No. of studies	Study design	Sample size	MIDs	Effect size (95% CI)	Absolute risk: control	Absolute risk: intervention (95% CI)	Risk of bias	Indirectness	Inconsistency	Imprecision	Quality
HbA1c (%) at 3 months (<0 favours intervention)											
1 (Deiss 2006)	Parallel RCT	30	+/- 0.50	MD 0.20 (-0.59, 0.99)	-	-	Very serious1	Not serious	NA4	Very serious7	Very low
HbA1c (mmol/mol) - 6 months (<0 favours intervention)											
2	Parallel RCT	267	+/- 0.50	MD -0.23 (-0.42, -0.04)	-	-	Serious2	Serious3	Serious5	Not serious	Very low
HbA1c relative reduction >10% 6 months (>1 favours intervention)											
2	Parallel RCT	267	0.80 , 1.25	RR 2.91 (1.62, 5.23)	9 per 100	18 more per 100 (6 more to 40 more)	Serious2	Serious3	Not serious	Not serious	Low
HbA1c relative reduction >= 5% 6 months (>1 favours intervention)											
1 (JDRF 2008)	Parallel RCT	114	0.80 , 1.25	RR 1.73 (1.10, 2.72)	31 per 100	23 more per 100 (3 more to 53 more)	Serious2	Not serious	NA4	Serious8	Low
HbA1c achieved target <7.0% 3 months (>1 favours intervention)											
2	Parallel RCT	267	0.80 , 1.25	RR 1.96 (1.10, 3.50)	11 per 100	11 more per 100 (1 more to 27 more)	Serious2	Serious3	Not serious	Serious8	Very low
HbA1c achieved target <7.5% 6 months (>1 favours intervention)											
1 (Laffel 2020)	Parallel RCT	153	0.80 , 1.25	RR 1.37 (0.54, 3.50)	9 per 100	3 more per 100 (4 fewer to 22 more)	Not serious	Serious3	NA4	Very serious7	Very low
Time in range (%) [70 - 180 mg/dL] 6 months (>0 favours intervention)											

Study	Design	N	±	Effect (95% CI)	Control	Absolute					Quality
1 (Laffel 2020)	Parallel RCT	153	+/- 5.00	MD 6.90 (3.10, 10.70)	-	-		Not serious	Serious3	NA4	Serious8	Low

Time above range (%) >180 mg/dL 6 months (<0 favours intervention)

| 1 (Laffel 2020) | Parallel RCT | 153 | +/- 6.62 | MD -5.80 (-10.00, -1.60) | - | - | Not serious | Serious3 | NA4 | Serious8 | Low |

Time above range (%) >250 mg/dL 6 months (<0 favours intervention)

| 1 (Laffel 2020) | Parallel RCT | 153 | +/- 6.94 | MD -7.90 (-12.30, -3.50) | - | - | Not serious | Serious3 | NA4 | Serious8 | Low |

Glycemic variability: coefficient of variation 6 months (<0 favours intervention)

| 1 (Laffel 2020) | Parallel RCT | 153 | +/- 2.68 | MD -2.20 (-3.90, -0.50) | - | - | Not serious | Serious3 | NA4 | Serious8 | Low |

Severe hypoglycemia (n) <3.9 mmol/l 6 months (<1 favours intervention)

| 2 | Parallel RCT | 267 | 0.80, 1.25 | RR 0.92 (0.34, 2.44) | 6 per 100 | 0 fewer per 100 (4 fewer to 8 more) | Serious2 | Not serious | Not serious | Very serious7 | Very low |

Hypoglycemia fear survey - total 3 months (<0 favours intervention)

| 1 (Burckhardt 2018) | Crossover RCT | 98 | +/- 5.30 | MD -8.50 (-12.70, -4.30) | - | - | Not serious | Not serious | NA4 | Serious8 | Moderate |

Hypoglycemia fear survey - behaviour 3 months (<0 favours intervention)

| 1 (Burckhardt 2018) | Crossover RCT | 98 | +/- 2.15 | MD -3.30 (-5.00, -1.60) | - | - | Not serious | Not serious | NA4 | Serious8 | Moderate |

