NKR 22: Høfeber og allergiskhelårssnue (allergisk rhinoconjunctivitis), PICO 3: Leukotrien-receptorantagonister eller perorale antihistaminer.

Review information

Authors

Sundhedsstyrelsen[1]

[1][Empty affiliation]

Citation example: S. NKR 22: Høfeber og allergiskhelårssnue (allergisk rhinoconjunctivitis), PICO 3: Leukotrien-receptorantagonister eller perorale antihistaminer.. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Characteristics of studies

Characteristics of included studies

Chen 2006

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Cetirizine ● *Male/female ratio*: 12/8 ● *Age*: 4.53 Montelukast ● *Male/female ratio*: 11/9 ● *Age*: 4.49 **Included criteria:** Documented clinical history ofperennial allergic rhinitis (PAR) of at least halfa year, a positive

	prick-test for house dust-miteand a positive mite-specific IgE **Excluded criteria:** Corticosteroids or sodium cromoglycate withinthe past 4 wk, or H1-antagonist and/or decon-gestant within the past 7 days.
Interventions	**Intervention Characteristics** Cetirizine Montelukast
Outcomes	*Continuous*: ● PQRLQ ● Total symptom score ● Nasal itching ● Sneezing ● Rhinorrhea ● Nasal congestion ● Conjunctivae itching ● Conjunctivae hyperemia ● Tearing *Adverse Events*: ● Dizziness
Identification	**Sponsorship source:** **Country:** Taiwan **Setting:** **Comments:** **Authors name:** Chen **Institution:** Division of asthma, allergy and rheumatology, department of pediatrics, chung shan medical university hospital, taichung **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:**

	Baseline characteristics: **Intervention characteristics:** **Pretreatment:** *Kirsten Skamstrup Hansen* perhaps more inflammation in ceterizine group **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: not specified but double blind study
Allocation concealment (selection bias)	Unclear risk	Comment: not specified but double blind study
Blinding of participants and personnel (performance bias)	Low risk	Comment: not specified but double blind study
Blinding of outcome assessment (detection bias)	Low risk	low risk
Incomplete outcome data (attrition bias)	Low risk	Comment: 60 patients met theinclusion criteria and all of these completed thewhole study
Selective reporting (reporting bias)	Low risk	Low risk
Other bias	Unclear risk	Unclear

Lu 2009

Methods	
Participants	
Interventions	
Outcomes	
Identification	

Notes	Fra opdaterende søgning.

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Period 2 was a 2-week double-blind active-treatment period where patients were randomized based on a computerized allocation system to one of four once-daily oral treatments: montelukast 10 mg, loratadine 10 mg, combination tablet of montelukast 10 mg+loratadine 10 mg, or placebo.
Allocation concealment (selection bias)	Unclear risk	not specified but double-blind design
Blinding of participants and personnel (performance bias)	Unclear risk	not specified but double-blind design
Blinding of outcome assessment (detection bias)	Unclear risk	not specified but double-blind design
Incomplete outcome data (attrition bias)	Unclear risk	only 4 drop outs in each group
Selective reporting (reporting bias)	Unclear risk	not described
Other bias	Unclear risk	Company sponsored study evaluation of asthma symptoms and severity not included

Meltzer 2000

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Loratadine 10 mg ● *Number*: 92 ● *No. men*: 43

	● *Daytime nasal symptoms*: 2.07 ● *Daytime eye symptoms*: 1.41 Montelukast 10 mg ● *Number*: 95 ● *No. men*: 40 ● *Daytime nasal symptoms*: 2.12 ● *Daytime eye symptoms*: 1.47 **Included criteria:** Healthy men and women (aged 15 to 75 years) with a clinicalhistory of seasonal allergic rhinitis for at least 2 years and a positiveskin test to at least 1 of 8 allergens (Bermuda, Johnson and rye[grass pollens], or olive, oak, elm, sycamore, and walnut [tree pol-lens]) were eligible for the study. **Excluded criteria:** unstableasthma (emergency department treatment or hospitalization forasthma 1 or 3 months, respectively, before visit 1), use of agentsother than short-acting inhaledβ-agonists to treat asthma, and elec-trocardiographic abnormalities including conduction delay and anabnormal QTc interval. Nasal surgery (within 1 year) and anepisode of upper respiratory tract infection (rhinitis or sinusitiswithin 3 weeks) before visit 1 were other exclusions. astemizole within 3 months; oral orparenteral corticosteroids within 1 month; cromolyn, nedocromil, ornasal or ophthalmic corticosteroids within 2 weeks; cetirizine,zileuton, zafirlukast, oral or long-acting inhaledβ-adrenergic ago-nists or inhaled anticholinergic agents within 1 week; terfenadine,loratadine, or fexofenadine within 72 hours; and short-acting anti-histamines and decongestants within 24 hours before visit 1.Immunotherapy requirements included that if used it needed to havebeen initiated at least 6 months before visit 1 and be maintained atstable doses during the study
Interventions	**Intervention Characteristics** Loratadine 10 mg Montelukast 10 mg
Outcomes	*Continuous*: ● Daytime nasal ● Daytime eye ● RQLQ ● Nasal congestion ● Rhinorrhea ● Nasal itching ● Sneezing

