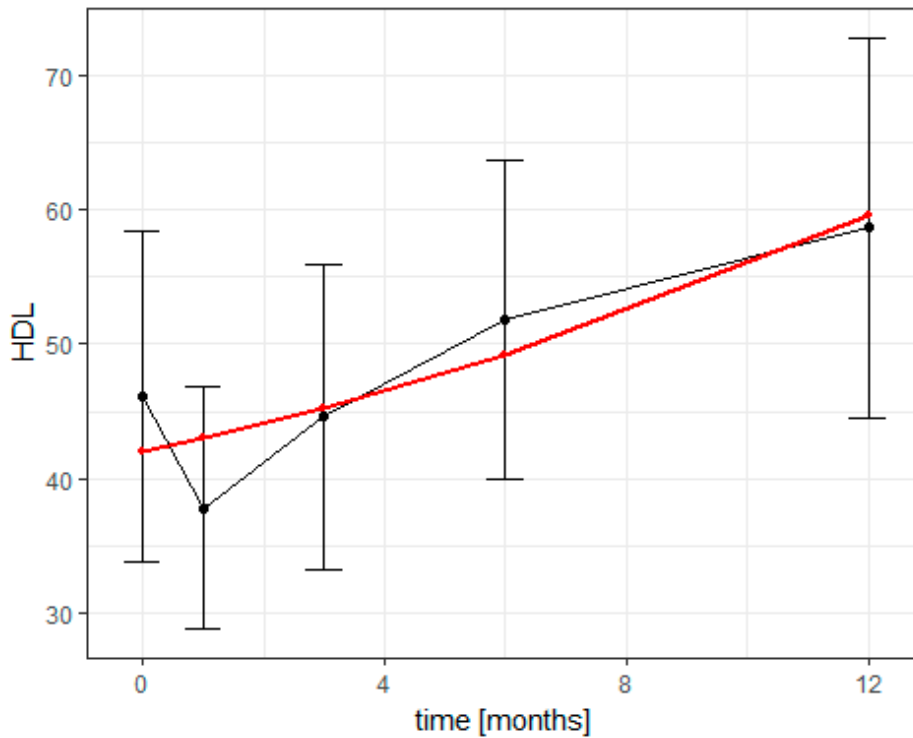


Table 50. Results of quadratic models for HDL CHOLESTEROL

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	42***	64.1***	41.9** *	45.7***	35.8***	63.8***	60.6***	63.7***	45.5***	35.9***	39.8***	60.1***	63.7***	60.4***	39.7***	60.4***
time_sq	0.045*	0.115***	0.051*	0.044	-0.0036	0.119***	0.096***	0.035	0.051*	-0.0030	-0.0001	0.101***	0.041	0.017	-0.0035	0.024
time	0.915**	-0.382	0.806*	0.923***	1.984***	-0.471	-0.032	0.523	0.810**	1.898***	2.042***	-0.124	0.454	0.851*	1.962***	0.781*

total_	-															
mass_	0.16					0.16	0.12	0.22				0.12	0.22	0.17		0.17
kg	6***					5***	2***	2***				1***	0***	9***		7***
IPAQ		0.0				0.00			0.00	0.00		0.00	0.00		0.00	0.00
		00				0			0	0		0	0		0	0
sexM																
			-				-		-		-	-		-	-	-
			8.18				5.13		8.10		9.37	5.11		5.12	9.30	5.15
			7***				6**		7***		6***	5**		7**	8***	4**
diet_kc				0.00				0.00		0.00	0.00		0.00	0.00	0.00	0.00
al				4***				6***		5***	5***		6***	6***	5***	5***
no. of	598	595	577	598	560	577	595	557	577	541	560	577	541	557	541	541
observ																
ations																
AIC	4426	438	429	439	409	426	436	402	426	398	406	425	393	401	395	392
		2.3	1.2	8.3	8.9	8	9.8	6.8	3.9	4.4	5.1	5.6	8.8	4.4	1	6.5

LDL CHOLESTEROL

Figure 51. Distribution of LDL CHOLESTEROL in time - linear fit

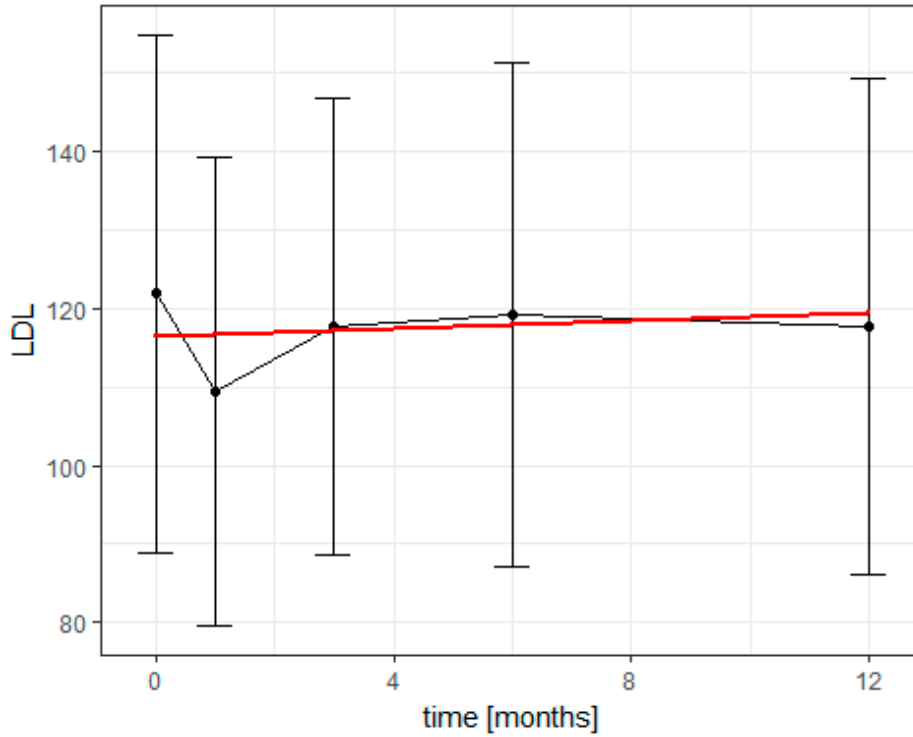


Table 51. Results of linear models for LDL CHOLESTEROL

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	116.4***	111.7***	115.3***	117.4***	111.4***	110.1***	110.6***	117.7***	116.2***	110.4***	112.9***	108.9***	116.3***	116.8***	111.8***	115.3***
time	0.260	0.361	0.161	0.261	0.427	0.283	0.427	0.253	0.162	0.332	0.428	0.349	0.203	0.299	0.334	0.253
total_mass_kg		0.037				0.041	0.059	-0.055				0.063	-0.047	-0.009		-0.029
IPAQ			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				-2.233			-3.627		-2.060		-3.397	-3.625		-2.423	-3.312	-2.653
diet_kcal					0.004**			0.005**		0.004**	0.004**		0.0005*	0.005**	0.004**	0.0005*

no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	5572.7	555.14	539.98	556.76	522.32	540.3	554.58	520.02	539.48	507.05	521.77	539.74	507.34	519.5	506.51	506.81

Figure 52. Distribution of LDL CHOLESTEROL in time - quadratic fit

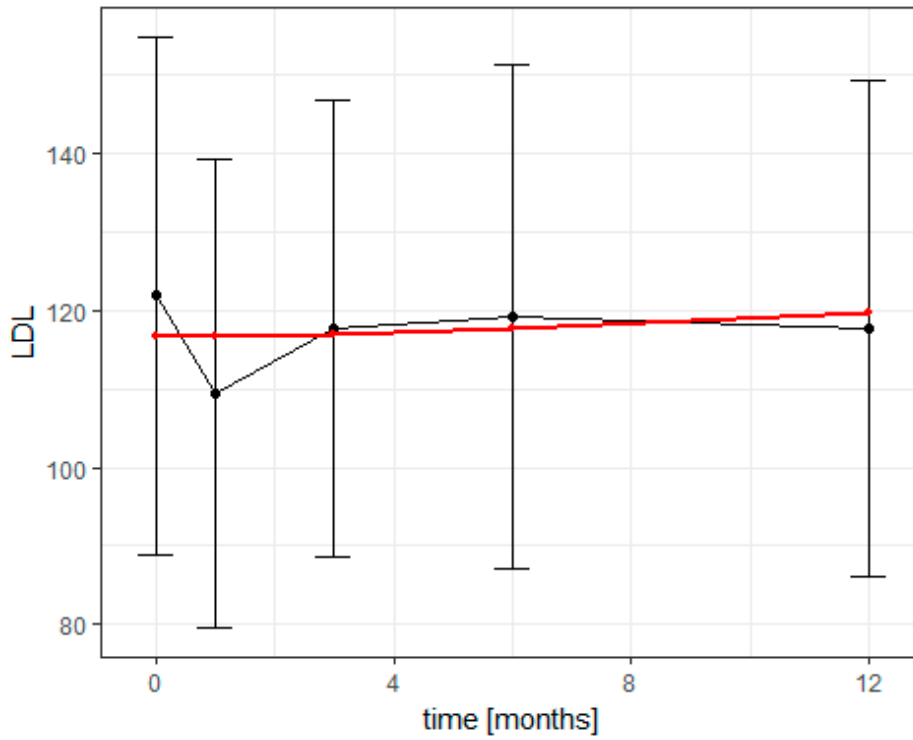


Table 52. Results of quadratic models for LDL CHOLESTEROL

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	116.5***	111.3***	115.5***	117.6***	109.3***	110.0**	108.9***	110.6***	116.5***	108.2***	110.8***	107.6***	109.3***	108.2***	109.7***	106.7***
time_sq	0.013	-0.005	0.017	0.013	-0.009	-0.001	-0.008	-0.009	0.017	-0.002	-0.001	-0.004	-0.009	0.010	0.009	0.010
time	0.109	0.423	-0.030	0.110	1.477	0.294	0.671	1.443	-0.030	1.421	1.503	0.536	1.365	1.687	1.450	1.618
total_mass_kg	0.040					0.042	0.072	-0.014				0.073	-0.009	0.018		0.025

