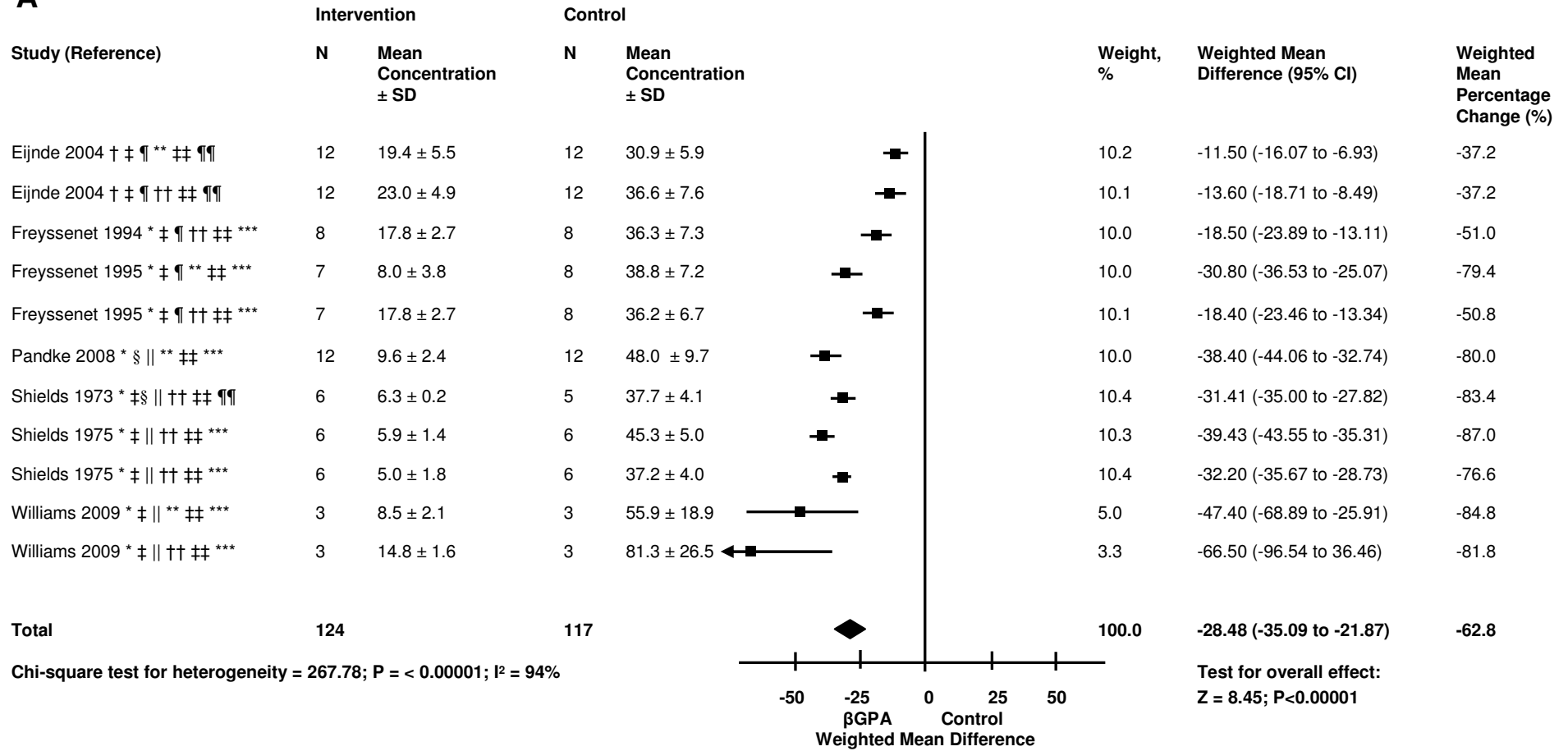
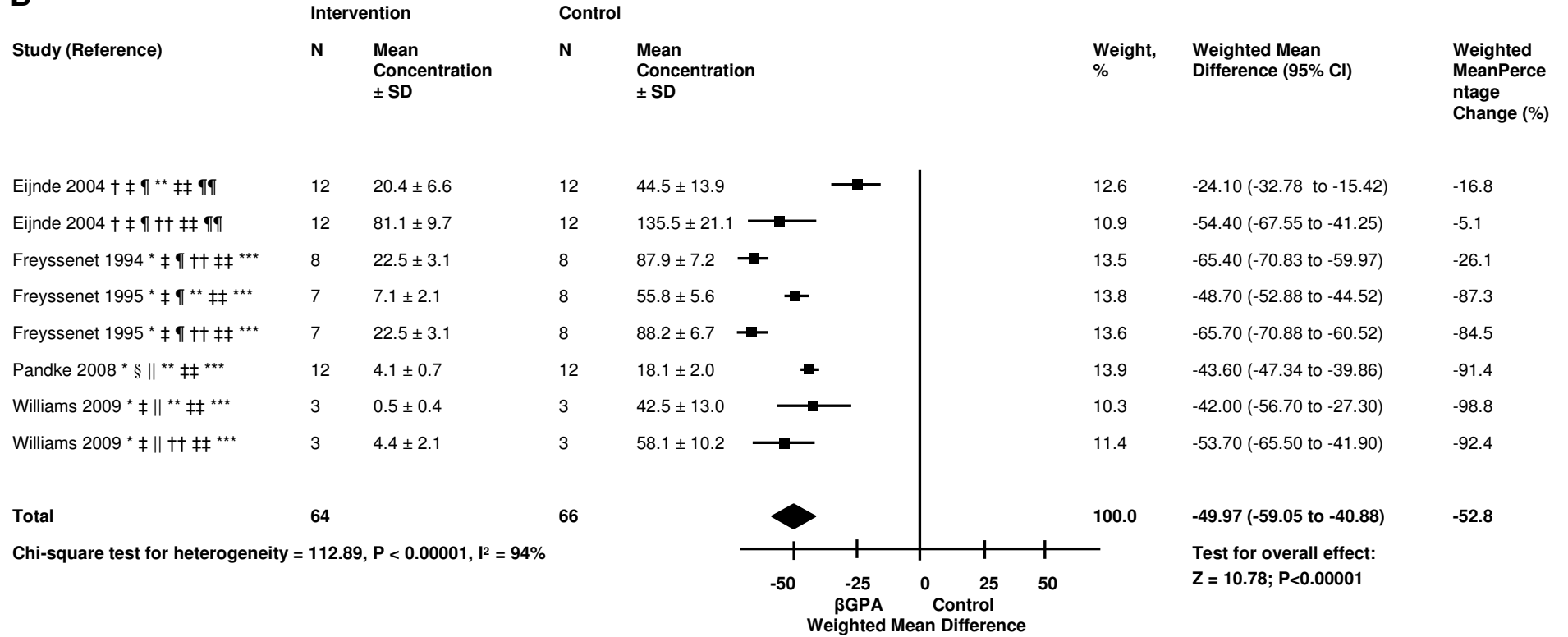