Identification	**Sponsorship source:** **Country:** USA **Setting:** **Comments:** **Authors name:** Meltzer **Institution:** San Diego **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Comment: computer generated
Allocation concealment (selection bias)	Unclear risk	Comment: unclear description off the study medication,
Blinding of participants and personnel (performance bias)	Low risk	Quote: "All labels were collected at trial completion to ensure that blinding had been maintained throughout the study."
Blinding of outcome assessment (detection bias)	Unclear risk	Unclear
Incomplete outcome data (attrition bias)	Low risk	Comment: decsribed
Selective reporting (reporting bias)	Unclear risk	Unclear

Other bias	Unclear risk	Comment: MSD sponsored

Nayak 2002

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Loratadine 10 mg ● *Number*: 301 ● *mean age*: 37 ● *number female*: 191 Montelukast 10 mg ● *Number*: 155 ● *mean age*: 35 ● *number female*: 102 **Included criteria:** nonsmokingage 15 to 85 years oldsymptomatic during fall allergy season and had documented history of seasonal allergic rhinitis of at least 2 yearspositive skintest to one of the regional allergens active during the season and a predefined levelof daytime nasal symptoms that was at least mild to moderate in severity **Excluded criteria:** perennial rhinitis with Little or no seasonal flare-upsrhinitis medicamentosanonallergic rhinitissubstantial ,structural nasal obstructionsevere asthma that had required emergency room treatment within 1 month or hospitalization within 3 month before the trial.upper respiratory tract infectionacute or chronic pulmonary disorderinitiation of allergen immunotherapy within the previous 6 monthsPregnant or lactating womenhospitalized patientsrecently undergone a major surgical procedure or WHO had another clinically significant disorderMedications for allergic rhinitis/conjuctivitis were not allowed during the study
Interventions	**Intervention Characteristics** Loratadine 10 mg Montelukast 10 mg

Outcomes	*Continuous*: ● Daytime nasal symptom ● Nasal congestion ● Rhinorrhea ● Nasal itching ● Sneezing ● Daytime eye symptoms ● RQLQ
Identification	**Sponsorship source:** **Country:** USA **Setting:** **Comments:** **Authors name:** Nayak **Institution:** University of illinois **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Comment: computer generated allocation schedule
Allocation concealment (selection bias)	Unclear risk	Unclear
Blinding of participants and personnel (performance bias)	Low risk	Comment: blinding ensured in the active Groups by including matching image placebo tablets of the other treatments
Blinding of outcome assessment (detection bias)	Unclear risk	Unclear
Incomplete outcome data (attrition bias)	Low risk	Low risk
Selective reporting (reporting bias)	Low risk	Low risk
Other bias	High risk	High risk

Philip 2002

Methods	**Study design:** **Study grouping:** **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Montelukast ● *Age*: 37 ● *Sex (male/female)*: 233/115 Cetirizine ● *Sex (male/female)*: 390/212 ● *Age*: 36 **Included criteria:** **Excluded criteria:**

Interventions	**Intervention Characteristics** Montelukast Cetirizine
Outcomes	*Continuous*: ● Eye symptoms (total) ● Nasal Congestion ● Total nasal symptoms (composite) ● Quality of life
Identification	**Sponsorship source:** **Country:** USA **Setting:** **Comments:** **Authors name:** George Philip **Institution:** Merck and Co Rahway NJ **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Julie Hansen* These means are mean differences from placebo in avarage change from baseline during the treatment period - except from QoL scores. **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "according to a computer-generated allocation schedule." Comment: computer allocation
Allocation concealment (selection bias)	Unclear risk	Comment: Not described unclear description of blinding medication/ unclear about changes in on of the studyarms
Blinding of participants and personnel (performance bias)	Unclear risk	Comment: It is written that the patients are blinded - but not how or when
Blinding of outcome assessment (detection bias)	Unclear risk	Comment: It is unclear wether the outcome assessors were blinded. Medications not described.
Incomplete outcome data (attrition bias)	Low risk	Comment: No statistiscal method to interpret discontinued patient data was used. Few patients discontinues (montelukast 3,4%, loratadine 4,8%)is described table 2
Selective reporting (reporting bias)	Unclear risk	Quote: "The protocol (with amendments) and informed consents were approved by the institutional review" Comment: Protocl not located
Other bias	High risk	Comment: This study was performed in coorporation with The montelukast spring rhinitis study group. This study was supported by grants and experts from Merck and CO

Philip 2007

Methods	
Participants	
Interventions	
Outcomes	
Identification	
Notes	Fra opdaterende søgning.