IPAQ			0.00			0.0			0.00	0.00		0.00	0.00		0.00	0.00
			0			00			0	0		0	0		0	0
sexM			-		-			-		-		-	-		-	-
			2.23		3.94			2.06		3.65	3.85		4.01	3.58	4.16	
			1		2			1		0	8		1	0	7	
diet_kcal				0.00		0.00		0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
				5***		6***		5**	5***		5**	6***	5**	5**	5**	
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	5576.5	5554.9	5403.5	5571.4	5224.9	5406.5	5549.3	5202	5398.5	5072.2	5219.4	5400.8	5075.3	5196.3	5066.7	5069.5

ASPARTATE TRANSAMINASE

Figure 53. Distribution of ASPARTATE TRANSAMINASE in time - linear fit

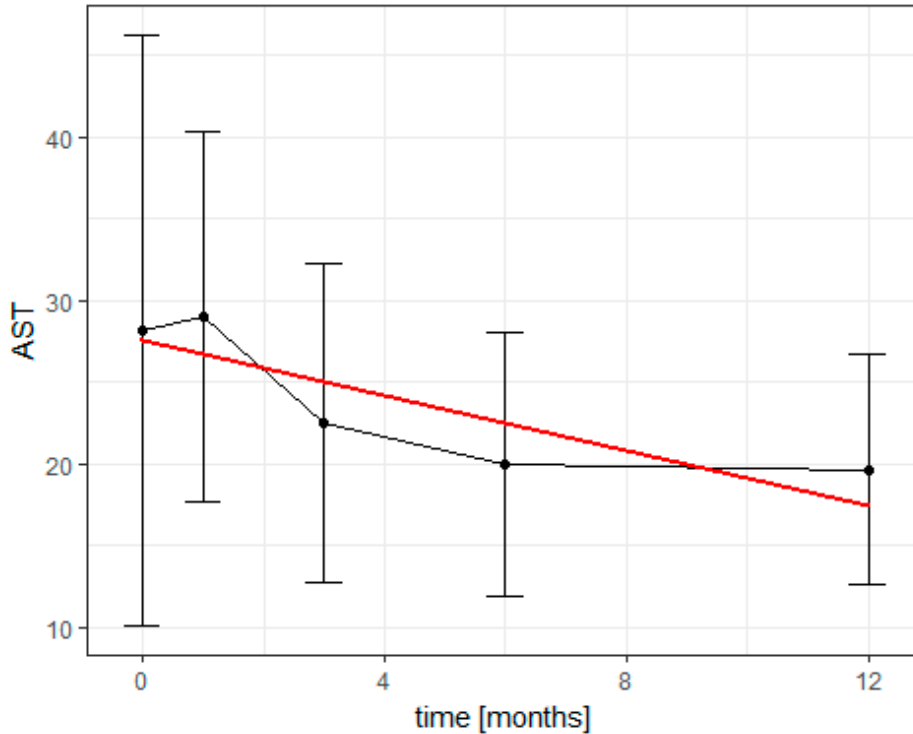


Table 53. Results of linear models for ASPARTATE TRANSAMINASE

variable	with covariate	month 1 del	month 2 del	month 3 del	month 4 del	month 5 del	month 6 del	month 7 del	month 8 del	month 9 del	month 10 del	month 11 del	month 12 del	month 13 del	month 14 del	month 15 del
(Intercept)	27.5*	12.2***	27.1***	25.3***	27.1***	12.6***	13.6***	11.9***	25.2***	27.3***	24.9***	13.9***	12.7***	13.6***	25.4***	14.4***
time	0.843***	0.470**	0.796*	0.844*	0.783*	0.463*	0.523*	0.404*	0.796*	0.735*	0.787*	0.513*	0.401*	0.471*	0.740*	0.466*
total_mass_kg		0.118*				0.114*	0.100*	0.133*				0.097*	0.123*	0.110*		0.100*
IPAQ			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM			4.843*			1.993		4.273*		5.258*		1.873		2.586	4.762*	2.523

diet_kcal					-				-				-				-
					0.0				0.0				0.0				0.0
					00				02*				00				00
									*				01*				02*
													*				01*
no. of observations	600	597	579	600	561	579	597	558	579	542	561	579	542	558	542	542	
AIC	4614.1	454.6	443.5	460.3	411.7	441.8	453.7	402.5	442.1	393.7	410.0	441.5	391.6	401.9	391.9	391.1	

Figure 54. Distribution of ASPARTATE TRANSAMINASE in time - quadratic fit

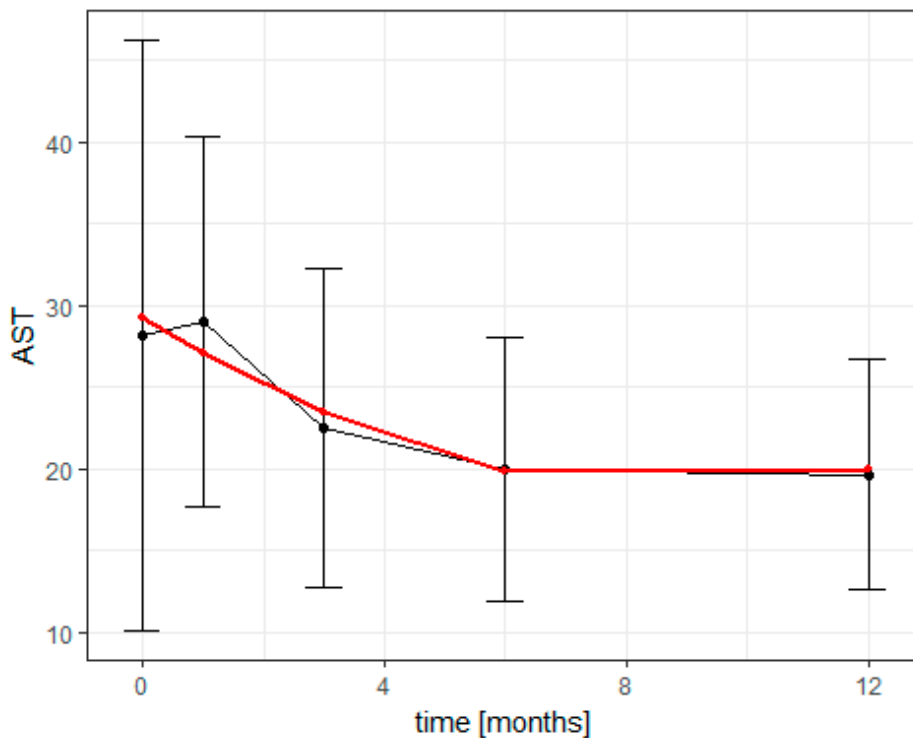


Table 54. Results of quadratic models for ASPARTATE TRANSAMINASE

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	29.3**	16.6***	28.7***	27.1***	30.3***	17**	19.1***	17.9***	26.9***	30.5***	28**	19.5***	18.3***	21**	28.5***	21.4***
time_sq	0.131***	0.083*	0.122*	0.131*	0.135*	0.085*	0.095*	0.105*	0.122*	0.132*	0.139*	0.197*	0.102*	0.121*	0.137*	0.117*
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.357***	1.505*	2.209*	2.359*	2.379*	1.526*	1.730*	1.724*	2.203*	2.296*	2.430*	1.740*	1.684*	2.011*	2.360*	1.961*

total_																
mass_	0.0					0.0	0.0	0.1				0.0	0.0	0.0		0.0
kg	93*					89*	64*	04*				60*	97*	67*		61*
	**					**		**				**	**			
IPAQ						0.0										
	-					0.0										
	0.0					00						0.0	0.0		0.0	0.0
	00											00	00		00	00
sexM																
						4.8		2.9		4.2		5.6	2.7		3.8	5.1
						55*		06		55*		47*	66		84*	52*
						**				*		**			*	**
diet_kc																
al						-										
						0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
						01*		03*		02*	01*		02*	03*	02*	02*
								**		*		**	**	**	**	**
no. of	600	597	579	600	561	579	597	558	579	542	561	579	542	558	542	542
observ																
ations																
AIC	4598.	453	442	458	409	441	453	401	440	391	407	440	390	400	389	389
	3	9.2	1.9	4.5	5.2	6	2.7	4.6	8.8	6.8	6.2	9.9	6.8	4.3	6.5	6.9