A

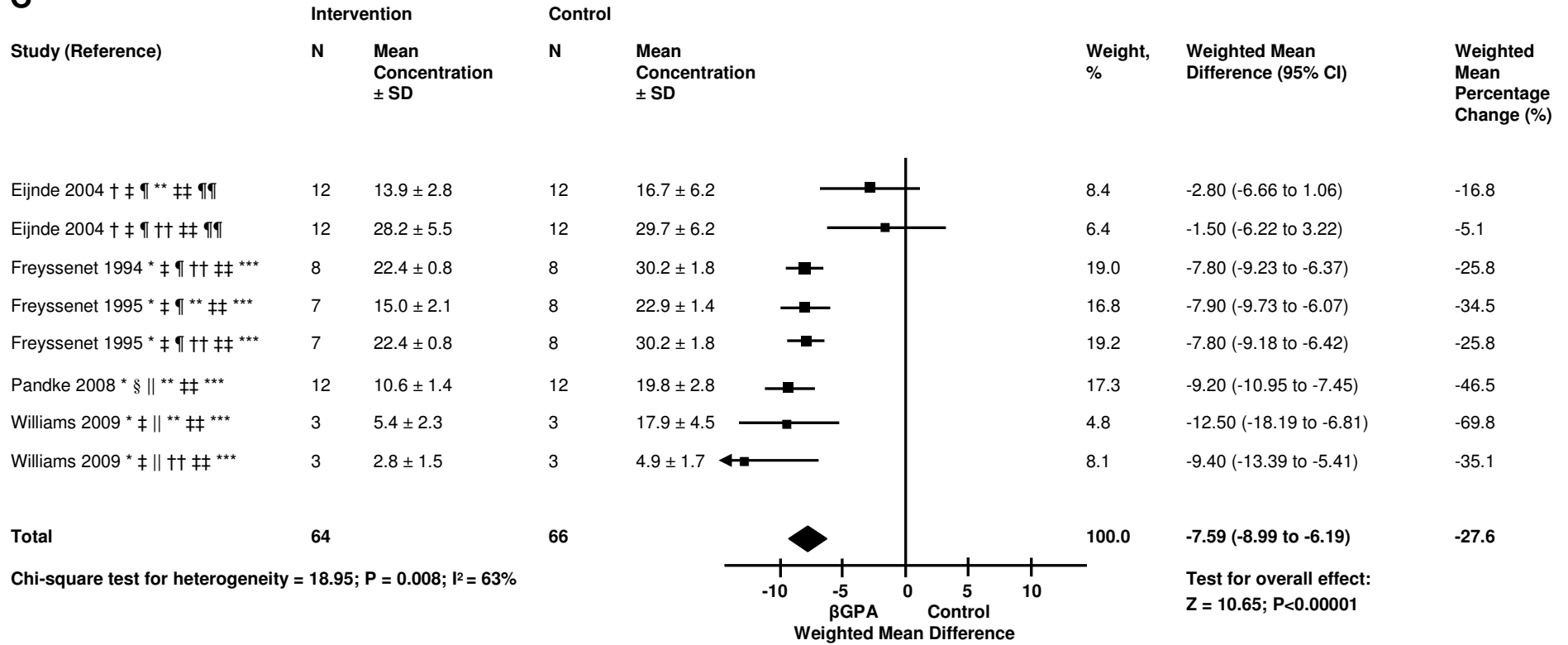


Chi-square test for heterogeneity = 267.78; P = < 0.00001; I² = 94%

B

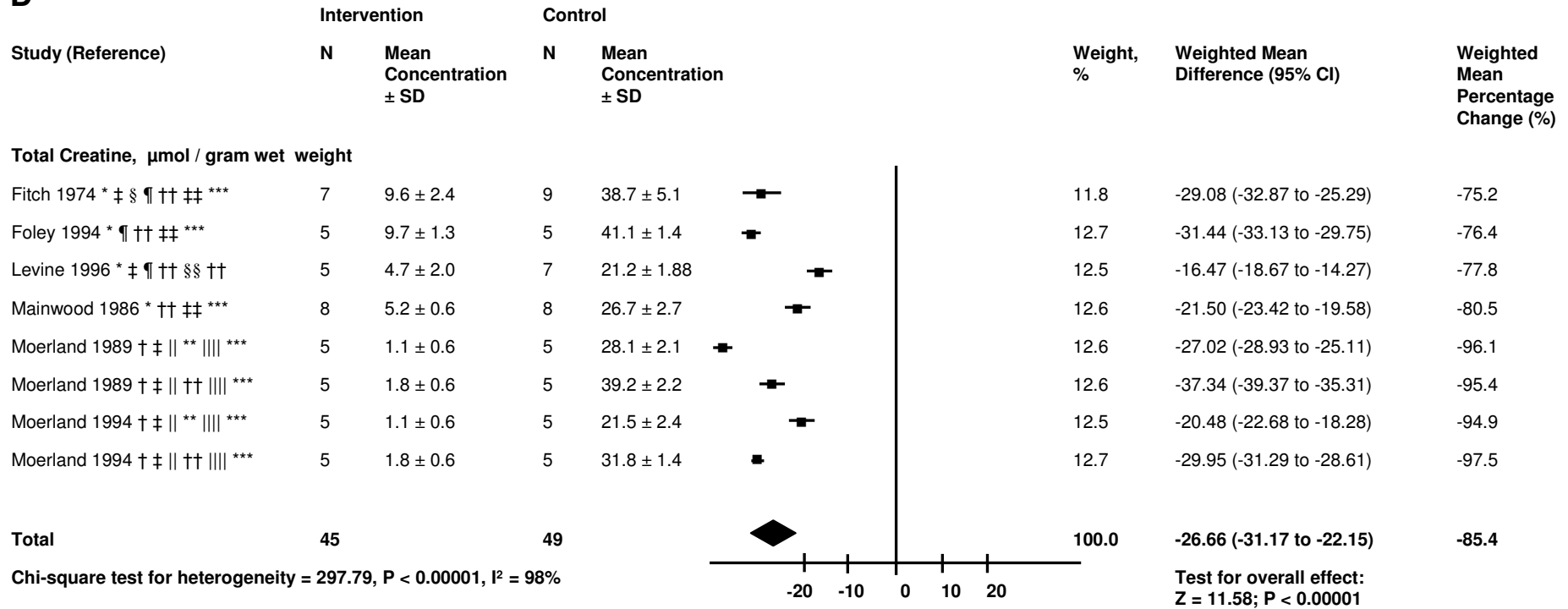


C

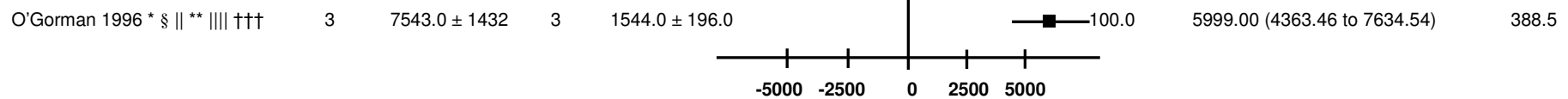


Chi-square test for heterogeneity = 18.95; P = 0.008; I² = 63%

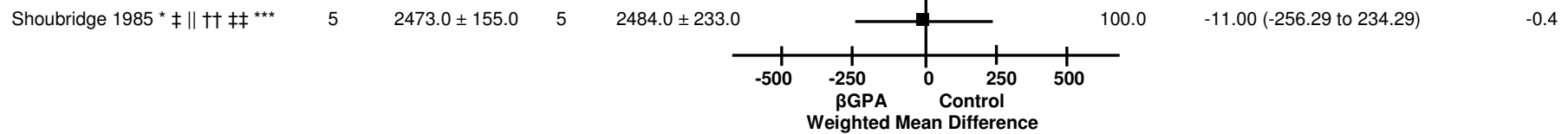
D



Mitochondrial creatine kinase (densitometric analysis of immuno-stained Western blots)

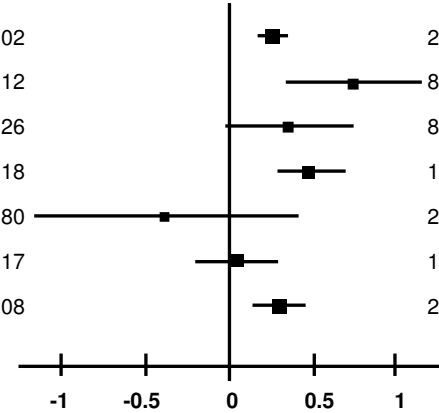


Mitochondrial creatine kinase activity (nmol/min per mg protein)



E

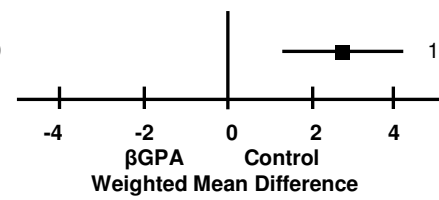
Study (Reference)	Intervention		Control		Weight, %	Weighted Mean Difference (95% CI)	Weighted Mean Percentage Change (%)