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias)	Low risk	scheme page 299
Blinding of outcome assessment (detection bias)	Low risk	Not described
Incomplete outcome data (attrition bias)	Low risk	Not described
Selective reporting (reporting bias)	High risk	Not described
Other bias	High risk	MSD sponsored

vanAdelsberg 2003

Methods	**Study design:** Randomized controlled trial **Study grouping:** **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Montelukast ● *Male/female ratio*: 147/301 ● *Age*: 36 Cetirizine ● *Male/female ratio*: 61/119 ● *Age*: 39 **Included criteria:** nonsmokers age 15-82 years oldsymptomatic during the fall and at least 2 years history of seasonal allergic rhinitisdefined minimum daytime nasal symptoms score during the placebo run in periodpositive skin prick test to a fall allergen **Excluded criteria:** Patients with thefollowing conditions were excluded: perennial rhinitis with little orno seasonal flare-ups; rhinitis medicamentosa; nonallergic rhinitis;structural nasal obstruction; upper respiratory tract infection;

	acuteor chronic pulmonary disorder. Medications for allergic rhinitis andconjunctivitis were not allowed during the study. Medications thatcould affect nasal or ocular symptoms, including decongestants andanti-inflammatory drugs, and oral or long-acting inhaled b-agonists,theophylline, and leukotriene modifiers were also excluded.Patients who had begun immunotherapy within the previous6 months were excluded.
Interventions	**Intervention Characteristics** Montelukast Cetirizine
Outcomes	*Continuous*: ● Quality of life ● Total eye symptoms ● Nasal symptom score (composite)
Identification	**Sponsorship source:** Merck & CO **Country:** USA **Setting:** **Comments:** **Authors name:** J. Van Adelsberg **Institution:** Merck research laboratories **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: "Patients were randomized in a 5: 2: 5 ratio to montelukast 10 mg, loratadine 10 mg, or placebo treatment groups, respectively." Comment: It is unclear where or from who the ratio was performed.
Allocation concealment (selection bias)	Unclear risk	Comment: Not described
Blinding of participants and personnel (performance bias)	Low risk	Quote: "Blinding was ensured by including matching-image placebo tablets." Comment: Could have been described more.
Blinding of outcome assessment (detection bias)	Unclear risk	Comment: Not described
Incomplete outcome data (attrition bias)	High risk	Comment: No ITT was used in efficacy analyses. Though 93,8% in hthe montelukast group and 94,4% in the laratadine group completed. The drop out was primary due to adverse events or lack of efficacy
Selective reporting (reporting bias)	Unclear risk	Comment: No protocol was located. All relevant outcomes was presented for all completing patients.
Other bias	High risk	Comment: This study was performed with a great help from the montelukast study group. This study was granted by Merck & Co pharmacuticals, where from the first author was from

vanAdelsberg 2003a

Methods	**Study design:** Randomized controlled trial **Study grouping:** **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Montelukast ● *Age (SD)*: 36 (14) ● *Sex (% male)*: 522 (38) Cetirizine

	● *Age (SD)*: 35 (13) ● *Sex (% male)*: 171 (42) **Included criteria:** age 15-85 years with seasonal allergic rhinitisif they had at least a 2 year documented clinical history of allergic rhinitis symptoms durung the spring.and mild to moderate daytime nasal symptomsand a positive skin prick test to one of the allergens active during the study seasonnon smokersgood mental and physical Health other than having allergic rhinitis or mild astma (only required inhaled short acting beta 2 agonist. **Excluded criteria:** upper respiratory infection,sinuitis, infectious rhinitis, ocular infection, perennial rhinitis without seasonal flare up, rhinitis medicamentosa, non allergic rhinitis or other significant structural nasal obstructionpatients who required medication other than study medication for treating allergic rhinitis or conjuctivitis
Interventions	**Intervention Characteristics** Montelukast Cetirizine
Outcomes	*Continuous*: ● Quality of life (Rhinoconjunctivitis QOL) ● Composite symptom score (day- and nighttime symptoms) ● End-of-day eye symptoms
Identification	**Sponsorship source:** **Country:** USA **Setting:** **Comments:** **Authors name:** Janet van Adelsberg **Institution:** Merck and Co **Email:** **Address:**
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:**

	Dichotomous outcomes: **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Comment: computer generated allocation
Allocation concealment (selection bias)	Unclear risk	Comment: Not described.Double-dummy tecnique was used.
Blinding of participants and personnel (performance bias)	Low risk	Comment: Blinding was ensured in the two active treatment groups by including matching-image placebo tablets of the other treatments.matching image placebo tablets
Blinding of outcome assessment (detection bias)	Unclear risk	Comment: evaluation of the effectiveness made independently by patients and physicians(otherwise Not described)
Incomplete outcome data (attrition bias)	Low risk	Comment: ITT was used in efficacy analyses - not in the symptom analyses. Though 96% and 96.5% of the patients in the two active groups completed the study.described figure 1
Selective reporting (reporting bias)	Unclear risk	Unclear
Other bias	High risk	Comment: The montelukast spring allergic rhinitis study group took a very active part in creating this study. Further Merck an Co - farmacutical industry - was primary sponser for this project.