ALANINE TRANSAMINASE

Figure 55. Distribution of ALANINE TRANSAMINASE in time - linear fit

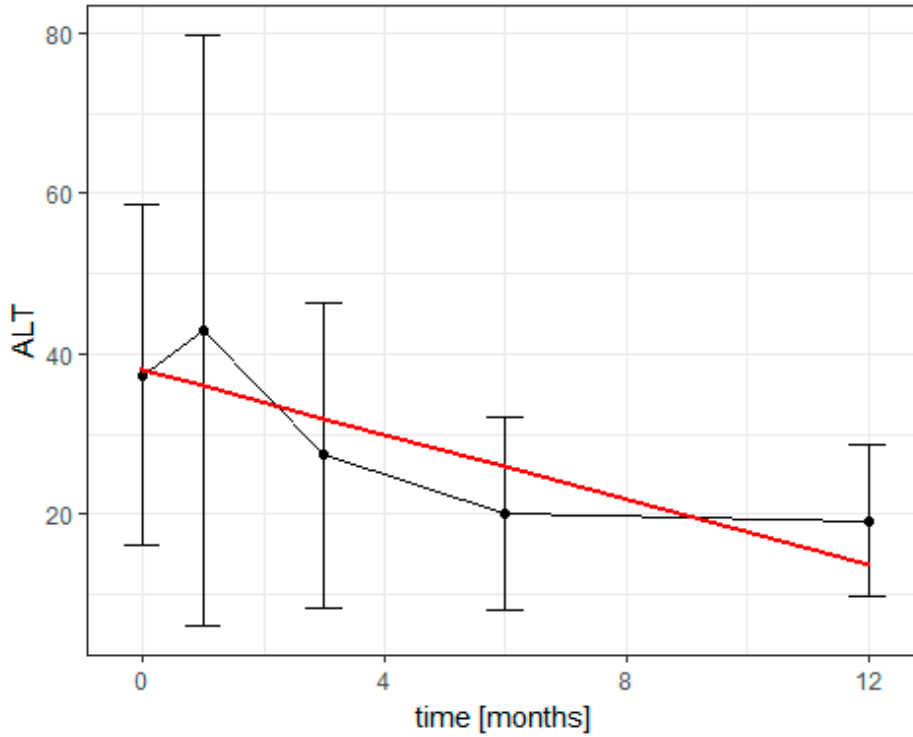


Table 55. Results of linear models for ALANINE TRANSAMINASE

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	38***	4.3	38.6***	32.4***	39**	4.1	9.5	4.9	33.3***	39.5***	34.1***	9.3	4.7	10.2	34.9***	9.8
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.014***	1.223*	1.937*	2.014***	2.035*	1.142*	1.425*	1.217*	1.936***	1.956*	2.048***	1.334*	1.155*	1.420*	1.976***	1.346*
total_mass_kg		0.265*				0.272*	0.198*	0.290*				0.206*	0.293*	0.221*		0.228*
IPAQ			-0.000			-0.000			-0.000	-0.000		-0.000	-0.000		-0.000	-0.000
sexM			12.322**			7.348*			12.095**		12.352**	6.983*		7.227*	11.972**	6.748*

diet_k																
cal					-			-		-		-		-		-
					0.0			0.0		0.0	0.00		0.0	0.0	0.00	0.0
					01			03*		01	1		03	03*	1	03
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
AIC	5451.9	540.6	527.8	542.5	513.1	525.4	538.0	507.9	525.7	497.3	510.5	524.0	494.5	506.7	494.6	493.5

Figure 56. Distribution of ALANINE TRANSAMINASE in time - quadratic fit

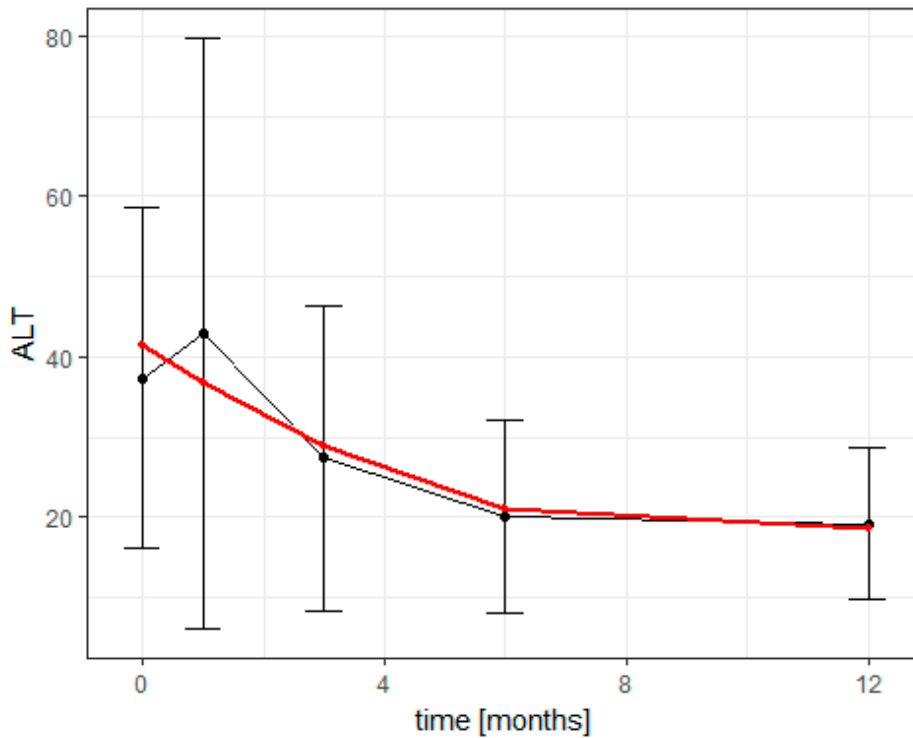


Table 56. Results of quadratic models for ALANINE TRANSAMINASE

variable	with covariate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	41.4**	11.5	41.8***	35.8***	46.3***	10.7	19.4**	15.1*	36.5***	46.7***	41.4***	18.5*	14*	23.6**	42.2***	22.2**
time_sq	0.247***	0.153*	0.237**	0.249***	0.309*	0.143*	0.191*	0.235*	0.28***	0.298*	0.328***	0.178*	0.221*	0.280*	0.318***	0.263*
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.865***	3.108*	4.683*	4.888***	5.677*	2.898*	3.816*	4.092*	4.689***	5.481*	5.922***	3.564*	3.861*	4.901*	5.741***	4.614**

total_																
mass_	0.2					0.2	0.1	0.2				0.1	0.2	0.1		0.1
kg	25*					35*	35*	51*				48*	59*	57*		70*
	**					**		**				*	**	*		*
IPAQ																
	-					-			-	-		-	-		-	-
	0.0					0.0			0.00	0.0		0.0	0.0		0.00	0.0
	00					00			0	00		00	00		0	00
sexM																
				12.3			8.9		12.0		13.2	8.4		9.4	12.8	8.7
				60**			35*		65**		48**	07*		68*	21**	74*
				*			*		*		*	*		*	*	*
diet_k																
cal					-			-		-	-		-	-	-	-
					0.0			0.0		0.0	0.00		0.0	0.0	0.00	0.0
					04*			05*		03*	4**		05*	05*	4**	05*
								**					*	**		*
no. of	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
observ																
ations																
AIC	5437	539	526	541	511	524	538	506	523	495	508	523	493	505	492	492
	.8	8.2	4.6	0.6	3.7	8.9	4	9.9	8.4	7.2	4.8	5.8	9	5	9.7	5.5