	N	Mean Concentration ± SD	N	Mean Concentration ± SD			
µmol / min x gram wet weight							
De Tata 1993 * ‡ ** ‡‡ †††	6	1.12 ± 0.10	4	0.87 ± 0.02	26.3	0.25 (0.17 to 0.33)	28.7
De Tata 1993 * ‡ †† ‡‡ †††	5	1.79 ± 0.43	4	1.07 ± 0.12	8.1	0.72 (0.33 to 1.11)	67.3
Freyssenet 1995 * ‡ ¶ ** ‡‡ ***	7	1.95 ± 0.44	8	1.61 ± 0.26	8.8	0.34 (-0.03 to 0.71)	21.1
Freyssenet 1995 * ‡ ¶ †† ‡‡ ***	7	1.69 ± 0.20	8	1.23 ± 0.18	18.0	0.46 (0.27 to 0.65)	37.4
O'Gorman 1996 * § ** †††	5	0.63 ± 0.40	5	1.00 ± 0.80	2.6	-0.37 (-1.15 to 0.41)	-21.2
Shoubridge 1985 * ‡ ** ‡‡ ***	5	1.38 ± 0.22	5	1.34 ± 0.17	14.7	0.04 (-0.20 to 0.28)	3.0
Shoubridge 1985 * ‡ †† ‡‡ ***	5	1.35 ± 0.15	5	1.05 ± 0.08	21.4	0.30 (0.15 to 0.45)	28.6
Total	40		39				