Footnotes

Characteristics of excluded studies

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

References to studies

Included studies

Chen 2006

Chen,S. T.; Lu,K. H.; Sun,H. L.; Chang,W. T.; Lue,K. H.; Chou,M. C.. Randomized placebo-controlled trial comparing montelukast and cetirizine for treating perennial allergic rhinitis in children aged 2-6 yr. Pediatric allergy and immunology : official publication of the European Society of Pediatric Allergy and Immunology 2006;17(1):49-54. [DOI: PAI351 [pii]]

Lu 2009

[Empty]

Meltzer 2000

Meltzer,E. O.; Malmstrom,K.; Lu,S.; Prenner,B. M.; Wei,L. X.; Weinstein,S. F.; Wolfe,J. D.; Reiss,T. F.. Concomitant montelukast and loratadine as treatment for seasonal allergic rhinitis: a randomized, placebo-controlled clinical trial. The Journal of allergy and clinical immunology 2000;105(5):917-922. [DOI: S0091-6749(00)80014-7 [pii]]

Nayak 2002

Nayak,A. S.; Philip,G.; Lu,S.; Malice,M. P.; Reiss,T. F.; Montelukast Fall Rhinitis Investigator Group. Efficacy and tolerability of montelukast alone or in combination with loratadine in seasonal allergic rhinitis: a multicenter, randomized, double-blind, placebo-controlled trial performed in the fall. Annals of Allergy, Asthma & Immunology : Official Publication of the American College of Allergy, Asthma, & Immunology 2002;88(6):592-600. [DOI: S1081-1206(10)61891-1 [pii]]

Philip 2002

Philip,G.; Malmstrom,K.; Hampel,F. C.; Weinstein,S. F.; LaForce,C. F.; Ratner,P. H.; Malice,M. P.; Reiss,T. F.; Montelukast Spring Rhinitis Study Group. Montelukast for treating seasonal allergic rhinitis: a randomized, double-blind, placebo-controlled trial performed in the spring. Clinical and experimental allergy : journal of the British Society for Allergy and Clinical Immunology 2002;32(7):1020-1028. [DOI: 1422 [pii]]

Philip 2007

[Empty]

vanAdelsberg 2003

van Adelsberg,J.; Philip,G.; Pedinoff,A. J.; Meltzer,E. O.; Ratner,P. H.; Menten,J.; Reiss,T. F.; Montelukast Fall Rhinitis Study Group. Montelukast improves symptoms of seasonal allergic rhinitis over a 4-week treatment period. Allergy 2003;58(12):1268-1276. [DOI: 261 [pii]]

vanAdelsberg 2003a

van Adelsberg,J.; Philip,G.; LaForce,C. F.; Weinstein,S. F.; Menten,J.; Malice,M. P.; Reiss,T. F.; Montelukast Spring Rhinitis Investigator Group. Randomized controlled trial evaluating the clinical benefit of montelukast for treating spring seasonal allergic rhinitis. Annals of Allergy, Asthma & Immunology : Official Publication of the American College of Allergy, Asthma, & Immunology 2003;90(2):214-222. [DOI: S1081-1206(10)62144-8 [pii]]

Excluded studies

Data and analyses

1 Montelukast vs Antihistamin

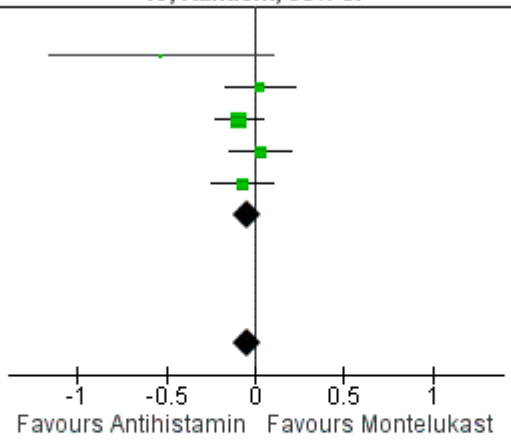
Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Livskvalitet (Quality of Life)	5	2767	Std. Mean Difference (IV, Random, 95% CI)	-0.05 [-0.13, 0.04]
1.1.1 Quality of life, Change values, 2-12 weeks	5	2767	Std. Mean Difference (IV, Random, 95% CI)	-0.05 [-0.13, 0.04]
1.2 Fraværsdage (Day away from work/school)	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable

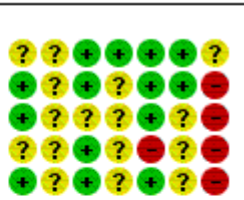
1.3 Øjensymptomer (Eye symptoms)	6	2954	Std. Mean Difference (IV, Random, 95% CI)	-0.09 [-0.19, 0.00]
1.3.1 Eye symptoms, Change values, 2-4 weeks	5	2914	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.17, 0.00]
1.3.2 Ocular itching, change value, 12 weeks	1	40	Std. Mean Difference (IV, Random, 95% CI)	-0.53 [-1.17, 0.10]
1.4 Næsesymptomer Total (Total nasal symptom)	7	3847	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.15, -0.01]
1.4.1 Total nasal symptom, Change values, 2-4 weeks	7	3847	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.15, -0.01]
1.5 Tilstoppet næse (Obstruction)	4	1633	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.09, 0.11]
1.5.1 Obstruction, Change values, 2-12 weeks	4	1633	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.09, 0.11]
1.6 Døsighed (Dizziness)	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable
1.7 Abdominalsmerter (Abdominal pain)	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable
1.12 Næseklør (Nasal itching)	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.53 [-1.25, 0.19]
1.12.1 Nasal Itching, Change values, 2-12 weeks	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.53 [-1.25, 0.19]
1.13 Nysen (Sneezing)	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.46 [-1.32, 0.39]
1.13.1 Sneezing, Change values, 2-12 weeks	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.46 [-1.32, 0.39]
1.14 Næseflåd (Rhinorrhea)	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.21 [-0.77, 0.36]
1.14.1 Rhinorrhea, Change values, 2-12 weeks	4	1633	Std. Mean Difference (IV, Random, 95% CI)	-0.21 [-0.77, 0.36]

