| **First Author, Year**  **Trial Name** | **Was randomization adequate?** | **Was allocation concealment adequate?** | **Were groups similar at baseline?** | **Was intervention fidelity adequate?** | **What was the reported adherence to the intervention?** | **What was the overall attrition?** | **What was the differential attrition?** | **Did the study have differential attrition or overall high attrition raising concern for bias?** | **Did the study have cross-overs or contamination raising concern for bias?** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aarab, 2011189 | Yes | Yes | Yes | Yes | MAD use 91% of nights  nCPAP 83% of nights  Intraoral placebo device 94% of nights | 11% | 13% (MAD vs. nCPAP), 5% (MAD vs. Intraoral placebo device)  7% (nCPAP vs. Intraoral placebo device) | Partially | No |
| Andren, 2013188 | Yes | NR | Mostly | Yes | NR | 1% | 3% | No | No |
| Arias, 2005128 | NR | NR | Yes (cross-over study) | NA | 7% were nonadherent (use <3.5 hrs/night) and excluded from analysis; of the rest: CPAP: 6 hrs/night; sham 6 hrs/night | 7% | 7% | No | No |
| Arias, 2008129 | NR | NR | Yes | NA | CPAP: 6.2 hrs/night  Sham CPAP: 6.3 hrs/night | 17% | Unclear | Unclear (unable to determine differential attrition) | No |
| Bäck, 2009198 | Yes | Yes | Yes | NA | NA | 0% | 0% | No | No |
| Ballester, 1999170 | NR | NR | Yes | NA | Mean CPAP 5.2 hrs/night; 73% used it >4.5 hrs/night | 0% | 0% | No | No |
| Barbe, 2001130 | Yes | NR | Yes | NA | CPAP: 5 hrs/night; Sham: 4 hrs/night | 2% | 2% | No | No |
| Barbe, 2010171 | Yes | Yes | Mostly | NR | CPAP: mean use 4.7 hrs/night | 4% | 6% | No | No |
| Barbe, 2012172 | Yes | Yes | Yes, although AHI was a little higher in CPAP group | NA | CPAP: median 5h/night; 36% with mean use <4h per night | Loss to follow-up: 17% | 1% | No | No |
| Bardwell, 2007131 | NR | NR | Partially (SaO2 different) | NA | CPAP: 6.3 hrs/night;  Sham CPAP: 6.0 hrs/night | 0% | 0% | No | No |
| Barnes, 2004173 | Yes | Yes | Yes | NA | CPAP: 3.6 hrs/night; MAD: 5.5 hrs/night; Placebo: 94.3% | 23% | 6% | Yes, high overall | No |
| Bloch, 2000214 | Yes | NR | Yes (cross-over study) | NA | MADs: at least 4 to 7 nights/week  No tx: NA | 0% | NA | No | No |
| Browaldh, 2013199  SKUP3 | Yes | Yes | Yes | NA | NA | 8% | NR | No | No |
| Campos-Rodriguez, 2006132 | NR | Unclear | Yes | NA | 5.0 vs. 4.4 hrs/day for CPAP vs. sham | 6% | 0% | No | No |
| Chasens, 2014287 | Yes | NR | Partially | NA | 74% were adherent for at least 4 hours per night | 4.3% | 9% | No | No |
| Chong, 2006134 | NR | No | Yes | NA | 5.2 hrs/night | 5% | 0% | No | No |
| Coughlin, 2007135 | Yes | NR | Yes (cross-over) | NA | CPAP: 3.9 hrs/night; Sham CPAP: 2.6 hrs/night | 3% | 0% | No | No |
| Craig, 2012174 MOSAIC | Yes | Yes | Yes | NA | Median CPAP usage: 2.39 h/night (IQR: 0.36 to 4.59) | 13% for the coprimary outcome ESS (lower for some secondary outcomes) | 0% | No | No |
| Cross, 2008136 | NR | NR | Yes (cross-over study) | NA | CPAP: 4.5 hrs/night;  Sham: 3.1 hrs/night | 17% | 4% | No | No |
| Desplan, 2014204 | NR | NR | ESS scores and BP higher in intervention group | NR | NR (but inpatient program, so implied to be 100% for the completers) | 15% | 0 | No | No |
| Dixon, 2012200 | NR | NR | Yes | Yes (for surgical group); NR for weight loss group | 13% of the surgical group did not consent to surgery; adherence to weight loss intervention NR; CPAP adherence was about 67% for both groups | Non-completers: 10% for main outcomes, 13% for QOL outcomes;  Loss to follow-up 0% | 7% (for main outcomes; unclear for QOL outcomes | No | No (small number of cross-overs) |