Chi-square test for heterogeneity = 15.13, P = 0.02, I² = 60%

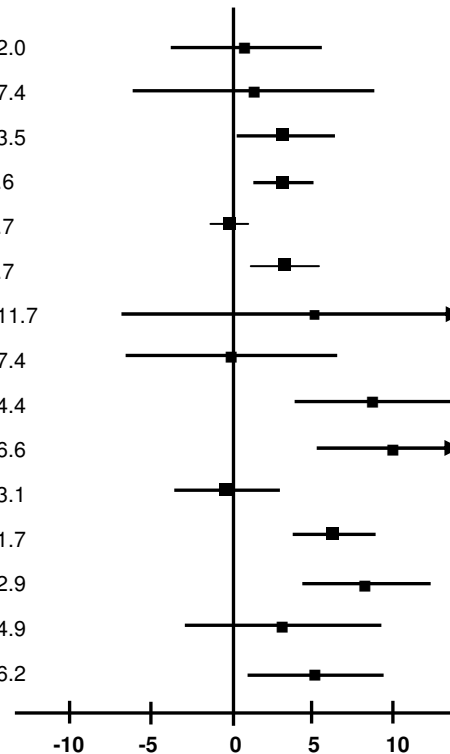
µmol / min x gram protein

Ren 1993 * ‡ †† ‡‡ ***	8	8.1 ± 1.8	8	5.3 ± 0.9	100.0	2.72 (1.33 to 4.11)	52.8
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F

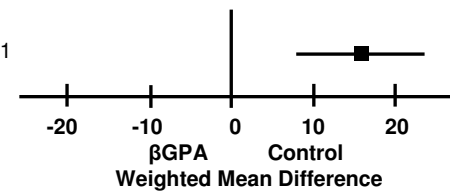
Study (Reference)	Intervention		Control		Weight, %	Weighted Mean Difference (95% CI)	Weighted Mean Percentage Change (%)
	N	Mean Concentration ± SD	N	Mean Concentration ± SD			
µmol / min x gram wet weight							
De Tata 1993 * ‡ †† ‡‡ †††	6	14.5 ± 5.2	6	13.8 ± 2.0	6.1	0.70 (-3.90 to 5.30)	5.1
Ecochard 2004 * ‡ ** ‡‡ ¶¶	15	32.2 ± 13.2	15	31.0 ± 7.4	3.5	1.20 (-6.43 to 8.83)	3.9
Ecochard 2004 * ‡ †† ‡‡ ¶¶	15	23.0 ± 4.7	15	19.9 ± 3.5	8.2	3.10 (0.16 to 6.04)	15.6
Freysenet 1994 * ‡ ¶ †† ‡‡ ***	8	12.2 ± 2.1	8	9.3 ± 1.6	9.6	2.90 (1.07 to 4.73)	31.2
Freysenet 1995 * ‡ ¶ ** ‡‡ ***	7	9.6 ± 1.3	8	9.8 ± 0.7	10.3	-0.20 (-1.28 to 0.88)	-2.0
Freysenet 1994 * ‡ ¶ †† ‡‡ ***	7	12.2 ± 0.1	8	9.0 ± 1.7	9.4	3.20 (1.25 to 5.15)	35.6
Lara 1998 * ‡ †† §§ ¶¶	10	40.7 ± 14.1	10	35.8 ± 11.7	1.8	4.90 (-6.82 to 16.62)	13.7
Moerland 1994 † ‡ ** ***	6	25.8 ± 3.4	6	25.9 ± 7.4	4.3	-0.06 (-6.55 to 6.43)	-0.2
Moerland 1994 † ‡ †† ***	6	23.3 ± 4.4	6	14.8 ± 4.4	5.7	8.46 (3.49 to 13.43)	57.1
Pandke 2008 * § ** ‡‡ ***	12	58.2 ± 5.2	12	48.2 ± 6.6	6.0	10.00 (5.25 to 14.75)	20.7
Shoubridge 1985 * ‡ ** ‡‡ ***	5	19.1 ± 1.7	5	19.6 ± 3.1	8.0	-0.50 (-3.60 to 2.60)	-1.0
Shoubridge 1985 * ‡ †† ‡‡ ***	5	21.2 ± 2.2	5	15.0 ± 1.7	8.8	6.20 (3.76 to 8.64)	41.3
Shoubridge 1985 * ‡ †† ‡‡ ***	5	28.1 ± 3.4	5	20.0 ± 2.9	6.9	8.10 (4.18 to 12.02)	40.5
Williams 2009 * ‡ ** ‡‡ ***	12	59.4 ± 9.4	12	56.4 ± 4.9	4.8	3.00 (-2.96 to 8.96)	25.1
Williams 2009 * ‡ †† ‡‡ ***	12	24.9 ± 4.2	12	19.9 ± 6.2	6.5	5.00 (0.76 to 9.24)	5.3
Total	130		131				