Figures

Figure 1 (Analysis 1.1)

Study or Subgroup	Montelukast Mean	SD	Total	Antihistamin Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
1.1.1 Quality of life, Change values, 2-12 weeks								
Chen 2006	19.15	20.71	20	31.15	23.36	20	1.7%	-0.53 [-1.16, 0.10]
Nayak 2002	1.09	1.07983823	155	1.06	1.1507223	301	17.5%	0.03 [-0.17, 0.22]
Philip 2002	0.89	1.14212805	348	0.99	1.12663875	602	36.9%	-0.09 [-0.22, 0.04]
vanAdelsberg 2003	1.12	1.28224751	448	1.08	1.1342033	180	21.9%	0.03 [-0.14, 0.21]
vanAdelsberg 2003a	0.9	1.10739558	522	0.98	1.1342033	171	22.0%	-0.07 [-0.24, 0.10]
Subtotal (95% CI)			**1493**			**1274**	**100.0%**	**-0.05 [-0.13, 0.04]**
Heterogeneity: Tau² = 0.00; Chi² = 4.08, df = 4 (P = 0.40); I² = 2%								
Test for overall effect: Z = 1.09 (P = 0.28)								
Total (95% CI)			**1493**			**1274**	**100.0%**	**-0.05 [-0.13, 0.04]**
Heterogeneity: Tau² = 0.00; Chi² = 4.08, df = 4 (P = 0.40); I² = 2%								
Test for overall effect: Z = 1.09 (P = 0.28)								
Test for subgroup differences: Not applicable								