C REACTIVE PROTEIN

Figure 57. Distribution of C REACTIVE PROTEIN in time - linear fit

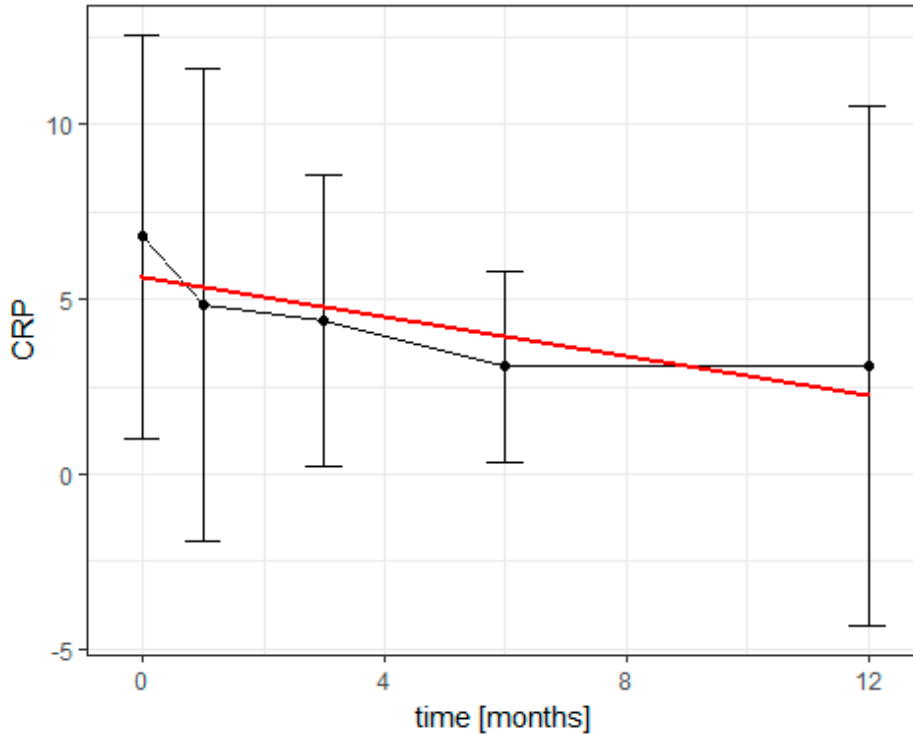


Table 57. Results of linear models for C REACTIVE PROTEIN

variable	with covariate	month 1	month 2	month 3	month 4	month 5	month 6	month 7	month 8	month 9	month 10	month 11	month 12	month 13	month 14	month 15
(Intercept)	5.6**	0.4	5.6**	5.6**	4.4**	0.1	-0.6	0.4	5.7**	4.7**	4.5**	-1	0.3	-0.6	4.8**	-0.8
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.281***	0.148*	0.270***	0.281***	0.250***	0.145*	0.111	0.141*	0.270***	0.240***	0.249***	0.103	0.138*	0.104	0.239***	0.097
total_mass_kg		0.041***				0.043***	0.053***	0.036*				0.057***	0.037*	0.049***		0.052***
IPAQ			0.000			0.000			0.000	-0.000		0.000	-0.000		-0.000	-0.000
sexM				0.038			-1.364*		-0.141		-0.204	-1.550*		-1.326	0.320	1.485*
diet_kcal					0.001***			0.001		0.001*	0.001***		0.001	0.000	0.001*	0.001

no. of observations	598	595	577	598	559	577	595	556	577	540	559	577	540	556	540	540
AIC	3703.5	3665.7	3587.8	3702.6	3477.5	3581.8	3660.6	3449.9	3586.8	3378.6	3476.5	3575.7	3377	3445	3377.4	3371.3

Figure 58. Distribution of C REACTIVE PROTEIN in time - quadratic fit

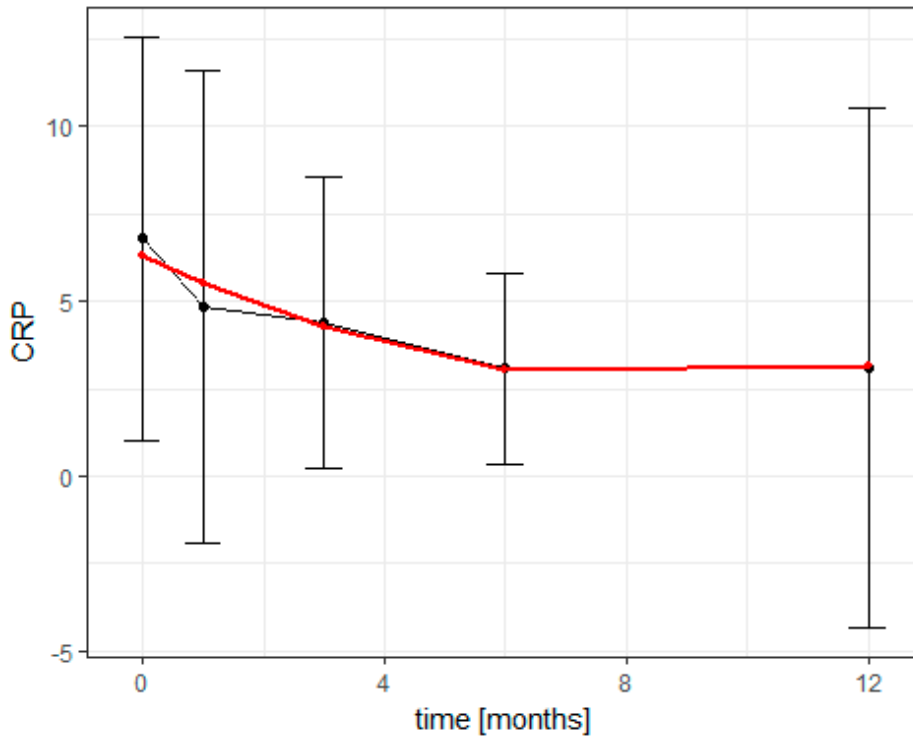


Table 58. Results of quadratic models for C REACTIVE PROTEIN

variable	with out covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	6.3***	1.9	6.2**	6.3*	5.1*	1.8	0.9	1.5	6.3*	5.5*	5.1*	0.6	1.4	0.4	5.6*	0.2
time_sq	0.047***	0.0	0.04	0.04	0.0	0.0	0.0	0.0	0.04	0.03	0.0	0.0	0.0	0.0	0.0	0.0
time	0.820***	0.5	0.81	0.82	0.5	0.5	0.4	0.4	0.81	0.66	0.5	0.4	0.4	0.3	0.6	0.3
total_mass_kg		0.0				0.0	0.0	0.0				0.0	0.0	0.0		0.0
IPAQ			0.00			0.0			0.00	-		0.0	-		-	-

sexM				0.04				-	-					-	-	-
				4				1.1	0.14		0.1	1.3		1.1	0.2	1.3
								24	8		30	01		70	31	19
diet_kc					0.0			0.0		0.00	0.0			0.0	0.0	0.0
al					01*			00		1	01*			00	00	00
no. of	598	595	577	598	559	577	595	556	577	540	559	577	540	556	540	540
observa																
tions																
AIC	3699.	366	358	369	348	358	366	345	358	338	347	357	338	345	337	337
	2	7.7	3.4	8.3	0.7	3.5	4	4	2.4	0.1	9.7	9	0.8	0.1	9	6.2

MEAN INSULIN CONCENTRATION (OGTT)

Figure 59. Distribution of MEAN INSULIN CONCENTRATION (OGTT) in time - linear fit

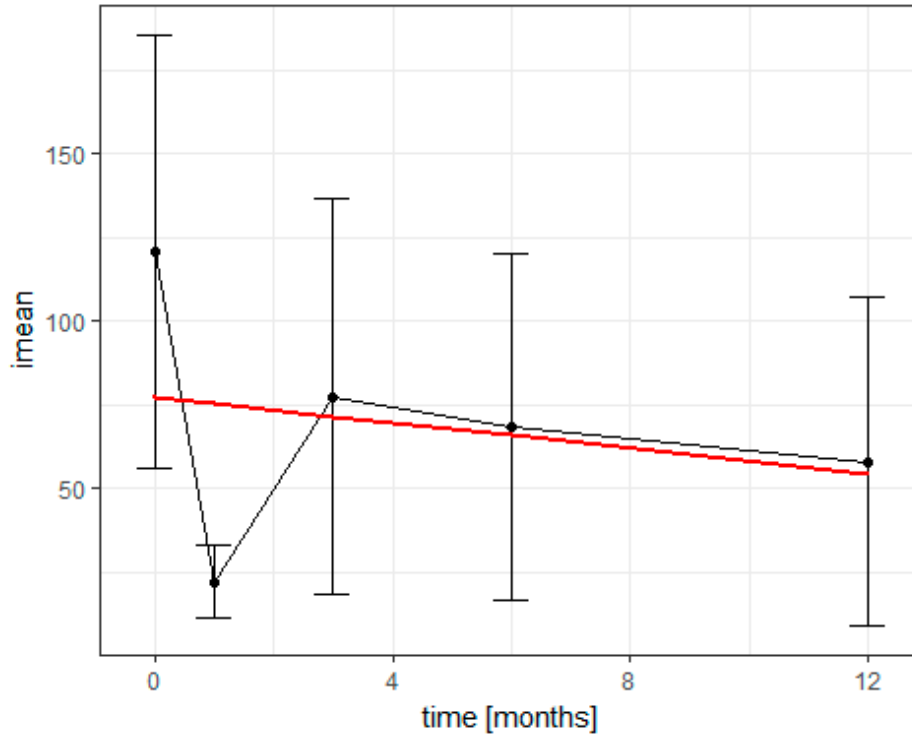


Table 59. Results of linear models for MEAN INSULIN CONCENTRATION (OGTT)