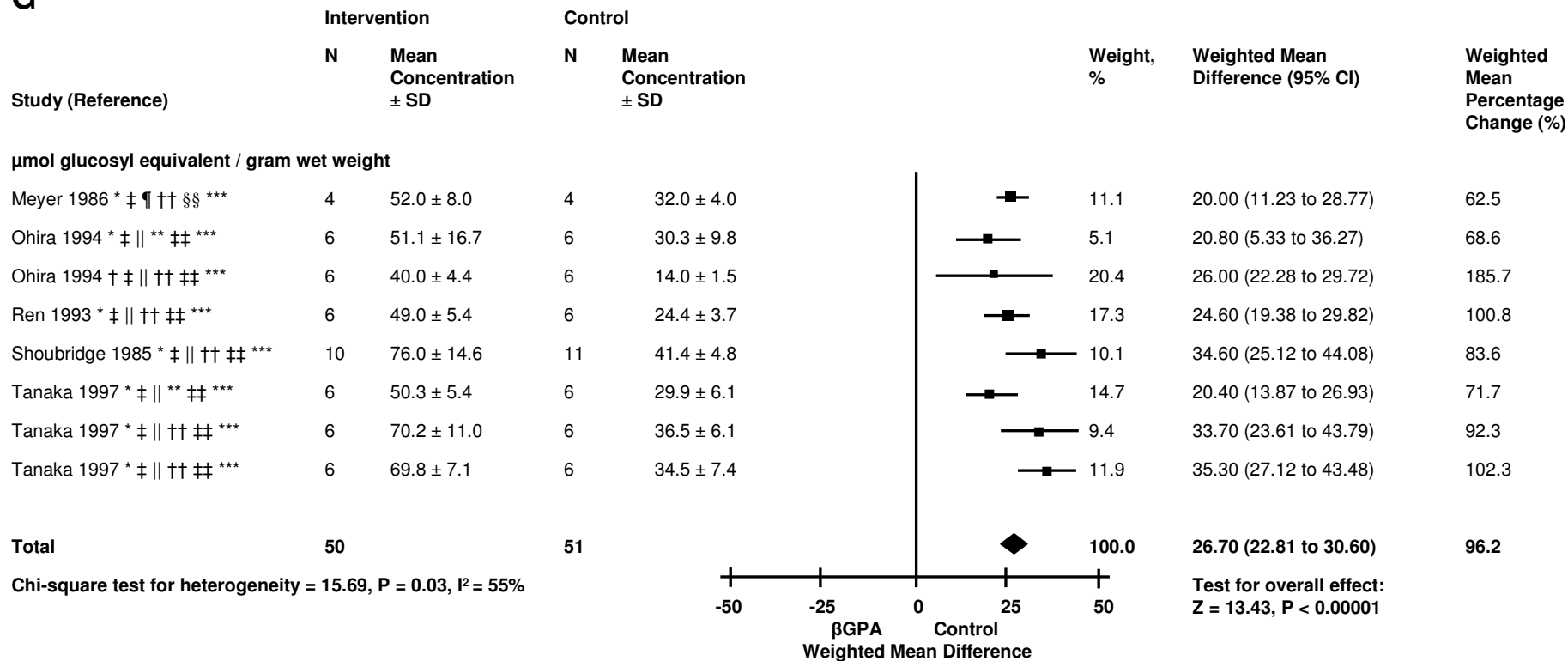
Chi-square test for heterogeneity = 62.29, P < 0.00001, I² = 78%