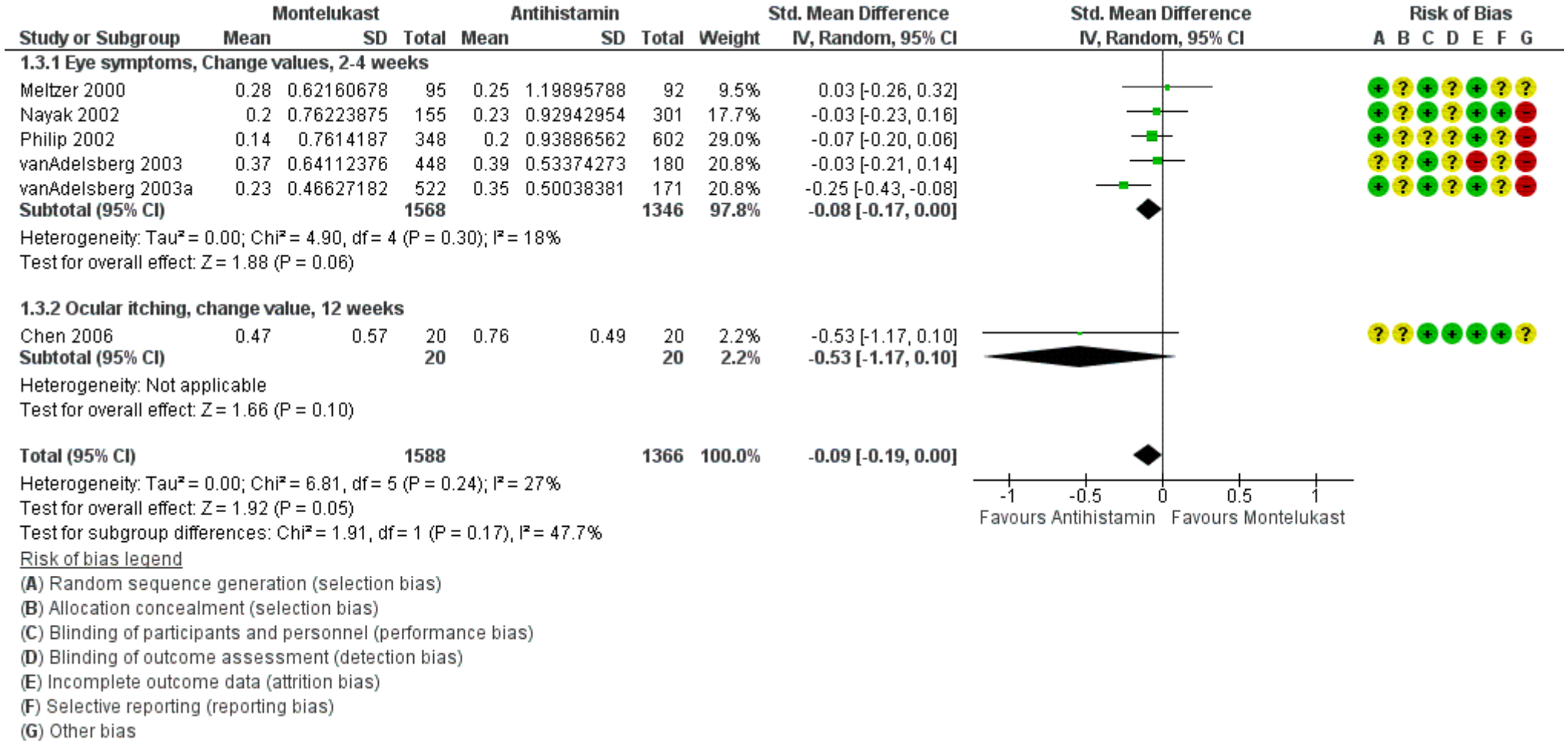




Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

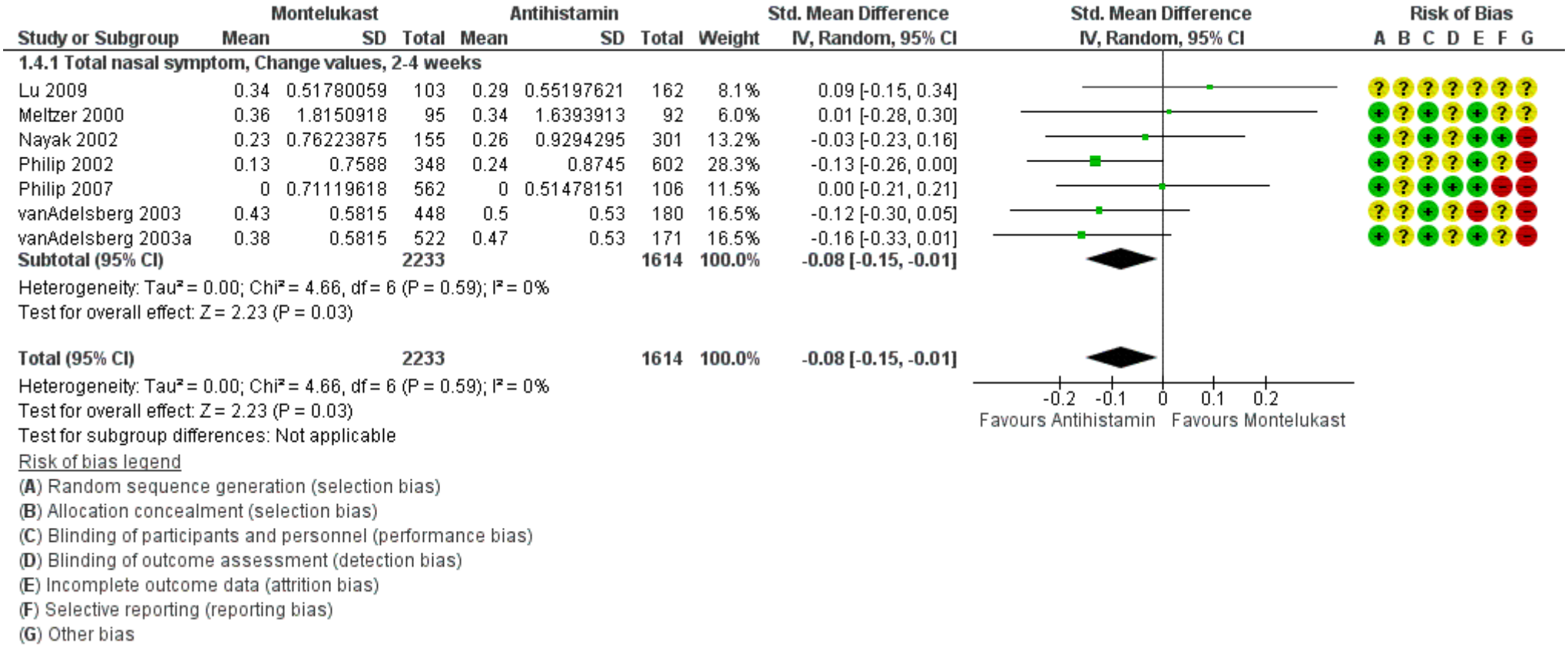
Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.1 Livskvalitet (Quality of Life).

Figure 2 (Analysis 1.3)