Hypoglycemia fear survey - worry 3 months (<0 favours intervention)

| 1 (Burckhardt 2018) | Crossover RCT | 98 | +/- 3.66 | MD -5.20 (-8.10, -2.30) | - | - | Not serious | Not serious | NA4 | Serious8 | Moderate |

Hypoglycemia fear survey - worry 6 months (<0 favours intervention)

| 1 (JDRF 2010) | Parallel RCT | 218 | +/- 7.33 | MD 1.60 (-2.36, 5.56) | - | - | Not serious | Not serious | NA4 | Not serious | High |

Hypoglycemia fear survey - parents 6 months (<0 favours intervention)

1 (JDRF 2010)	Parallel RCT	218	+/- 9.32	MD 0.30 (-4.22, 4.82)	-	-	Not serious	Not serious	NA4	Not serious	High
Quality of life (PEDS) - generic - 3 months (>0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 4.42	MD 2.60 (-0.90, 6.10)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
Quality of life (PEDS) - generic - 6 months (>0 favours intervention)											
2	Crossover RCT and Parallel RCT	362	+/- 5.92	MD -0.31 (-1.77, 1.16)	-	-	Serious2	Not serious	Not serious	Not serious	Moderate
Quality of life (PEDS) - diabetes - 3 months (>0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 3.54	MD 2.60 (-0.20, 5.40)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
Quality of life (PEDS) - diabetes - 6 months (>0 favours intervention)											
1 (Hommel 2014)	Crossover RCT	218	+/- 6.53	MD 1.50 (-1.90, 4.90)	-	-	Not serious	Not serious	NA4	Not serious	High
Quality of life (PEDS) - family impact - 3 months (>0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 3.54	MD 2.60 (-0.20, 5.40)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
Quality of life (PEDS) - generic - parents 6 months (>0 favours intervention)											
2	Crossover RCT and Parallel RCT	362	+/- 4.88	MD -2.00 (-6.12, 2.12)	-	-	Serious2	Not serious	Very serious6	Serious8	Very low
Quality of life (PEDS) - diabetes - parents 6 months (>0 favours intervention)											
1 (JDRF 2010)	Parallel RCT	218	+/- 4.54	MD -1.60 (-5.19, 1.99)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
DASS - Stress - 3 months (<0 favours intervention)											

Studies	Design	N	SD	Effect (95% CI)	Control	Absolute	Risk of bias	Inconsistency	Indirectness	Imprecision	Certainty
1 (Burckhardt 2018)	Crossover RCT	98	+/- 2.02	MD -2.20 (-3.80, -0.60)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
DASS - Anxiety - 3 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 1.89	MD -1.00 (-2.50, 0.50)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
DASS - Depression - 3 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 1.64	MD -1.10 (-2.40, 0.20)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
STAI - state - 3 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 3.54	MD -3.60 (-6.40, -0.80)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
STAI - trait - 3 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 2.40	MD -3.50 (-5.40, -1.60)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
PSQI - 3 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	98	+/- 1.26	MD -1.50 (-2.50, -0.50)	-	-	Not serious	Not serious	NA4	Serious8	Moderate
PAID-p 6 months (<0 favours intervention)											
1 (Burckhardt 2018)	Crossover RCT	218	+/- 8.24	MD -0.80 (-4.78, 3.18)	-	-	Not serious	Not serious	NA4	Not serious	High
DKA (n) 6 months (<1 favours intervention)											
2	Parallel RCT	267	0.80 , 1.25	RR 3.20 (0.34, 30.11)	1 per 100	2 more per 100 (0 more to 21 more)	Not serious	Serious3	Not serious	Very serious7	Very low
SAE 6 months (<1 favours intervention)											
1 (Laffel 2020)	Parallel RCT	153	0.80 , 1.25	RR 1.07 (0.15, 7.39)	3 per 100	0 more per 100 (2 fewer to 16 more)	Not serious	Serious3	NA4	Very serious7	Very low

1. >33.3% of the weight in a meta-analysis came from studies at high risk of bias

2. >33.3% of the weight in a meta-analysis came from studies at moderate or high risk of bias

3. >33.3% of the weight in a meta-analysis came from partially direct or indirect studies

4. Only one study so no inconsistency

5. I2 between 33.3% and 66.7%

6. I2 > 66.7%

7. 95% confidence intervals cross both ends of the defined MIDs

8. 95% confidence intervals cross one end of the defined MIDs