| Durán-Cantolla, 2010137 | Yes | Yes | Yes | NA | Mean 4.2 (Sham) to 4.5 (CPAP) hrs/day over 12 weeks; 59% (Sham) and 65% (CPAP) used >4 hours/day | 20% did not complete the trial (either refused to continue, intolerant to CPAP, protocol violation, or technical problems) | 2% | Borderline for overall attrition; no for differential attrition | No |
| Durán-Cantolla, 201536 | Yes | Yes | NA (cross-over) | NA | MAD: 6.4 hrs/night; placebo: 6.2 hrs/night | 10% | 5% | No | No |
| Egea, 2008138 | NR | NR | Yes based on N randomized, but partially based on N analyzed | NA | NR | 18% | 4% | No | No |
| Engleman, 1994216 | NR | NR | Yes | NA | CPAP: mean 3.7 hrs/night | 9% | Unclear | No | No |
| Engleman, 1997217 | NR | NR | Yes | NA | CPAP mean 3.2 hrs/night | 11% | 20% | Partially | No |
| Engleman, 1998175 | NR | NR | Yes | NA | Mean of 3.2 hours of CPAP runtime and used effectively 2.8 hours per night | 0% | 0% | No | No |
| Engleman, 1999176 | NR | NR | Yes | NA | CPAP 3.5 hrs/night | 8% | NR (at most 8%) | No | No |
| Faccenda, 2001177 | NR | NR | Yes (cross-over study) | NA | 47% of patients used CPAP at least 3.5 hrs/night; mean use 3.3 hrs/night; placebo adherence almost 100% | 4% | 2% | No | No |
| Ferguson, 2003201 | Yes | NR | Yes | NA | NA (surgery vs. no treatment) | 4% | 4% | No | No |
| Foster, 2009205  Kuna, 2013206  Sleep AHEAD | Yes | Yes | Yes | NA | NR | At 1 yr: 17%  At 2 yrs: 20%  At 4 yrs: 38% | At 1 yr: 1%  At 2 yrs: 1%  At 4 yrs: 6% | At 4 yrs, high overall | No |
| Gottlieb, 2014178  HeartBEAT | Yes | Yes | Partially | NA | CPAP: 3.5 hrs/night  Oxygen: mean 4.8 hrs/night | 12% for primary outcome; 5% to 7% for other outcomes | 3% to 7% | No | No |
| Haensel, 2007139 | NR | NR | Yes | NA | CPAP: 6.6 hrs/night;  Sham CPAP: 6.0 hrs/night | 0% | 0% | No | No |
| Hoyos, 2012140 | Yes | Yes | Yes | NA | CPAP: 3.6 hrs/night; Sham CPAP: 2.8 hrs/ night | Loss to followup at 12 weeks: 20%; Missing data for ESS and BP: 23% | 11% (from published correction); 2% (from Table 2) | Yes | No |
| Hui, 2006141 | NR | NR | Yes | NA | CPAP 5.1 hrs/night; sham 2.6 hrs/night | 18% | 0% | No | No |
| Ip, 2004179 | NR | NR | Yes | NA | CPAP: 4.3 hrs/night  UC: NA | 4% | 4% | No | No |
| Jenkinson, 1999142  Hack, 2000143 | NR | Yes | Yes | NA | CPAP 5.4 hrs/night; sham 4.6 hrs/night | 6% | 4% | No | No |
| Johansson, 2009207 | Yes | Yes | Yes | NA | VLCD: 100% | 3% | 6% | No | No |
| Johnston, 2002195 | NR | NR | Yes | NA | MAD 68% every or almost every night;  79% ≥4 hrs/night | 5% | 5% | No | No |
| Jones, 2013144 | Yes | NR | Yes | NA | CPAP: 3.0 hrs/night  Sham CPAP: 2.0 hrs/night | 19% | 5% | No | No |
| Kline, 2012208  Kline, 2013209 | Yes | Yes | Partially (exercise training group had higher mean AHI (32 vs. 24), higher mean baseline weight and BMI, higher percentage White, lower percentage with prior OSA treatment) | NA | Rate of attendance 87% (exercise) 79% (control); 81% of the treatment group received the targeted aerobic dose | 12% (non-completers) | 2% | No | No |
| Koutsourelaski, 2008202 | Yes | NR | Yes | NA | NA (surgery) | 0% | 0% | No | No |
| Kushida, 2012145  Batool-Anwar, 2016288 | Yes | Yes | Yes | NA | CPAP: 5.8 hrs/night  Sham: 4.3 hrs/night | 23% (for ESS at 6 months; varies by outcome and timing) | 5% | Yes | No |