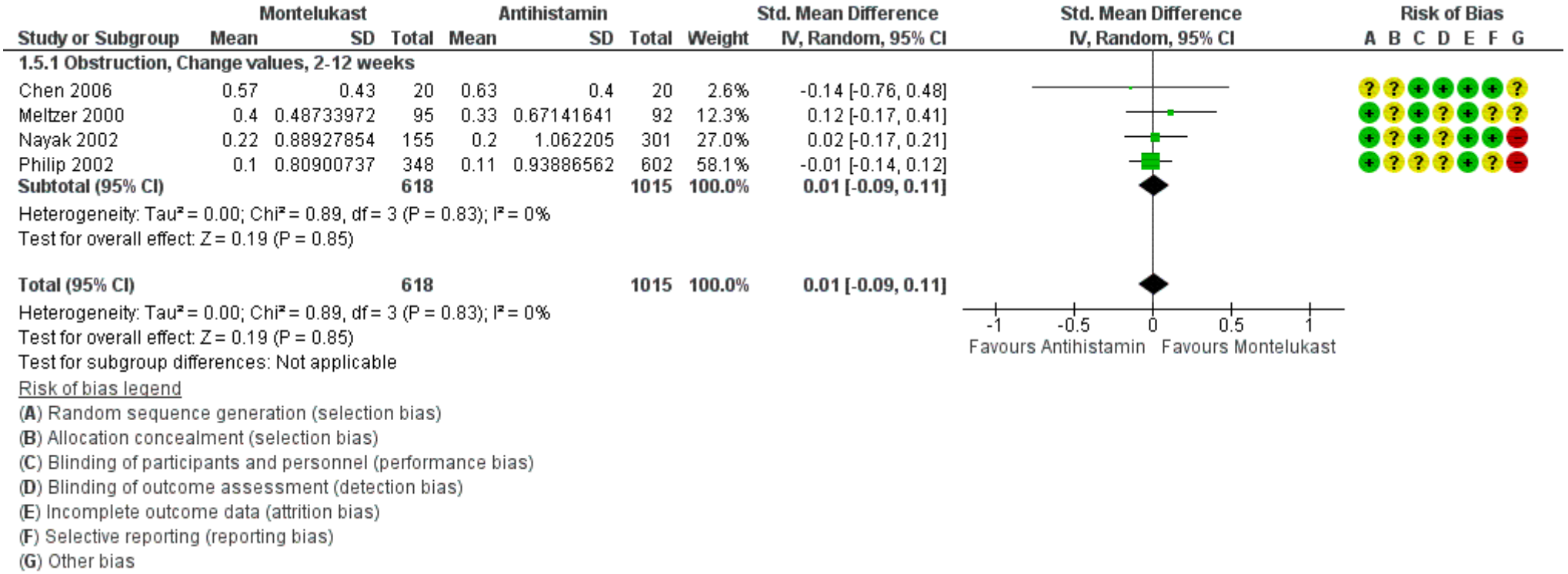
Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.3 Øjensymptomer (Eye symptoms).

Figure 3 (Analysis 1.4)



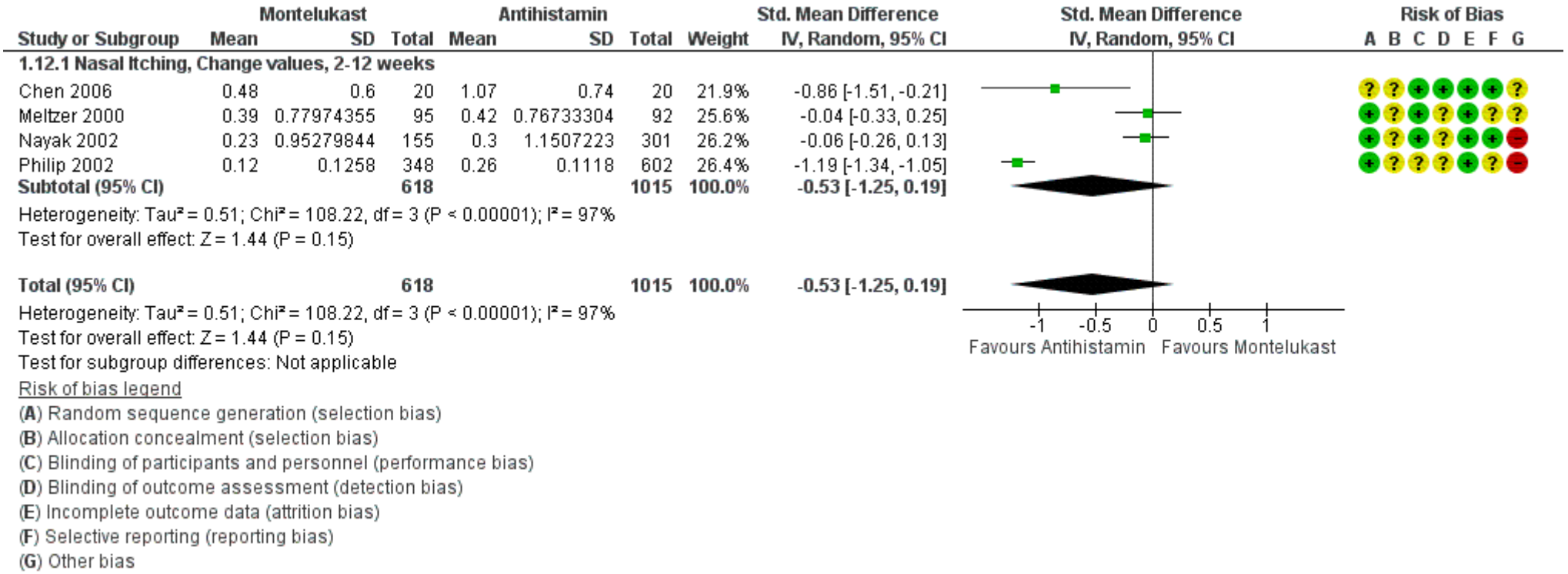
Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.4 Næsesymptomer Total (Total nasal symptom).