variable	with covariates	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15
(Intercept)	77.5**	-23.9	77**	67**	32.9***	-32.6	-20.4	-9	65.9***	31.2***	27.5***	-28.3	-11.2	-3.7	25.3***	-5
time	-1.951***	0.378	-2.224**	-1.966***	-0.954	0.278	0.240	-	-2.220	1.145*	0.977	0.123	0.163	0.311	1.169*	-0.405
total_mass_kg		0.800*				0.862**	0.755*	0.332*				0.809**	0.361*	0.259		0.277*
IPAQ			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				23.096**			4.773		25.528**		13.720	5.589		8.180	15.515	9.282

diet_k																	
cal					0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
					41*		42*		44*	40*		41*	42*	43*	41*		
					**		**		**	**		**	**	**	**	**	
no. of observations	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541	
AIC	6551.8	648.2	635.0	653.5	597.4	630.8	647.5	592.7	633.0	579.4	596.5	630.1	578.9	592.0	578.3	578.1	

Figure 60. Distribution of MEAN INSULIN CONCENTRATION (OGTT) in time - quadratic fit

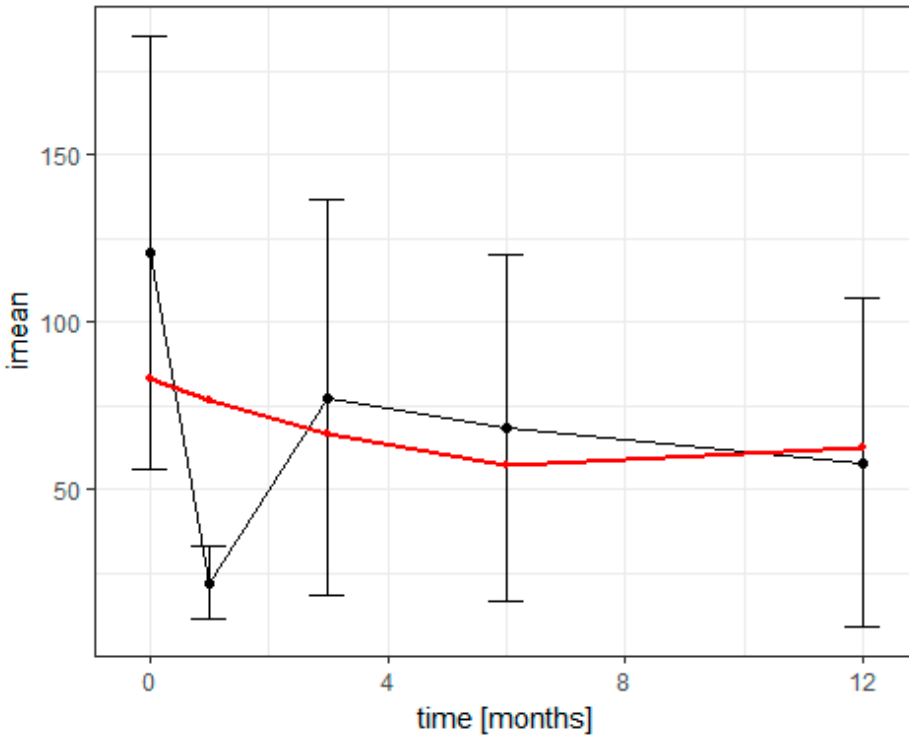


Table 60. Results of quadratic models for MEAN INSULIN CONCENTRATION (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	83.3**	-	82.6***	72.8***	21.3***	-	-	-	71.5***	18*	16.8**	-	-	-	13.1	-
time_sq	0.430**	0.112	0.419*	0.431**	-	0.073	0.139	-	0.416**	-	-	0.101	-	-	-	-
time	-	-	-	-	4.861*	-	-	8.367**	-	5.396*	4.625*	-	8.492**	8.214*	5.140*	8.254**

			68*													
			**													
total_	0.7					0.8	0.7	0.4				0.7	0.5	0.4		0.4
mass_	68*					39*	04*	72*				69*	02*	53*		72*
kg	**					**	**	**				**	**	*		*
IPAQ	0.0					0.0			0.00	0.0		0.0	0.0		0.0	0.0
	00					00			0	00		00	00		00	00
sexM			23.1				6.0		25.4		12.	6.5		1.9	14.	2.9
			43**				70		85**		415	73		14	051	87
			*						*		*				*	
diet_k					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
cal					45*			47*		49*	45*		46*	47*	48*	46*
					**			**		**	**		**	**	**	**
no. of	598	595	578	598	559	578	595	556	578	541	559	578	541	556	541	541
observ																
ations																
AIC	6545	648	634	652	596	630	647	590	632	578	595	630	577	590	577	576
	.9	3.4	4.9	7.6	5.6	9.8	6.9	8.7	5	2.9	6.3	3.2	0.2	2.9	2.6	4.2

MEAN GLUCOSE CONCENTRATION (OGTT)

Figure 61. Distribution of MEAN GLUCOSE CONCENTRATION (OGTT) in time - linear fit

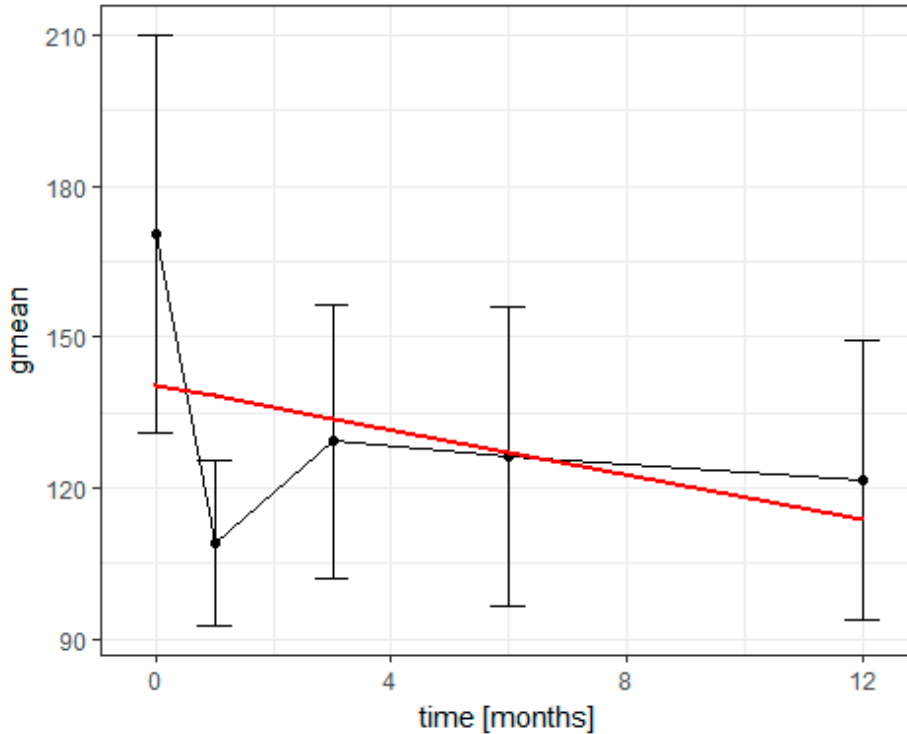


Table 61. Results of linear models for MEAN GLUCOSE CONCENTRATION (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	140.5***	86.6***	140.7**	138.5**	111.6**	82.9***	80**	96.3***	138.4**	110.5**	112.4**	76**	96**	93.4***	111.2**	92.9***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.246***	1.038*	2.361*	2.247*	1.625*	1.074*	0.798	1.349*	2.361*	1.721*	1.624*	0.838*	1.391*	1.222*	1.720*	1.263*
total_mass_kg		0.426*				0.453*	0.506*	0.115				0.535*	0.122	0.159		0.167
IPAQ			0.000			0.000			0.000	0.000		0.000	0.000		0.000	0.000
sexM				4.322			-7.964		5.078		-1.957	-8.121		-5.294	-1.630	-5.400

diet_kcal					0.0				0.0		0.0	0.0		0.0	0.0	0.0	0.0
					27*				28*		29*	27*		28*	28*	29*	28*
					**				**		**	**		**	**	**	**
no. of observations	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544	
AIC	5959.6	5905.8	5771	5953.8	5379.8	5745.2	5898.2	5338	5764.7	5206.8	5374.9	5737.5	5207.6	5331.8	5202	5201.4	

Figure 62. Distribution of MEAN GLUCOSE CONCENTRATION (OGTT) in time - quadratic fit