µmol / min x gram protein

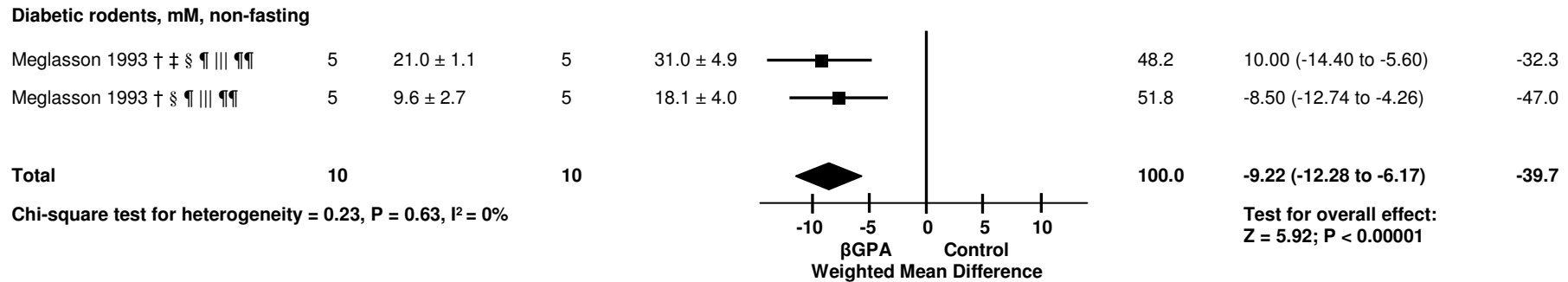
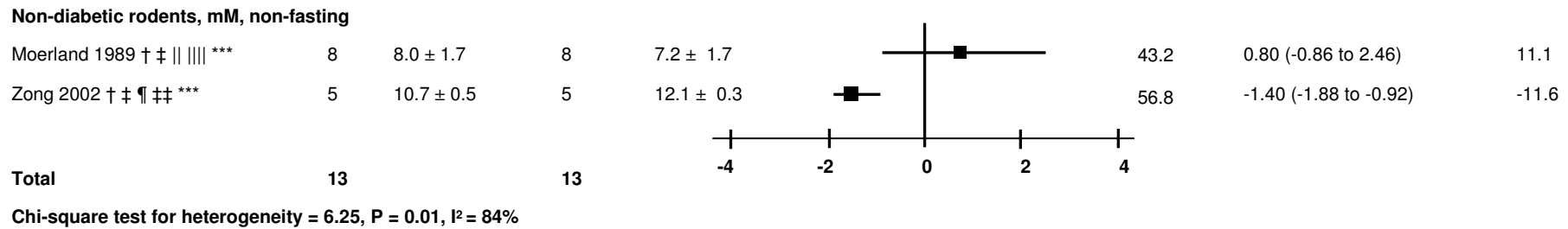
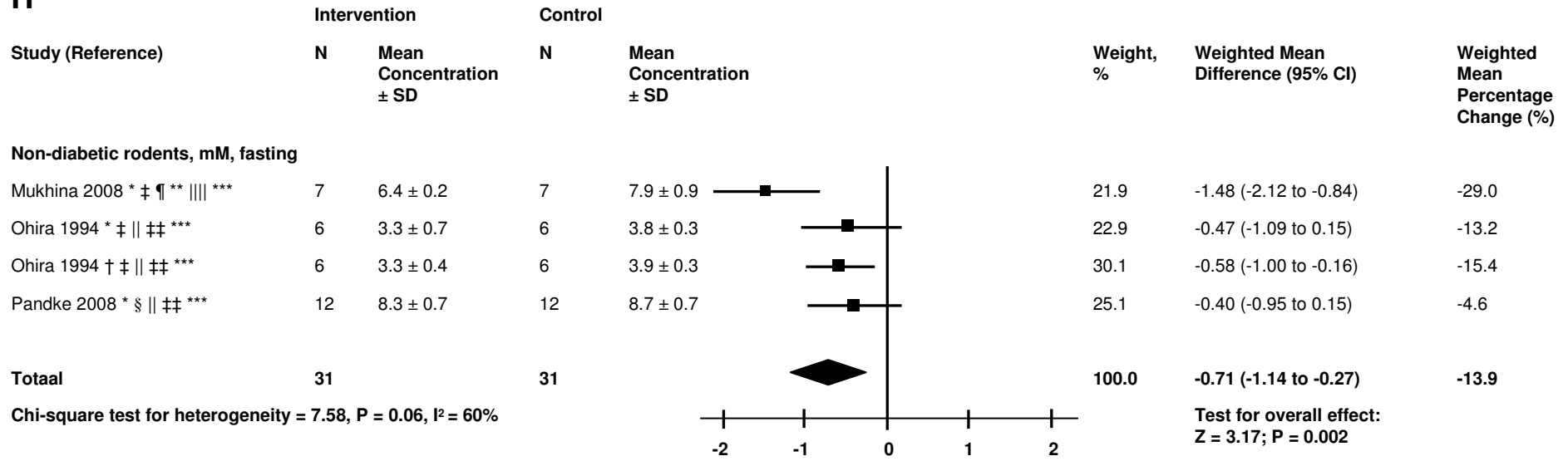
Ren 1993 * ‡ †† ‡‡ ***	8	141.0 ± 22.6	8	101.0 ± 14.1	100.0	40.00 (21.51 to 58.49)	39.6
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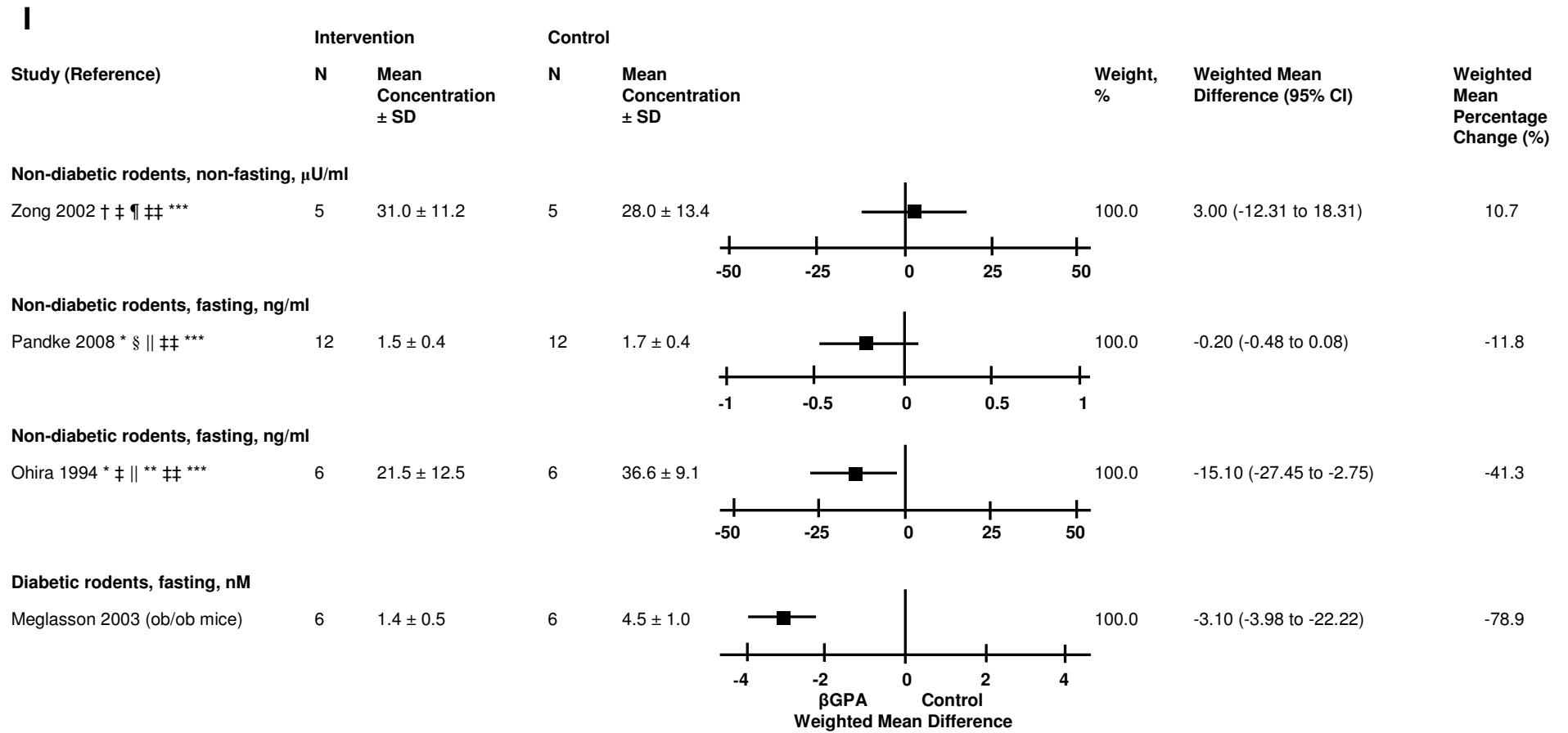