Figure 4 (Analysis 1.5)



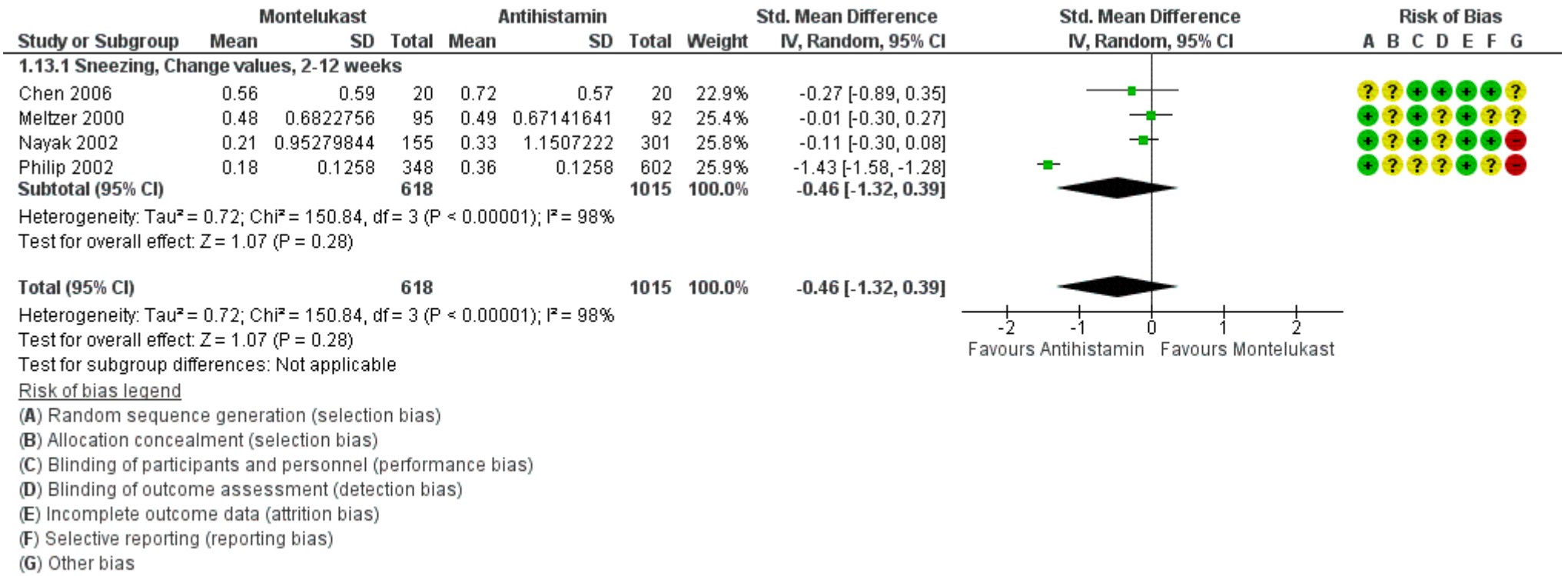
Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.5 Tilstoppet næse (Obstruction).

Figure 5 (Analysis 1.12)



Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.12 Næseklør (Nasal itching).

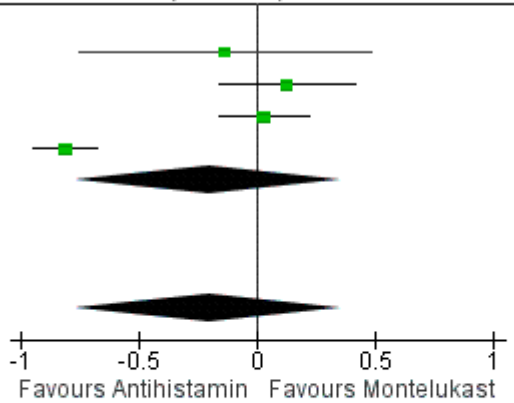
Figure 6 (Analysis 1.13)



Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.13 Nysen (Sneezing).

Figure 7 (Analysis 1.14)

Study or Subgroup	Montelukast Mean	SD	Total	Antihistamin Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
1.14.1 Rhinorrhea, Change values, 2-12 weeks								
Chen 2006	0.49	0.58	20	0.56	0.4	20	20.6%	-0.14 [-0.76, 0.48]
Meltzer 2000	0.5	0.77974355	95	0.4	0.76733304	92	25.7%	0.13 [-0.16, 0.42]
Nayak 2002	0.28	0.92103849	155	0.25	1.10646374	301	26.6%	0.03 [-0.17, 0.22]
Philip 2002	0.14	0.1398	348	0.24	0.1118	602	27.1%	-0.81 [-0.95, -0.68]
Subtotal (95% CI)			**618**			**1015**	**100.0%**	**-0.21 [-0.77, 0.36]**
Heterogeneity: Tau² = 0.30; Chi² = 67.06, df = 3 (P < 0.00001); I² = 96%								
Test for overall effect: Z = 0.72 (P = 0.47)								
Total (95% CI)			**618**			**1015**	**100.0%**	**-0.21 [-0.77, 0.36]**
Heterogeneity: Tau² = 0.30; Chi² = 67.06, df = 3 (P < 0.00001); I² = 96%								
Test for overall effect: Z = 0.72 (P = 0.47)								
Test for subgroup differences: Not applicable								



Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

Forest plot of comparison: 1 Montelukast vs Antihistamin, outcome: 1.14 Næseflåd (Rhinorrhea).