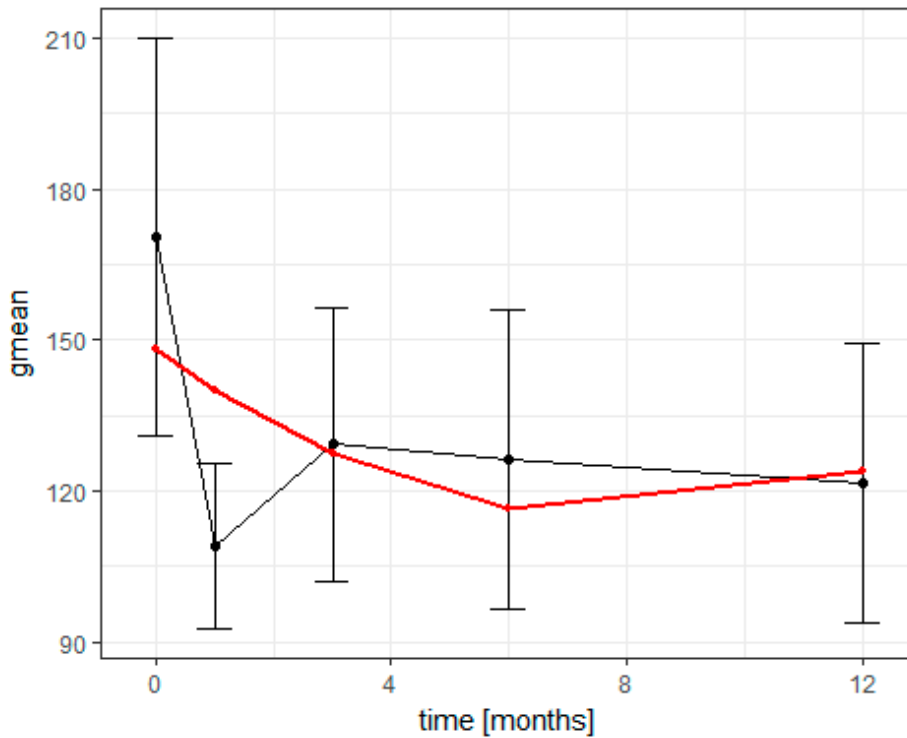


Table 62. Results of quadratic models for MEAN GLUCOSE CONCENTRATION (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	148**	111.5**	148***	146***	112.5**	108.4**	108.4**	94.9***	145.8**	111.3**	113.2**	104.9**	95.6***	90.3***	111.8**	90.9***
time_sq	0.547***	0.431**	0.551**	0.548**	0.040	0.428**	0.416**	-0.024	0.550**	0.030	0.037	0.413**	-0.008	-0.047	0.028	-0.031
time	-8.568***	-6.437**	-8.740**	-8.572**	-2.093*	-6.461**	-6.170**	-1.049	-8.737**	-2.070*	-2.066*	-6.186**	-1.290	-0.613	-2.048*	-0.865

total_																
mass_																
kg																
	0.2					0.2	0.3	0.1				0.3	0.1	0.1		0.1
	76*					98*	10*	22				35*	24	77		79
	**					**	**					**				
IPAQ																
		0.0				0.0			0.0	0.0		0.0	0.0		0.0	0.0
		00				00			00	00		00	00		00	00
sexM																
			4.3				-		5.0		-	-		-	-	-
			99				3.0		09		1.8	3.2		5.8	1.5	5.7
							64				54	31		42	53	48
diet_kc																
al						0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
						27*		29*	29*	27*		28*	29*	29*	29*	28*
						**		**	**	**		**	**	**	**	**
no. of	602	599	581	602	563	581	599	560	581	544	563	581	544	560	544	544
observ																
ations																
AIC	5924.	588	573	591	538	572	588	534	573	520	537	572	521	533	520	520
	9	7.4	6.9	9.1	2.7	7.6	2.1	1.1	0.7	9.8	7.9	2.2	0.7	4.6	5	4.3

MATSUDA INDEX

Figure 63. Distribution of MATSUDA INDEX in time - linear fit

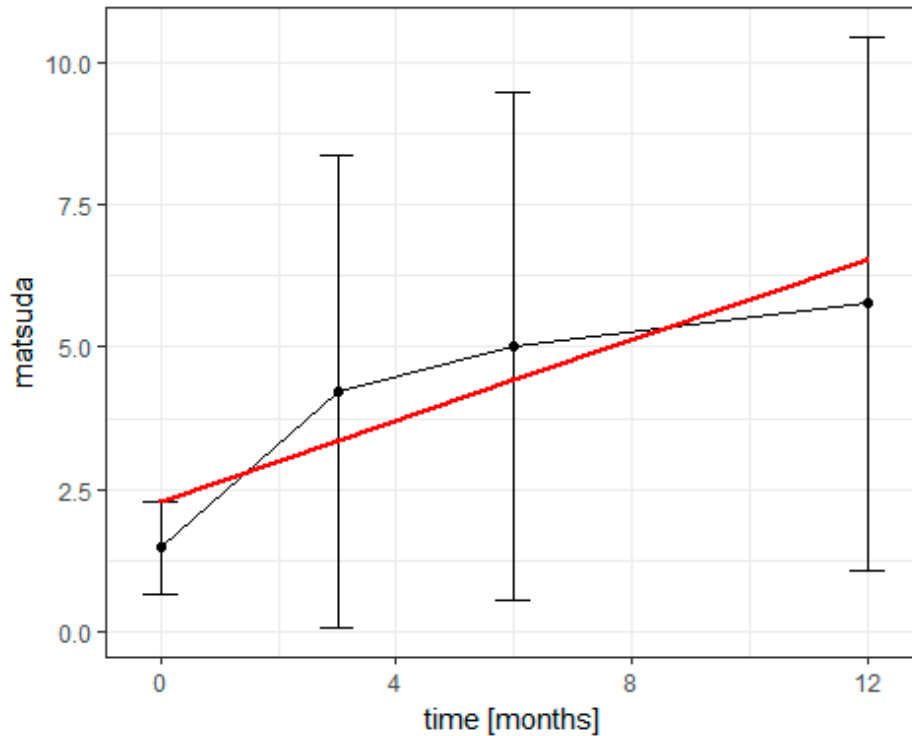


Table 63. Results of linear models for MATSUDA INDEX

variable	with out cova riate	mo del 1	mo del 2	mo del 3	mo del 4	mo del 5	mo del 6	mo del 7	mo del 8	mo del 9	mo del 10	mo del 11	mo del 12	mo del 13	mo del 14	mo del 15	
(Intercept)	2.3** *	9.7* **	2.1* **	3.3* **	4.1* **	9.7* **	9.2* **	9.7* **	3.1* **	4.1* **	4.7* **	9.1* **	9.6* **	9.1* **	4.7* **	9***	
time	0.352 ***	0.1 75* **	0.3 48* **	0.3 53* **	0.2 84* **	0.1 68* **	0.2 00* **	0.1 63* **	0.3 50* **	0.2 77* **	0.2 94* **	0.1 93* **	0.1 58* **	0.1 90* **	0.2 88* **	0.1 85* **	
total_ mass_ kg	-	0.0 58* **				-	0.0 59* **	0.0 51* **	0.0 48* **			-	0.0 51* **	0.0 49* **	0.0 40* **	-	0.0 40* **
IPAQ			0.0 00			0.0 00			0.0 00	0.0 00		0.0 00	0.0 00		0.0 00	0.0 00	
sexM				- 2.1 24* **			- 0.8 89		- 2.2 05* **			- 1.8 73* **	- 0.9 46		- 1.0 06* **	- 1.9 06* **	- 1.0 20*
diet_kc al					- 0.0			- 0.0		- 0.0	- 0.0		- 0.0	- 0.0	- 0.0	- 0.0	

					01*			01*		01*	01*		01*	01*	01*	01*
					**			**		**	**		*	**	**	*
no. of observations	462	460	450	462	427	450	460	425	450	417	427	450	417	425	417	417
AIC	2458.9	2408.5	2421.8	2438	2291.3	2381.6	2404.9	2258.1	2399.9	2261.8	2275.6	2377.6	2242.1	2253.6	2245.8	2237.6