G

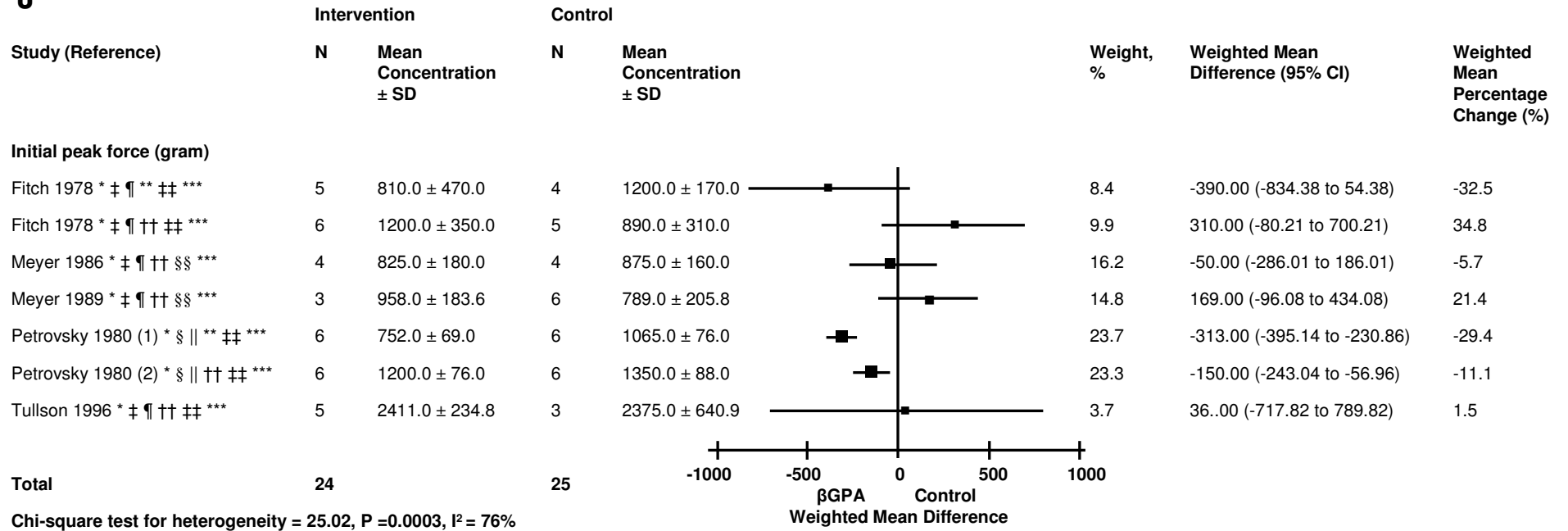


H



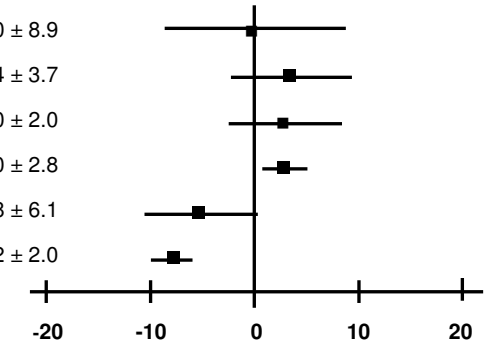


J



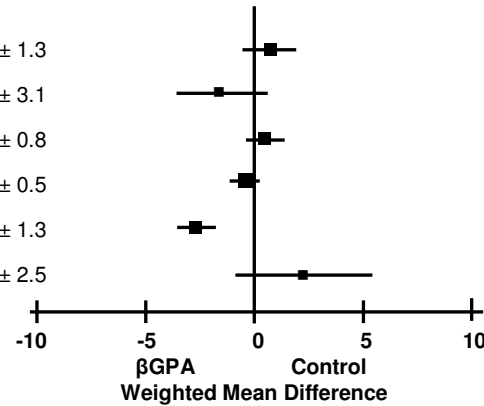
K

Study (Reference)	Intervention		Control		Weight, %	Weighted Mean Difference (95% CI)	Weighted Mean Percentage Change (%)
	N	Mean Concentration ± SD	N	Mean Concentration ± SD			
Peak twitch force (gram)							
Foley 1994 * ‡ ¶ †† ‡‡ ***	5	38.0 ± 4.5	5	38.0 ± 8.9	12.8	0.00 (-8.76 to 8.76)	0.0
Mainwood 1982-2 * ‡ ¶ †† ‡‡ ***	6	21.9 ± 5.9	6	18.4 ± 3.7	16.1	3.50 (-2.05 to 9.05)	19.0
Nasledov 1996 * ‡ ¶ †† *** *** ¶ ¶	6	14.0 ± 1.6	6	11.0 ± 2.0	19.0	3.00 (0.95 to 5.05)	27.3
Nasledov 1996 * ‡ ¶ †† *** *** ¶ ¶	5	28.0 ± 5.0	5	25.0 ± 2.8	16.7	3.00 (-2.02 to 8.02)	12.0
Wakatsuki 1994 * ‡ ¶ †† ** ‡‡ ***	6	12.7 ± 2.7	6	17.8 ± 6.1	16.3	-5.10 (-10.45 to 0.25)	-28.7
Wakatsuki 1995 * ‡ ¶ †† ‡‡ ***	6	12.5 ± 1.2	6	20.2 ± 2.0	19.1	-7.70 (-9.55 to -5.85)	-38.1
Total	34		34				



