Have pedometer, will travel, *J Fam Pract* 2008; 57:90–93	
Potential PURL Review Form: Systematic Reviews and Meta-Analyses	
SECTION 1: IDENTIFYING INFORMATION	
1.1 Citation	Bravata DM, Smith-Spangler C, Sundaram V, et al. Using pedometers to increase physical activity and improve health: a systematic review. *JAMA* 2007; 298:2296–2304.
1.2 PubMed ID	18029834
1.3 Nominated by	Sarah-Anne Schumann, MD
1.4 Date nominated	11/20/2007
1.5 Identified through	Table of Contents
1.6 Decision	Potential PURL—Assign Reviewer
1.7 PURLS Editor	Bernard Ewigman, MD, MSPH
1.7 Nomination decision date	11/26/2007
1.8 Initial status	
1.9 Comments	Very simple intervention with nice results. Lack of long-term results may be a limitation, but worth reviewing
1.10 Assigned reviewer	Sarah-Anne Schumann, MD
1.11 Reviewer affiliation	University of Chicago
1.12 Date review due	11/29/2007
SECTION 2: DETAILED STUDY DESCRIPTION	
2.1 What types of studies are included in this review?	26 RCTs and observational studies, in English. Studies assessed pedometer use in adult outpatients, with at least 5 participants, and reported a change in number of steps walked per day
2.2 What is the key question addressed by this review? Summarize the main conclusions and any strengths or weaknesses	Association between pedometer use and physical activity in adults; 2767 participants, mean age 49 years; 9 studies enrolled only women, and 15% of total were men; 93% white, most overweight, normal blood pressure (BP) and controlled lipids; most participants were inactive at baseline (7473 steps per day mean) In 8 RCTs, 155 participants increased their activity by 2491 steps more than 122 controls; if the study with highest increase is excluded, there is a 2004-step difference. In observational studies, pedometer users increased activity by 2183 steps/day over baseline (26.9% increase in physical activity); having a step goal was key predictor of increased physical activity; also needed to require a step diary to have a difference; less change in workplace interventions; body-mass index (BMI) decreased 0.38 from baseline, systolic BP decreased 3.8, diastolic BP 0.3; no changes glucose or

	lipids, which were normal at baseline *Note:* 2000 steps=1 mile
SECTION 3: INTERNAL VALIDITY	
3.1 Study addresses an appropriate and clearly focused question	Well addressed: an association was established between pedometer use and physical activity among adults in outpatient setting; also an association was established between pedometer use and change in body weight, lipids, fasting glucose and insulin, BP; association between daily step goal and improvements in health outcomes
3.2 A description of the methodology used is included	Well addressed
3.3 The literature search is sufficiently rigorous to identify all the relevant studies	Well addressed
3.4 Study quality is assessed and taken into account	Well addressed
3.5 There are enough similarities between selected studies to make combining them reasonable	Well addressed
3.6 Are patient-oriented outcomes included? If yes, what are they?	Yes; health outcomes (see 3.1)
3.7 Is the funding of the review a potential source of bias? If yes, what measures, if any, were taken to insure scientific integrity?	No
SECTION 4: EXTERNAL VALIDITY	
4.1 To which patients might the findings apply? (Include patients in the meta-analysis and other patients to whom the findings may be generalized)	Adult outpatients
4.2 In what care settings might the findings apply, or not apply?	Primary care
4.3 To which clinicians or policy-	Primary care, public health, obesity clinics

makers might the findings be relevant?	
SECTION 5: REVIEW OF SECONDARY LITERATURE	
5.1 DynaMed excerpts	According to DynaMed references, 2 small studies of pedometer use in family practice found no differences in walking or weight between the intervention and control patients.
5.2 DynaMed citation/access date	DynaMed editorial team. Physical activity for cardiovascular disease prevention. Last updated 11/23/07. Available at: www.ebscohost.com/dynamed. Accessed on 11/23/07:
5.3 UpToDate excerpts	Nothing specific about pedometers
5.4 UpToDate citation/access date	
5.5 PEPID PCP excerpts	Nothing specific about pedometers
5.6 PEPID citation/access data	
5.7 Other excerpts (USPSTF; other guidelines; etc)	
5.8 Citations for other excerpts	
SECTION 6: CONCLUSIONS	
6.1 How well does the study minimize sources of internal bias and maximize internal validity? Give one number on a scale of 1 to 7 (1=extremely well; 4=neutral; 7=extremely poorly)	**2**
6.2 If 6.1 was coded as 4 or below, please describe the potential bias and how it could affect the study results. Specifically, what is the likely direction in which potential sources of internal bias might affect the results?	
6.3 Are the results of this review relevant to the health care needs of patients cared for by "full scope" family physicians, general internists, general pediatricians, or general ob/gyns? Are they applicable without significant change in programs or policies such as	**1**

the organization or financing of practice? Give one number of a scale of 1 to 7 (1=absolutely relevant; 4=neutral; 7=not at all relevant)	
6.4 Please explain your response to item 6.3.	Applies to almost all adult patients; inexpensive
6.5 What is the main recommendation for change in practice, if any? Include a description of the change in practice, the indication(s), and the target population.	When recommending exercise program, some patients may benefit from using a pedometer
SECTION 7: EDITORIAL DECISIONS	
7.1 FPIN PURLs editorial decision	PURL—Forward to JFP Editor for interest in JFP publication
7.2 FPIN PURLS Editor	Bernard Ewigman, MD
7.3 Date of decision	November 29, 2007
7.4 Brief summary of decision	***In favor of this being a practice changer are several factors:*** 1) This simple intervention appears to improve average daily walking by more than 2000 steps, or about a mile a day. 2) Individual RCTs have had mixed results; this systematic review shows that there is a definite positive benefit in the populations studied. 3) Neither UpToDate nor PEPID mention pedometers. DynaMed mentions them but primarily in the context of inconclusive or negative studies. ***Against it being a practice changer:*** 1) The baseline steps per day was ~7000 or about 3.5 miles. The patients in these studies were already somewhat active and probably highly motivated since they enrolled in an RCT. The authors did note that lower number of baseline steps was associated with greater improvement in activity rates. 2) The population for which this intervention might be effective is probably limited (highly motivated, no disabling chronic diseases, already fairly active, etc). Nonetheless, that accounts for a significant number of patients and this is such a simple thing to recommend. 3) Unclear how effective this is long-term. 4) Challenge to implementation: Patients must set a step goal and keep a log or diary. This requires patient education and motivation. We think that the pros outweigh the cons: It is simple, and though it does not address all patients

	needs to increase exercise, it does address a large portion. Increased physical activity of even a mile a day is a good thing, even if it is short-term. We can't think of any adverse effects of using a pedometer. We are all going to go out and buy pedometers and start recommending them to our patients!