Figure 64. Distribution of MATSUDA INDEX in time - quadratic fit

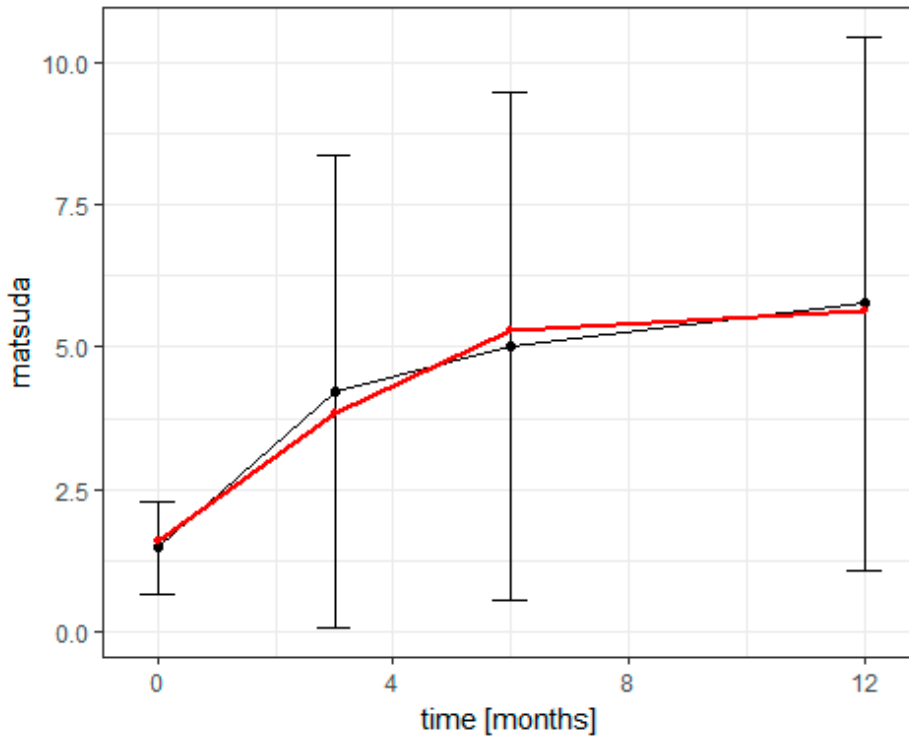


Table 64. Results of quadratic models for MATSUDA INDEX

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	1.6**	8***	1.4*	2.6*	2.9*	8***	6.9*	9.1*	2.4*	3***	3.4*	6.9*	8.9*	7.9*	3.5*	7.7
time_sq	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
time	0.047***	0.026**	0.046***	0.047***	0.030**	0.025**	0.031***	0.011	0.046***	0.026*	0.035**	0.030**	0.011	0.018	0.032**	0.019
total_mass_kg	-	0.048***	-	-	-	0.049***	0.035**	0.046***	-	-	-	0.036***	0.047***	0.035***	-	0.035*

IPAQ																	
sexM																	
diet_kcal																	
no. of observations	462	460	450	462	427	450	460	425	450	417	427	450	417	425	417	417	
AIC	2436.3	2408.2	2401.2	2415.3	2291.8	2382.1	2401.4	2264.3	2379.5	2263.9	2273.3	2375	2248.3	2258.3	2245.6	2242.3	

GLUCOSE AREA UNDER THE CURVE (OGTT)

Figure 65. Distribution of GLUCOSE AREA UNDER THE CURVE (OGTT) in time - linear fit

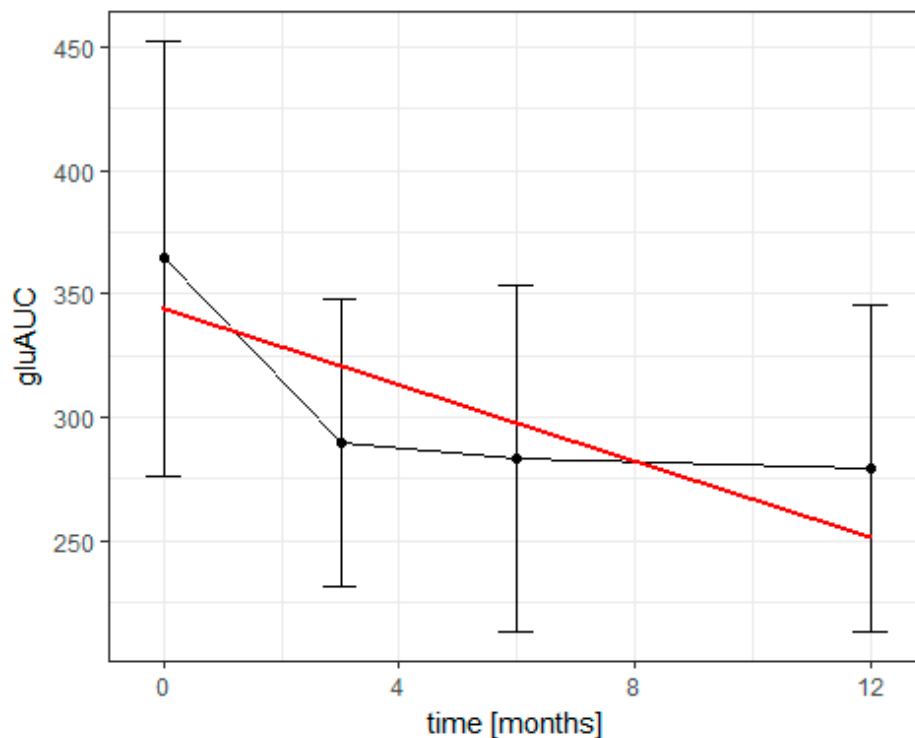


Table 65. Results of linear models for GLUCOSE AREA UNDER THE CURVE (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	343.8***	216.4**	348.3**	346.5**	295***	224.4**	201***	225.3**	351.2**	294.6**	300***	207.7**	233.5**	213.1**	299.9**	220.2**
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7.727***	4.659*	7.614*	7.693*	5.480*	4.622*	3.709***	3.961*	7.577*	5.326*	5.377*	3.660*	3.969*	3.223*	5.219*	3.201*
total_mass_kg		0.981**				0.945**	1.224***	0.561*				1.196**	0.521*	0.767**		0.739*
IPAQ			-	-	-	-	-	-	-	-	-	-	-	-	-	-
			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
sexM			-	-	-	-	-	-	-	-	-	-	-	-	-	-
			5.809	34.816**	6.170	12.346	28.383	12.909	29.021							

diet_kcal					0.0			0.0		0.0	0.0		0.0	0.0	0.0	0.0
					34*			32*		37*	34*		32*	31*	37*	31*
					**			**		**	**		**	**	**	**
no. of observations	382	380	375	382	351	375	380	349	375	345	351	375	345	349	345	345
AIC	4314.9	4274.5	4251.8	4308	3931.1	4235.7	4260.7	3900	4244.8	3874.7	3923.2	4221.9	3870.9	3888.3	3866.8	3858.9

Figure 66. Distribution of GLUCOSE AREA UNDER THE CURVE (OGTT) in time - quadratic fit

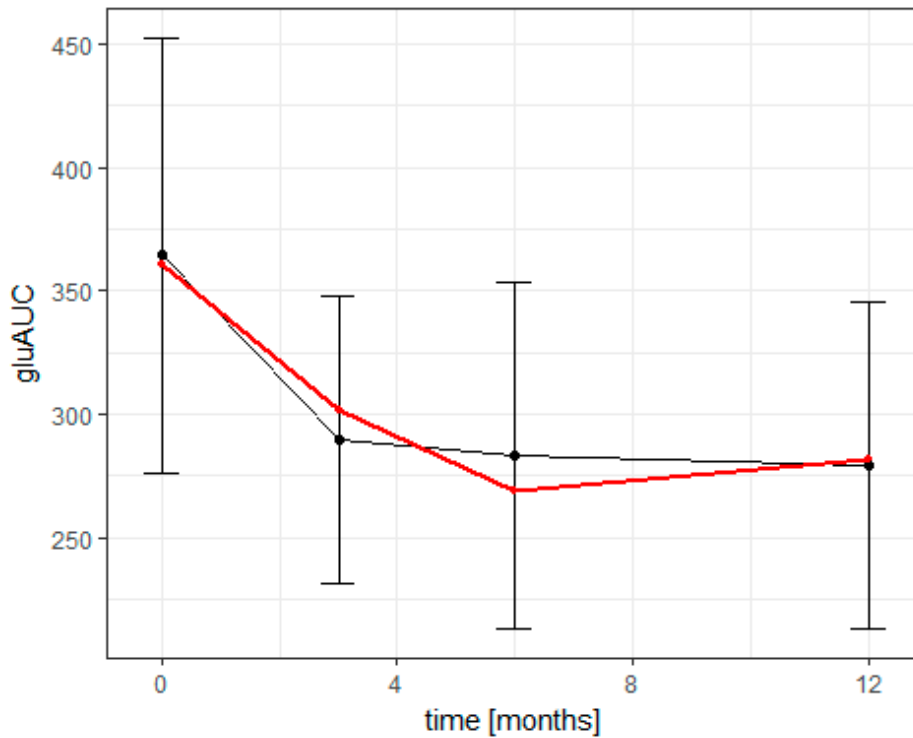


Table 66. Results of quadratic models for GLUCOSE AREA UNDER THE CURVE (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	360.9***	328.6***	365.3***	362.2***	340.5***	338.5***	320.6***	306.5***	366.9***	343.1***	341.8***	330.2***	319.5***	297.2***	344.7***	309.6***
time_sq	1.452***	1.342***	1.457***	1.451***	1.246***	1.374***	1.297***	1.113***	1.456***	1.242***	1.236***	1.329***	1.185***	1.055***	1.230***	1.124***
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24.044**	22.099**	24.033**	24.020**	20.925**	22.469*	21.237*	18.678*	24.004*	20.747*	20.775*	21.597*	19.568*	17.590*	20.558*	18.453*
	*	*	*	*	*	**	**	**	**	**	**	**	**	**	**	**

