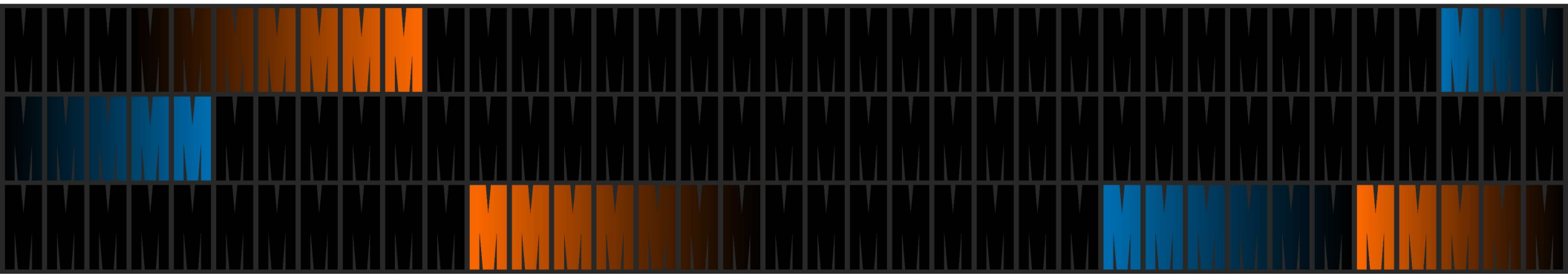
DEVELOPING AN EFFECTIVE ‘OVERVIEW OF INCLUDED STUDIES AND SYNTHESES’ TABLE

Date: 02/12/2023 | Presenter: Miranda Cumpston



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MONASH UNIVERSITY recognises that its Australian campuses are located on the unceded lands of the people of the Kulin nations, and pays its respects to their Elders, past and present.

MIRANDA CUMPSTON

- Australian Living Evidence Collaboration, Monash University
- Associate Editor, Cochrane Handbook (lead author of Chapter III: Reporting the review)
- Methods Editor, Cochrane Public Health, Cochrane Central Editorial Service
- No conflicts to declare

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POLL 1: GETTING TO KNOW YOU

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WHY DO WE SUMMARISE INCLUDED STUDIES?

- To communicate to readers and help them navigate the review:
  - What studies are included
  - How synthesis is structured
- Especially important when it's hard to keep track of which studies are relevant to which analysis:
  - Multiple intervention types
  - Multi-component interventions
  - Large numbers of included studies
  - Different study designs
  - Synthesis methods other than meta-analysis

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Characteristics of studies

Characteristics of included studies [ordered by study ID]

Jump to: **excluded studies** | **awaiting classification** | **ongoing studies**

Aittasalo 2012

Study characteristics	
Methods	Randomised controlled trial **Aim:** to evaluate a 6-month intervention to promote walking in office workers using pedometers and email messages
Participants	**Population description:** insufficiently physically active employees at 20 office-based work sites (specifics not described) **Intervention group:** 123 participants **Control group:** 118 participants **Location:** Southern Finland **Inclusion criteria:** respondents to the ba… volunteered for the study and were insufficiently physically active for cardiorespiratory he… ntensity physical activity or less than 75 minutes of vigorous-intensity physical activity per w… a week) and perceived no restrictions for physical activity **Recruitment:** 10 occupational healthcare units (OHCs) recruited 20 work sites for which they provide services. Baseline questionnaires were circulated to all 2230 employees. 646 responded, of whom 241 met the eligibility criteria **Demographics:** age: mean (SD) for control 45.3 (9.1), for intervention 44.1 (9.4) years Gender: control 44% male, intervention 29% male Highest level of education: control basic 9%, polytechnic or vocational school 64%, university degree 27%, intervention basic 6%, polytechnic or vocational school 64%, university degree 30%
Interventions	**Duration:** 6 months **Intervention:** the STEP programme consisted of 2 phases ***Pre-intervention phase:*** a 1-hour preliminary meeting at each work site held by a researcher and providing information on the intervention as well as on health benefits and recommendations for physical activity (PA) and walking. The use of stairs was emphasised from the aspect of health and easy applicability. Employees were supplied with walking leaflets, pedometers (Omron, Walking Style II), and printed logbooks. Employees were instructed to assess their average daily steps with the pedometer over 3 days

14 studies
48 pages

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POLL 2: WHAT SHOULD WE SUMMARISE?

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SUMMARISE THE INFORMATION **MOST USEFUL** TO YOUR READERS

- Characteristics that:
  - Are important to your objectives
  - Will help understand your synthesis
  - Are Important to implementation and applicability
  - Vary importantly across studies in the review
- **Clear and easy to refer to, printable**

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CONSIDER USING

- study ID (name and date)
- location/country
- study design
- sample size
- categories of population or intervention used to structure the synthesis (comparisons, subgroups)
- And maybe: outcome(s) reported and/or included in synthesis, measurement tools used, timepoints measured.