| Lam, 2007180 | Yes | NR | Yes | NA | CPAP: 4.2 hrs/night;  MAD: 6.4 hrs/night | 10% | 3% to 12% | Partially | Partially |
| Lam, 2010146 | Yes | NR | Yes | NA | CPAP 6.2 hrs/night; sham 4.5 hrs/night | 0% | 0% | No | No |
| Lee, 2011147 | NR | NR | Yes | NA | CPAP: 5.0 hrs/night;  Placebo CPAP: 6.9 hrs/night | NR, presume 0 | NR, presume 0 | No | No |
| Lim, 2007215 | NR | NR | Yes | NA | NR | 0 | 0 | No | No |
| Loredo, 1999148 | NR | NR | Partially (RDI higher in CPAP than pbo) | NA | Both groups: >5 hrs/night | 15% | Somewhat unclear (if 48 randomized resulted in 24 in each group, then 21%, 12%, and 16%, respectively | Somewhat unclear due to limited reporting | No |
| Loredo, 2006149 | NR | NR | Yes | NA | CPAP: 6.6 hrs/night  Sham CPAP: 6.0 hrs/night | Unclear which exclusions were prior to vs. after randomiz-ation (max would be 17%) | NR | No for overall; unclear for differential | No |
| Malow, 2008150 | Yes | Yes | Yes | NA | CPAP: 4.7 hrs/night  Sham CPAP: 3.6 hrs/night | 9% | 14% | Yes; all noncompleters were from G1; 9% of G1 d/c due to inability to tolerate CPAP—maybe higher severity? | No |
| Marshall, 2005151 | Yes | Yes | Yes (cross-over study) | NA | CPAP: 4.9 hrs/night;  Sham CPAP 4.9 hrs/night | 7% | <1% | No | No |
| Martinez-Garcia, 2013181  HIPARCO | Yes | Yes | Yes | NA | CPAP: 5 hrs/night; 72% at least 4 hours/night | 10% | 2% | No | No |
| McArdle, 2001152 | Yes | Yes | NA (cross-over) | NA | Median 4.5 hrs/night | 4% | 4% | No | No |
| McMillan, 2014182  PREDICT | Yes | Yes | Yes | Yes | 71% reported still using CPAP at 12 mths; at 3 mths, median usage of 1 h  52 min per night; at 12 mth, 2 h  22 min/night | 17 | 3 | No | No |
| Mills, 2006153 | NR | NR | Partially; 47% HTN in CPAP arm, 25% in sham arm | NA | CPAP: 6.8 hrs/night  Sham: 6.0 hrs/night | NR, presume 0 | NR, presume 0 | No | No |
| Montserrat, 2001154 | Yes | NR | Partially | NA | CPAP 4.3 hrs/night; sham 4.5 hrs/night | 4% | 0% | No | No |
| Moss, 2014210 | Yes | NR | Yes | NR | Exercise: 96% of sessions attended; control: NA | 10% | 0% | No | No; all patients were on CPAP for at least 6 months prior |
| Naismith, 2005;192  Gotsopoulos, 2002;193  Gotsopoulos, 2004194 | Yes | Yes | Yes (crossover study) | NA | Both MAD and sham MAS: 6.7 hrs/night; 96-97% of nights | 9% | 5% | No | No |
| Neikrug, 2014155 | Yes | NR | Yes | NA | CPAP: 5.2 hrs/night | 18% | 5% | No | No |
| Nguyen, 2010157 | NR | NR | Yes | Yes | NR (assessed but not reported) | 0% | 0% | No | No |
| Norman, 2006156 | NR | NR | Partially; higher SBP and MAP in CPAP group | NA | CPAP: 6.7 hrs/night  Sham: 6.0 hrs/night | NR, presume 0 | NR, presume 0 | No | No |
| Pamidi, 2015158 | Yes | Yes | Mostly: 19% of CPAP had HTN; 0% of pbo had HTN | NA | 8 hrs/night—all CPAP patients slept in the lab and were required to wear CPAP whole night | 15% | 11% | Borderline for differential | No |
| Pepperell, 2002159  Kohler, 2008160 | NR | NR | Yes | NA | 4.9 h/night for CPAP and 4.5h/night for Sham | 20% (for missing blood pressure data) | 1% (for blood pressure outcomes) | No | No |
| Petri, 2008191 | Yes | Yes | Yes | NA | NR | 13% | 1%-15% | Partially (G1 vs. G3) | No |
| Phillips, 2011161 | Yes | Yes | Yes | NA | CPAP: 4.4 hrs/night  Sham CPAP: 3.4 hrs/night | 24% | 5% | Yes overall, but not differential | No |