total_	0.24					0.19	0.33	0.22				0.29	0.18	0.33		0.29
mass_	0					7	6	9				5	4	3		2
kg																
IPAQ		-				-			-	-		-	-		-	-
		0.00				0.00			0.00	0.00		0.00	0.00		0.00	0.00
		0				0			0	0		0	0		0	0
sexM				-			-		-		-	-		-	-	-
				2.82			10.8		3.60		4.14	10.8		11.9	5.30	12.2
				8			05		7		3	86		85	1	75
diet_k					0.01			0.01		0.01	0.01		0.01	0.01	0.01	0.01
cal					4*			6**		6*	4*		5*	6**	6*	5*
no. of	382	380	375	382	351	375	380	349	375	345	351	375	345	349	345	345
obser																
vation																
s																
AIC	4247	422	418	424	389	418	421	387	418	384	389	417	384	386	383	383
	.5	7	6.7	0.8	8.8	7.2	9.3	6.6	0	4.7	2	9.5	5.2	8.8	7.7	7.4

INSULIN AREA UNDER THE CURVE (OGTT)

Figure 67. Distribution of INSULIN AREA UNDER THE CURVE (OGTT) in time - linear fit

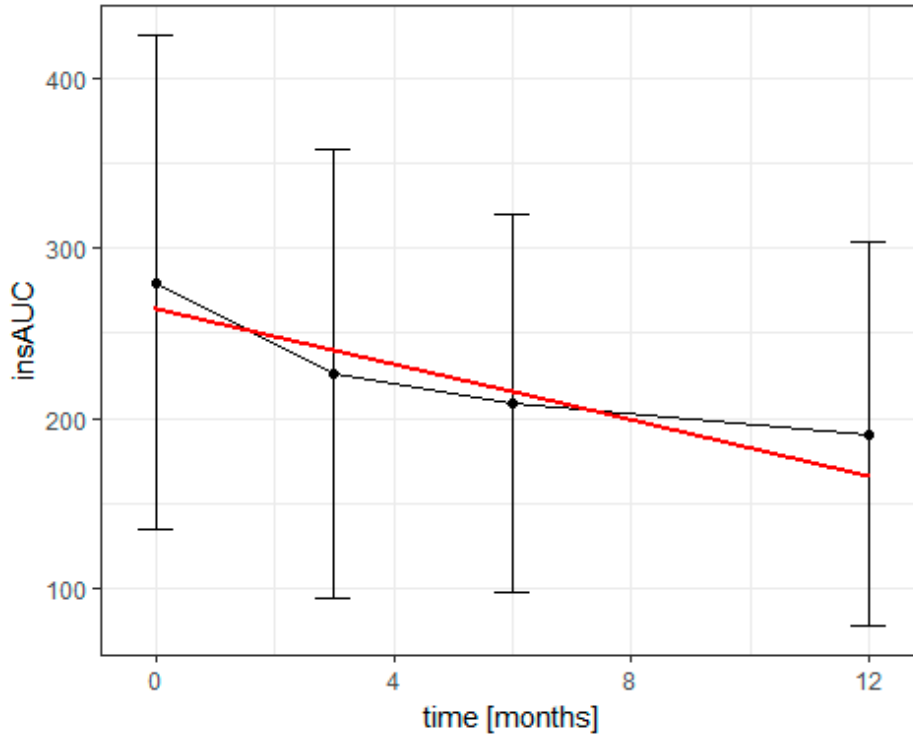


Table 67. Results of linear models for INSULIN AREA UNDER THE CURVE (OGTT)

variable	with covariate	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	265**	75.9	275.2***	249.5***	220.5***	87*	75.3	86.9*	259.1***	224.8***	208.6***	86.7*	100.3*	89.8*	212.5***	103.3*
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8.217***	3.637*	7.939***	8.373***	6.217***	3.376*	3.614*	3.367*	8.105***	5.640***	6.439***	3.380*	2.945	3.563*	5.868***	3.143
total_mass_kg		1.457***				1.438***	1.463***	1.11*				1.438***	1.080*	1.056*		1.025*
IPAQ			-	-	-	-	-	-	-	-	-	-	-	-	-	-
			0.001			0.001			0.001	0.001		0.001	0.001		0.001	0.001
sexM				33.409			-	0.557	34.626		29.466	0.456		8.008	30.008	7.953
diet_kcal					0.030***			0.024*		0.036***	0.029***		0.025*	0.025*	0.035***	0.025*

no. of observations	379	377	372	379	348	372	377	346	372	342	348	372	342	346	342	342
AIC	4632.2	4589	4562.1	4621.4	4246.2	4542.6	4581	4210.2	4551.1	4183.6	4236.2	4534.7	4174.6	4202.1	4173.4	4166.5

Figure 68. Distribution of INSULIN AREA UNDER THE CURVE (OGTT) in time - quadratic fit

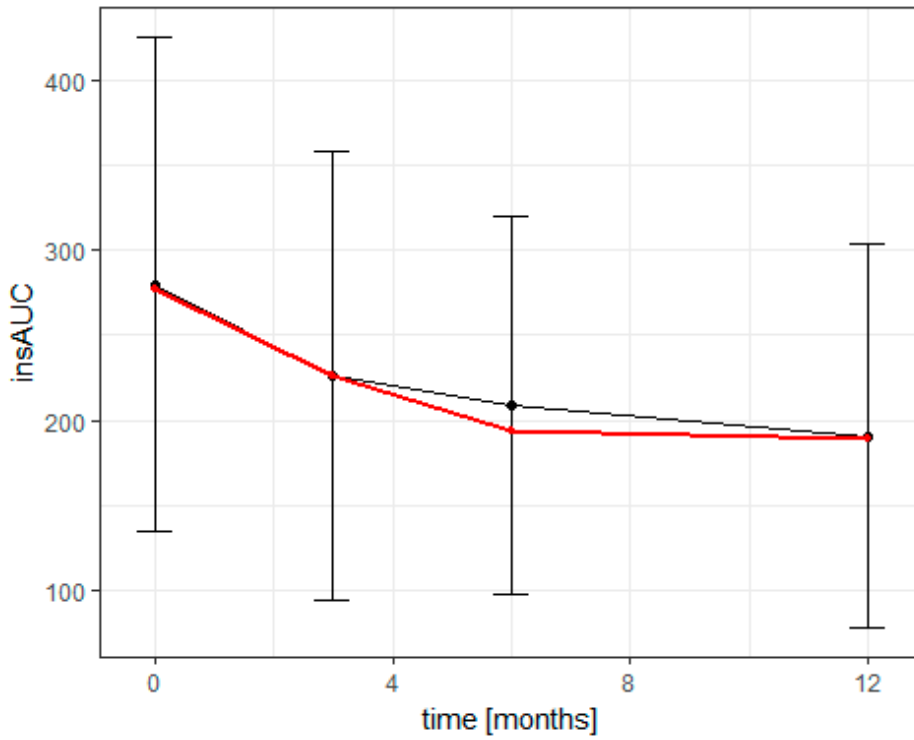


Table 68. Results of quadratic models for INSULIN AREA UNDER THE CURVE (OGTT)

variable	with covariates	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8	model 9	model 10	model 11	model 12	model 13	model 14	model 15
(Intercept)	277.7***	125.2*	288**	261.3***	247.6***	138.4**	132.3*	107.4*	271.2***	248.9***	236.4***	146.6**	122.*	11.6.9*	237.9***	13.1*
time_sq	1.086***	0.605	1.104***	1.099***	0.728*	0.636*	0.647*	0.292	1.115***	0.611	0.808*	0.683*	0.312	0.355	0.688	0.375
time	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20.444***	11.471*	20.405**	20.737**	15.296*	11.612*	12.284*	7.214	20.690**	13.278*	16.541**	12.521*	7.045	8.375	14.486*	8.200
total_mass_kg		1.133**				1.102**	1.044**	1.031*				1.000*	0.998*	0.923*		0.889*

IPAQ																
sexM																
diet_kcal																
no. of observations	379	377	372	379	348	372	377	346	372	342	348	372	342	34	342	34
														6		2
AIC	4618.3	4585.8	4548.4	4607.1	4242.5	4539.2	4577.6	4209.7	4537	4181.2	4231.6	4530.9	4174	4201.3	4170.3	4165.6