CONSIDER **NOT** USING

- Risk of bias – this is assessed based on the results, not the study overall
- Secondary characteristics
- Characteristics that are the same for all or most studies
- Results – grouped by study and not by outcome, isolated from synthesis and assessment of certainty

Author [56–64]	Sample/Diagnostic Criteria	Duration (Months)	Intervention and Comparative Statistical Analysis of the Body Composition	BW (kg or *z*-Score/%)	BF (kg or % of BW)	FFM (kg/)	LM (kg)	BMI (kg/m^2 or % of 95th Percentile or *z*-Score)	WC (cm)	Changes in Body Composition Mean ± sd or Mean ± (SE) or Mean (CI, 95%)
Armeno et al., 2011 [57]	n = 86 IG1: 47 IG2: 39 Girls: 58% Age: 11–19 years old Population: South America (Argentina) Obesity and Insulin Resistance, source of diagnostic criteria: 95th Percentile / NE	4	**Dietary intervention** Within groups: IG1 (low insulin response diet) IG2 (conventional diet) Between groups	**YES (kg and *z*-score)** NE NE NS	**YES (kg)** NE NE NE	NO	NO	**YES (kg/m^2 and *z*-score)** NE NE NS	**YES** NE NE $p < 0.05$	**BW**: IG1: 8.9 kg IG2: −6.4 kg IG1: −0.53 ± 0.5 (*z*-score) IG2: −0.54 ± 0.4 (*z*-score) **BF**: IG1: −5.12 kg IG2: NE **BMI**: IG1: −3.9 kg/m^2 IG2: −2.9 kg/m^2 IG1: −0.35 ± 0.2 (*z*-score) IG2: −0.36 ± 0.2 (*z*-score) **WC**: IG1: −9.1 ± 4.8 cm IG2: −6.6 ± 4.6 cm
Van der Aa et al., 2016 [58]	n = 42 IG1: 23 IG2: 19 Girls: 66% Age: 10–16 years old Population: Europe (The Netherlands) Obesity and Insulin Resistance, source of diagnostic criteria: NE/NE	18	**Physical exercise intervention, pharmacology** Within groups: IG1 (metformin) IG2 (placebo) Between groups	**YES (kg)** NE NE NE	**YES (kg and % of BW)** NE NE $p < 0.05$/NS	**YES** NE NE $p < 0.05$	NO	**YES (kg/m^2)** NE NE $p < 0.05$	**YES** NE NE NE	**BW** [(3)]**:** IG1: 1.6 kg (−4.2, 5.9) IG2: 12 kg (2.7, 17) **BF** [(3)]: IG1: −0.2 kg (−5.2, 2.1) IG2: 2 kg (1.2, 6.4) IG1: −3.1% (−4.8, 0.3) IG2: −0.8% (−3.2, 1.6) **FFM** [(3)]**:** IG1: 2.0 kg (−0.1, 4) IG2: 4.5 kg (1.3, 11.6) **BMI** [(3)]: IG1: 0.2 kg/m^2 (−2.9, +1.3) IG2: 1.2 kg/m^2 (−0.3, 2.4) **WC** [(3)]: IG1 and IG2 NE (cm)

POLL 3: HOW SHOULD WE SORT THE INFORMATION?

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Table I: Example OSIS table illustrating key study characteristics, ordering studies based on intervention type

Study name (year) country of conduct	Study design	Other key detail of intervention	Population (sample size: Intervention/ Control)	Outcome domains with available data (synthesis method/metric)	Specific outcome measure	Time point of measurement	Method of synthesis
Intervention category: Education & financial incentive							
Doyle et al 2010 Germany	RCT	Tailored to individuals	Adults & children (aggregated) (n=253/245)	Mental health (MA); wellbeing (ED)	1.GHQ-12 2.HADS 3.self-reported 4. SF-36	6 months 12 months	1.MA 2.MA 3.Summary 4.MA
Thomson et al 2009 USA	CBA	Not tailored	Women (adult) (n=57/52)	Mental health (MA); respiratory health (MA)	1. HADS; 2. Asthma symptoms	12 months	1. MA 2. MA
Intervention category: Financial only incentive							
Brown et al 2012 UK	RCT	Not tailored	Adults (men & women) (n=126/128)	Respiratory health (Range)	Morning wheeze	2 months	Summary

MA: meta-analysis of standardised effect sizes. ED: Effect direction. Range: effect range

Table II: Example table illustrating components of multi-component interventions, sorted by comparator.

