

BMI-SDS (body mass index standard deviation score)

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	9.6	0.008	0 vs. 5.5 vs. 12 months
Treatment group	2.0	0.160	
Time * group	6.6	0.036	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	0.335	p = 0.010
Group difference in mean change from 0 to 12 months	0.362	p = 0.096

Note: this effect is estimated on the original scale of measurement.

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate (PM)	0 to 5.5 mo	-0.336
Control	0 to 5.5 mo	-0.842
PathMate	0 to 12 mo	-0.264
Control	0 to 12 mo	-0.539

These effects are estimated relative to their standard deviation i.e. scale-independent.

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	0.506
PM vs. control	0 to 12 mo (D2)	0.275

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	0.170
PM vs. control	5.5 months (T1)	0.630
PM vs. control	12 months (T2)	0.512

Pooled standard deviation estimated from one-way analysis of variance.

Sidejump

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	131.4	<0.001	0 vs. 5.5 vs. 12 months
Treatment group	0.0	0.850	
Time * group	0.4	0.810	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	1.47	0.519
Group difference in mean change from 0 to 12 months	0.99	0.744

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	1.92

Control	0 to 5.5 mo	1.73
PathMate	0 to 12 mo	2.29
Control	0 to 12 mo	1.64

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	0.19
PM vs. control	0 to 12 mo (D2)	0.65

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	0.170
PM vs. control	5.5 months (T1)	0.630
PM vs. control	12 months (T2)	0.512

Tap test (time)

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	69.9	<0.001	0 vs. 5.5 vs. 12 months
Treatment group	0.1	0.813	
Time * group	7.3	0.026	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	-0.52	0.178
Group difference in mean change from 0 to 12 months	-1.13	0.007

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	-1.413
Control	0 to 5.5 mo	-1.023
PathMate	0 to 12 mo	-1.742
Control	0 to 12 mo	-1.493

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	-0.39
PM vs. control	0 to 12 mo (D2)	-0.249

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	0.283
PM vs. control	5.5 months (T1)	0.117
PM vs. control	12 months (T2)	-0.104

Run

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	10.9	0.004	0 vs. 5.5 vs. 12 months
Treatment group	3.6	0.059	
Time * group	2.2	0.339	

Estimation of effects based on this model	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	-0.047	0.168
Group difference in mean change from 0 to 12 months	-0.055	0.198

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	0.385
Control	0 to 5.5 mo	0.723
PathMate	0 to 12 mo	0.448
Control	0 to 12 mo	0.65

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	-0.338
PM vs. control	0 to 12 mo (D2)	-0.202

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	-0.362
PM vs. control	5.5 months (T1)	-0.767
PM vs. control	12 months (T2)	-0.656

One leg balance (failures, square-root transformed)

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	4.8	0.090	0 vs. 5.5 vs. 12 months
Treatment group	3.1	0.078	
Time * group	5	0.080	

Estimation of effects based on this model	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	0.022	0.948
Group difference in mean change from 0 to 12 months	-0.414	0.693

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	-0.304
Control	0 to 5.5 mo	-0.304
PathMate	0 to 12 mo	-0.5
Control	0 to 12 mo	

Note: Given the data distribution (many zeroes), this analysis is not meaningful.

Calculation not possible because the standard deviation is 0.

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	0
PM vs. control	0 to 12 mo (D2)	

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	0.575
PM vs. control	5.5 months (T1)	0.629
PM vs. control	12 months (T2)	0.204

Jump distance

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	15.4	0.005	0 vs. 5.5 vs. 12 months
Treatment group	1.9	0.167	
Time * group	2.4	0.301	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	-2.826	0.563
Group difference in mean change from 0 to 12 months	-9.391	0.194

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	0.656
Control	0 to 5.5 mo	0.691
PathMate	0 to 12 mo	0.622
Control	0 to 12 mo	0.84

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	-0.035
PM vs. control	0 to 12 mo (D2)	-0.218

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	-0.385
PM vs. control	5.5 months (T1)	-0.503
PM vs. control	12 months (T2)	-0.727

Situps

Test of effects based on a generalized estimating equations (GEE) model

Effect	X ²	p-value	
Time	28.2	<0.001	0 vs. 5.5 vs. 12 months
Treatment group	0.5	0.480	
Time * group	3.5	0.170	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	-1.475	0.267
Group difference in mean change from 0 to 12 months	-0.344	0.836

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	0.522
Control	0 to 5.5 mo	0.983
PathMate	0 to 12 mo	0.978
Control	0 to 12 mo	0.963

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	-0.461
PM vs. control	0 to 12 mo (D2)	0.015

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	-0.131
PM vs. control	5.5 months (T1)	-0.489
PM vs. control	12 months (T2)	-0.504

Pushup**Test of effects based on a generalized estimating equations (GEE) model**

Effect	X ²	p-value	
Time	46.6	<0.001	0 vs. 5.5 vs. 12 months
Treatment group	1.7	0.190	
Time * group	0.2	0.920	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	0.165	0.852
Group difference in mean change from 0 to 12 months	-0.089	0.932

Estimation of intragroup and inter-group effect sizes using Cohen's d**Intragroup effect sizes**

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	0.867
Control	0 to 5.5 mo	1.196
PathMate	0 to 12 mo	1.069
Control	0 to 12 mo	1.969

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	-0.329
PM vs. control	0 to 12 mo (D2)	-0.9

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	-0.444
PM vs. control	5.5 months (T1)	-0.370
PM vs. control	12 months (T2)	-0.522

Reach flexibility**Test of effects based on a generalized estimating equations (GEE) model**

Effect	X ²	p-value	
Time	27.2	<0.001	0 vs. 5.5 vs. 12 months
Treatment group	0.2	0.630	
Time * group	8.7	0.010	

Estimation of effects based on this model

	Coefficient	Wald test
Group difference in mean change from 0 to 5.5 months	2.9	0.006
Group difference in mean change from 0 to 12 months	1.25	0.437

Estimation of intragroup and inter-group effect sizes using Cohen's d

Intragroup effect sizes

Group	Change	Cohen's d
PathMate	0 to 5.5 mo	1.261
Control	0 to 5.5 mo	0.608
PathMate	0 to 12 mo	0.542
Control	0 to 12 mo	0.295

Intergroup effect sizes calculated as the difference between intragroup effect sizes

PM vs. control	0 to 5.5 mo (D1)	0.653
PM vs. control	0 to 12 mo (D2)	0.247

Intergroup effect sizes calculated as Cohen's d for each time point

PM vs. control	0 months (T0)	-0.340
PM vs. control	5.5 months (T1)	0.130
PM vs. control	12 months (T2)	-0.008