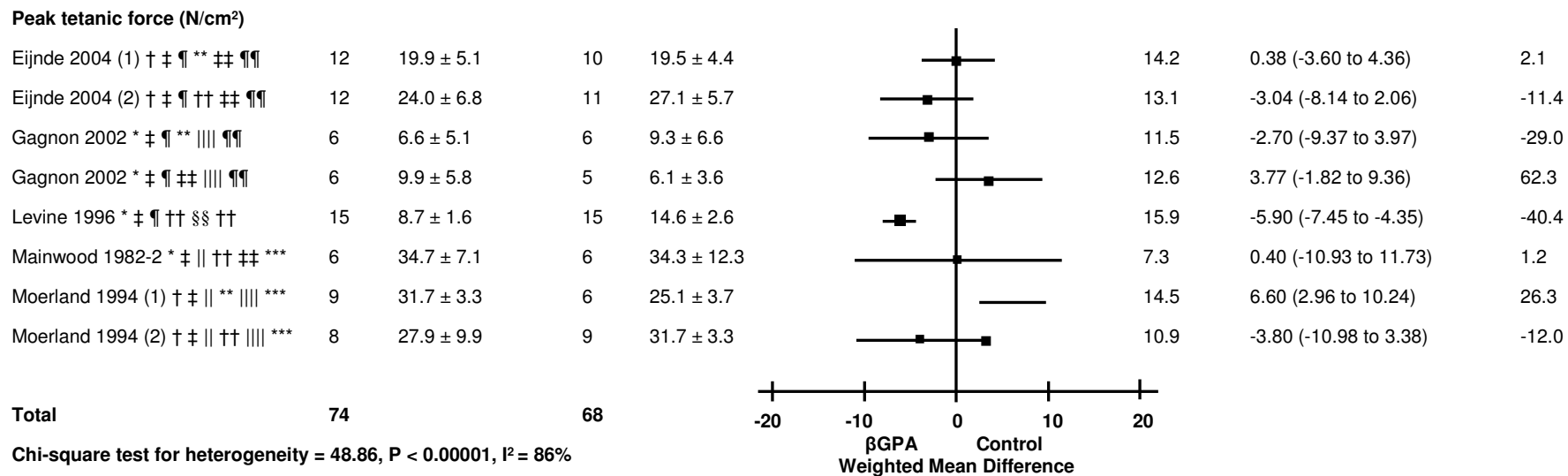
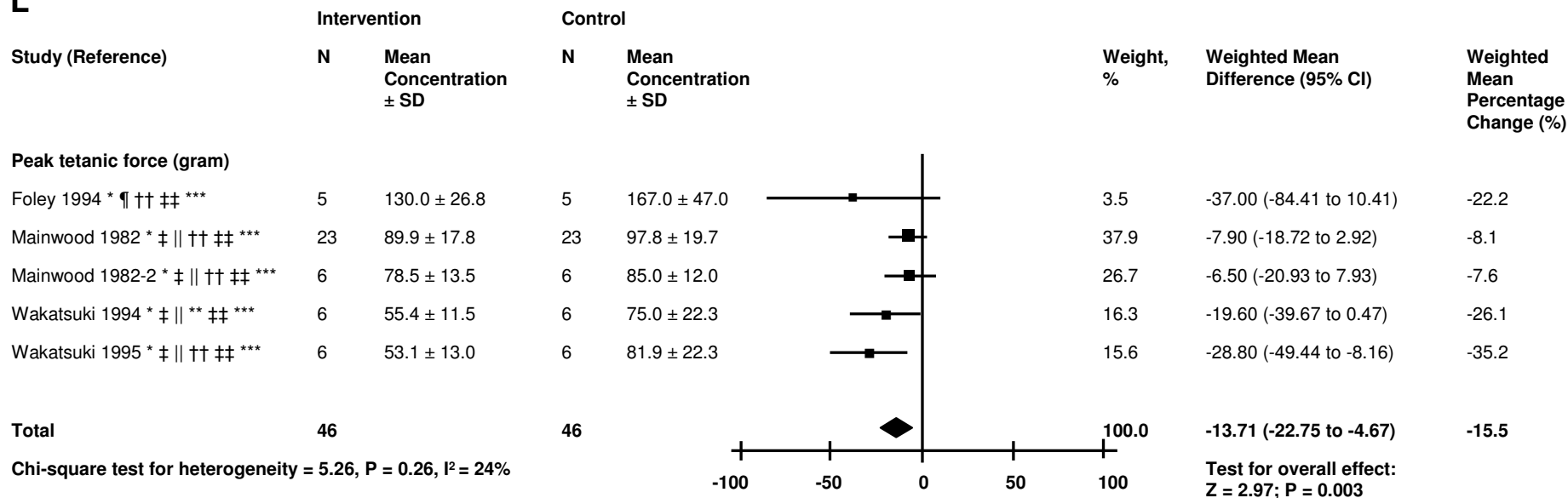
Chi-square test for heterogeneity = 68.16, P < 0.00001, I² = 93%

Peak twitch force (N/cm²)							
Eijnde 2004 † ‡ ¶ †† ** ‡‡ ¶ ¶	12	5.1 ± 1.4	10	4.3 ± 1.3	18.4	0.80 (-0.31 to 1.91)	18.6
Eijnde 2004 † ‡ ¶ †† ‡‡ ¶ ¶	12	7.9 ± 1.9	11	9.4 ± 3.1	13.3	-1.48 (-3.63 to 0.67)	-16.0
Gagnon 2002 * ‡ ¶ †† *** ¶ ¶	6	0.6 ± 0.5	6	1.0 ± 0.8	20.1	-0.40 (-1.10 to 0.30)	-40.0
Gagnon 2002 * ‡ ¶ †† ‡‡ ¶ ¶	6	1.4 ± 0.9	5	0.9 ± 0.5	19.5	0.56 (-0.30 to 1.42)	55.6
Levine 1996 * ‡ ¶ †† ‡‡ §§ ††	15	3.7 ± 1.22	15	6.4 ± 1.3	19.3	-2.68 (-3.58 to -1.78)	-42.2
Mainwood 1982-2 * ‡ ¶ †† ‡‡ ***	6	9.7 ± 2.9	6	7.4 ± 2.5	9.5	2.30 (-0.76 to 5.36)	31.1
Total	57		53				



Chi-square test for heterogeneity = 37.85, P < 0.00001, I² = 87%

L



M