Study [1]	Comparator	Self-management intervention components							Outcome domain	Outcome measure	Time points (time frame)[2]
1	Attention control	BEH			MON	CON	SKL	NAV	Pain	Pain VAS	1 mth (short), 8 mths (long)
									Function	HAQ disability subscale	1 mth (short), 8 mths (long)
2	Acupuncture	BEH		EMO		CON	SKL	NAV	Pain	Pain on walking VAS	1 mth (short), 12 mths (long)
									Function	Dutch AIMS-SF	1 mth (short), 12 mths (long)
4	Information	BEH	ENG	EMO	MON	CON	SKL	NAV	Pain	Pain VAS	1 mth (short)
									Function	Dutch AIMS-SF	1 mth (short)
12	Information	BEH					SKL		Pain	WOMAC pain subscore	12 mths (long)
3	Usual care	BEH		EMO	MON		SKL	NAV	Pain	Pain VAS*	1 mth (short)
										Pain on walking VAS	1 mth (short)
5	Usual care	BEH	ENG	EMO	MON	CON	SKL		Pain	Pain on walking VAS	2 wks (short)

BEH = health-directed behaviour; CON = constructive attitudes and approaches; EMO = emotional well-being; ENG = positive and active engagement in life; MON = self-monitoring and insight; NAV = health service navigation; SKL = skill and technique acquisition.
ANCOVA = Analysis of covariance; CI = confidence interval; IQR = interquartile range; MD = mean difference; SD = standard deviation; SE = standard error.
Pain and function measures: Dutch AIMS-SF = Dutch short form of the Arthritis Impact Measurement Scales; HAQ = Health Assessment Questionnaire; VAS = visual analogue scale; WOMAC = Western Ontario and McMaster Universities Osteoarthritis Index.
[1]Ordered by type of comparator; [2]Short-term (denoted 'immediate' in the review Kroon et al (2014)) follow-up is defined as <6 weeks, long-term follow-up (denoted 'intermediate' in the review) is ≥6 weeks to 12 months. *Indicates the selected outcome when there was multiplicity in the outcome domain and time frame.

Source: Adapted from Table 9.3.b. McKenzie JE, Brennan SE, Ryan RE, Thomson HJ, Johnston RV. Chapter 9: Summarizing study characteristics and preparing for synthesis. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version 6.3 (updated February 2022). Cochrane, 2022. Available from www.training.cochrane.org/handbook.

Table IV: Example OSIS table illustrating key characteristics of studies, outcomes and analysis methods, sorted alphabetically.

Study	Study design	Overall risk of bias (study level)	Population category (healthy, at-risk)	Type of intervention (social media alone, multi-components)	Comparator	Outcome domains	Specific outcomes	If clustered, was clustering accounted for?
Ahmad 2020	RCT	Unclear	General	Multi-component	No intervention	Health behaviour Psychological health Well-being	Mindfulness Depression Quality of life	-
Baker 2011	RCT	High	Targeted	Multi-component	Non-social media	*not included in analysis	*not included in analysis	-
Bantum 2014	RCT	Unclear	Targeted	Social media only	Non-social media	Health behaviour Body function Psychological health Well-being	MVPA Diet quality Insomnia Depression	-
Booth 2018	ITS		General	Social media only	No intervention	Health behaviours	Outpatient mental health visits	-
Bull 2012	cRCT	High	General	Social media only	Active social media comparator	Health behaviour	Condom use	Yes
Cavalcanti 2019	RCT	HIgh	General	Multi-component	Non-social media	Health behaviours	Breastfeeding	-
Chai 2018	CBA	High	Targeted	Multi-component	No intervention	health behaviours	Smoking rate	-
Chen 2019	RCT	Unclear	Targeted	Social media only	Non-social media	Body function Well-being	HbA1c Quality of life	-
Cheung 2015	cRCT	High	Targeted	Multi-component	Non-social media	Health behaviours	Smoking relapse	We calculated using ICC 0.148

Source: Adapted from Petkovic J, Duench S, Trawin J, Dewidar O, Pardo Pardo J, Simeon R, DesMeules M, Gagnon D, Hatcher Roberts J, Hossain A, Pottie K, Rader T, Tugwell P, Yoganathan M, Presseau J, Welch V. Behavioural interventions delivered through interactive social media for health behaviour change, health outcomes, and health equity in the adult population. Cochrane Database of Systematic Reviews 2021, Issue 5. Art. No.: CD012932. DOI: 10.1002/14651858.CD012932.pub2. Accessed 30 November 2022.