| Quinnell, 2014197  TOMADO | Yes | Yes | Yes | NA | Mean (SD)  4.4 (2.4) to  5.7 (2.0)  hrs/night for the 3 MAD groups | 18% did not complete; 8% not analyzed | Low when comparing most groups, but high for bMAD group vs. others (17%-30% differential) | Yes (high differential attrition for bMAD group compared with the others) | No |
| Redline, 1998183 | Yes | NR | Mostly (slightly higher RDI in CPAP arm, and fewer women) | NA | CPAP: 44% of sleep time; 3.1 hrs/night  CT: 82% of nights | 13% | 2% | No | Possibly\* |
| Robinson, 2006162 | NR | Yes | Yes | NA | CPAP: 5.2 hrs/night;  Sham CPAP: 4.3 hrs/night | 9% | 9% | No | No |
| Ruttanaumpawan, 2008184 | NR | NR | Partially; higher AHI in control, but they adjusted for it in analyses | NA | CPAP: 6.2 hrs/night | NR, presume 0 | NR, presume 0 | No | No |
| Siccoli, 2008164 | NR | NR | Yes | NA | CPAP: 4.7 hrs/night  Sham CPAP: 3.9 hrs/night | 3% | 2% | No | Possibly – 52 has been involved in previous study on CPAP effect on BP |
| Smith, 2007163 | Yes | NR | Yes | NA | CPAP 3.5 hrs/night; Sham 3.3 hrs/night | 15% | Unable to determine | No | No |
| Tomfohr, 2011186 | NR | NR | Yes | NA | 5.5 hrs/night for CPAP group; 6.6 for sham CPAP | 17% | 4% | No | No |
| Toukh, 2012165 | Yes | NR | NA (cross-over) | NA | NR | 8% | NR | No | No |
| Tuomilehto, 2009211  Tuomilehto, 2010212  Tuomilehto, 2013213 | Yes | NR | Partially | NA | NR | At 12 wks: 9%  At 1 yr: 11%  At 2 yrs: 12%  At 5 yrs: 30% | 1%-3% | Partially (at 5 yrs) | No |
| Usui, 2005187 | NR | NR | Partially: no women in CPAP vs. 29% in control and fewer patients with HTN in CPAP vs. control | NA | NR/NA | NR, presume 0 | NR, presume 0 | No | No |
| Weaver, 2012166 | Yes | Yes | Yes, except slightly higher score on mental health component of SF36 for sham CPAP group | NA | CPAP: 4.0 hrs/night;  Sham: 3.1 hrs/night | Overall: 21% who were randomized were not included in analyses (15% withdrew prior to receiving CPAP or sham; another 6% were missing data for the primary outcome) | 1% | Yes, high overall | No |
| Weinstock, 2012167,289 | Yes | NR | Yes | NA | Mean nightly use:  CPAP: 4.8h Sham CPAP: 3.4h; p<00.1 | 2% (1 participant completed the first [CPAP] period only) | 4% | No | No |
| West, 2007168  West, 2009169 | Yes | NR | Yes | NA | CPAP: 3.6 hrs/night  Sham CPAP: 3.3 hrs/night | 5% | 0% | No | No |
| Woodson, 2003203 | Yes | Yes | Yes | Good (e.g., planned 5 tongue sessions and delivered 4.5 +/- 0.8) | NA | 11% | 6% | No | No |

\*Subjects with symptoms of nasal congestion were provided with a nasal steroid spray, and it’s NR whether there was an equal proportion of such patients in each arm. Control pts got nasal dilator strips.

**Abbreviations:** AHEAD=Action for Health in Diabetes; AHI=apnea-hypopnea index; bMAD=fully-bespoke mandibular advancement device; BMI=body mass index; BP=blood pressure; CPAP=continuous positive airway pressure; ESS=Epworth Sleepiness Scale; G=group; HeartBEAT=Heart Biomarker Evaluation in Apnea Treatment; hrs=hours; HTN=hypertension; IQR=interquartile ratio; MAD=mandibular advancement device; MOSAIC=Multicentre Obstructive Sleep Apnoea Interventional Cardiovascular;mth**=**month; N=number; NA=not applicable; nCPAP=nasal continuous positive airway pressure; NR=not reported; OSA=obstructive sleep apnea; QOL=quality of life; RDI=respiratory disturbance index; Sa02=oxygen saturation; SBP=systolic blood pressure; SKUP3=Sleep apnoea Karolinska;  TOMADO=trial of oral mandibular advancement devices for obstructive sleep apnoea-hypopnoea; tx=treatment; UPPP=uvulopalatopharygoplasty; VLCD=very low calorie diet; vs.=versus.