HOW TO SET UP THE TABLE IN REVMAN WEB

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Tables

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1 Overview of included studies and syntheses

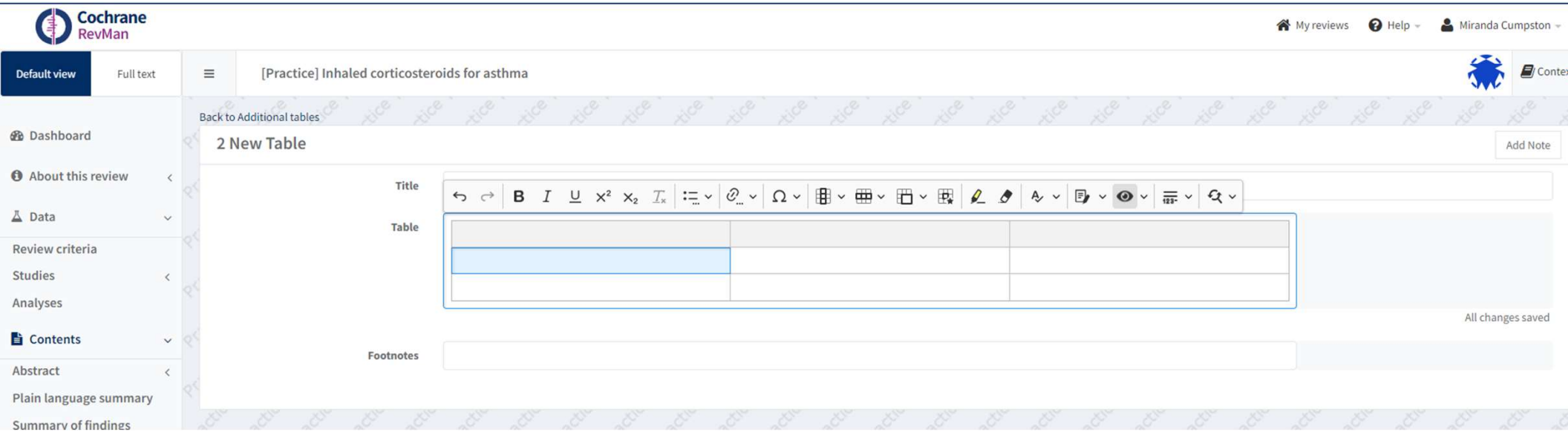
Edit Table | Action | Add Note

Study ID (country)[a]	Study design	N randomised[b]	N (%) who took study inhaler at first signs of exacerbation	Population (age range/ % male)	Asthma severity at baseline (ICS dose at baseline)	Increased ICS dose at first signs of exacerbation[c]	Outcome with available data (synthesis method)
FitzGerald 2004 (Canada)	6-month parallel, DB, PC	290	98 (34)	13+ / 28	NR (635 mcg/d, mean)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA); physician visits (MA)
Foresi 2000 (Italy)	6-month parallel, DB, PC	142	36 (25)	18-65 / 47	Moderate (500-1000 mcg/d, range)	Quadrupled	Adverse events (MA)
Garrett 1998 (New Zealand)	6-month cross-over, DB, PC	28	18 (64)	6-14 / 68	Mild to moderate (not exceeding 800 mcg/d, range)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA); hospital admission (MA)
Harrison 2004 (UK)	1-year parallel, DB, PC	390	207 (53)	16+ / 33	NR (710 mcg/d, mean)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA); physician visits (MA); duration (MA)
Jackson 2018 (USA)	48-week parallel, DB	254	168 (66)	5-11 / 64	Mild to moderate (NR)	Quintupled	Treatment failure ITT (MA); hospital admission (MA)
Martinez 2011 (USA)	44-week parallel, DB, PC	143	143 (100)	6-18 / 57	Mild (≤ 160 µg daily equivalent)	Double	Treatment failure ITT (MA); treatment failure per protocol (MA); adverse events (MA); hospital admission (MA)
Oborne 2009 (UK)	1-year parallel, DB, PC	403	94 (23)	16+ / 32	NR (520 mcg, mean)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA); adverse events (MA)
Rice-McDonald 2005 (Australia)	Cross-over until exacerbation in each phase	22	18 (82)	18+ / 41	Mild and moderate (NR)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA)
Wainwright 2009 (Australia)	1-year parallel, PC	251	187 (75)	3-14 / 60	NR (minimum 125 mcg fluticasone/d; 27% on 500 mcg/day ICS and 9% > 500mcg/day ICS)	Doubled	Treatment failure ITT (MA); treatment failure per protocol (MA); adverse events (MA); physician visits (MA); hospital admission (MA)

DB: double-blind; **ED:** emergency department; **ICS:** inhaled corticosteroids; **ID**: identifier; **ITT**: intention to treat; **MA:** meta-analysis, **N:** number, **NR:** not reported, **PC:** placebo-controlled, **UK:** United Kingdom; **USA:** United States of America.

Footnotes

Planning to submit after 1 January 2024? Enable focused review format in RevMan now. Key benefits.



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FURTHER RESOURCES

- Cochrane Handbook: Chapter 9 (https://training.cochrane.org/handbook/current/chapter-09)
- Cochrane website https://community.cochrane.org/news/cochranes-focused-review-format-now-available
  - RevMan Web Knowledge Base
  - Cochrane Public Health guidance on OSIS tables

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