Table 1. Key Characteristics of Included Studies.

First Author	Study population	Setting & country	Sample size Include power calculation if available	Description of intervention, controls and provider	Duration & intensity	Applicability to UK
Azad 2008	Women with heart failure 63-89 years	Community dwelling but intervention in out-patient clinic **Country:** Canada	**N= 91** (I =45, C =46) **Loss to follow up (FU). I=0,C=7** **Power Calculation (PC) =** 0.8 to give a 24.42 point difference in MLHFC score effect size 0.58	**COMPLEX INTERVENTION** Included medical care, exercise programme, dietary education & counselling". **Control:** Usual care **Provider:** Multi Disciplinary team	6 weeks, 12 visits, Pre intervention phone call, 1st visit, 6 weeks and 6 months FU	3
Barnason 2003	Coronary Artery Bypass Graft (CABG*) patients with Ischaemic Heart Failure 65 years or older	Home **Country:** USA	**N= 35** (I =18, C =17) **Loss to FU.** Not given **P C** underpowered	**NUTRITIONAL EDUCATION** Home telephone "health Buddy". Automated question and answer by phone which assessed patient responses and dispensed automated advice as per standardised protocol. This assessed symptoms & strategies used to overcome them; educated on Coronary Artery Disease risk factor modification and positively reinforced **Control:** Usual patient education and counselling provide to CABG* patients prior to hospital discharge. **Provider:** Research nurses	Daily basis, 10 minutes to complete for 6 weeks.	4
Bernstein 2002	Community dwelling functionally impaired over 69 years	Community Country: USA	**N= 70** (I =38, C =32) *Different for serum biochemical markers* **Loss to FU.** Not reported, although intention to treat analysis**.** **PC** Not reported	**NUTRITIONAL EDUCATION** Personalized education programme: intake of 5 vegetables a day, 3 servings a day of calcium rich foods, & general nutritional information coupled with behaviour modification techniques. **Control:** Exercise group to improve strength and balance. **Provider:** Unclear – possibly dieticians	8 home visits, bi-weekly phone contact, monthly letters for 6 months, similar frequency for I & C	2

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Boult 2001 Boult 1998	Medicare beneficiaries aged 70 or older classified at high risk of repeated admissions to hospital, Emergency Room and nursing homes and use of medications.	Ambulatory clinic in community hospital **Country** USA	**N= 568** **(I =294, C =274)** **Loss to FU:** analysed by intention to treat, which included 46 I who dropped out, C numbers not given. **PC:** Enrolment of 227 in each group was projected to provide 90% power to detect a clinically and statistically sign difference (α=0.05) between groups' hypothesized 18 month hospital admission rates 30% vs 45%)	**COMPLEX INTERVENTION** Comprehensive assessment followed by interdisciplinary primary care Home visit Social worker, 2 visits to Gerontological Evaluation and Monitoring (GEM) clinic seeing gerontological Nurse Practitioner and geriatrician followed by individualised plan delivered by GEM primary care team. Minimal dietary intervention based on asst of nutritional risk **Control:** Notified physician that participant at high risk of repeated hospitalization, then "usual" care. **Provider:** Nurse	6 months GEM program followed by usual care, follow up from randomisation 6,12 & 18 months	3
Bradbury 2006	Edentulous patients seeing dental student at clinics for replacement dentures with Fruit Vegetable intake<500g per day	Dental student clinics hospital **Country** UK	**N= 160** At randomisation but excluded many participants after this. **(I =34, C =32)** **Loss to FU. I=4C=4,** not analysed on intention to treat **PC** 80% for a difference of 1 serving	**NUTRITIONAL EDUCATION** 2x1-1 counselling sessions with nutritionist & tailored written package **Control:** Normal care only **Provider:** Nutritionist	18 months;	2
Campbell 1998 Murchie 2003 **Campbell 1998a**	Coronary heart disease (CHD) patients under 80 years without terminal illness, dementia or being housebound	Nurse run clinics in General Practice **Country** Scotland	**N= 1343** **(I =673 564, C =670 534)** Varied according to outcome Outcome questionnaire I=593, c=580 Practice data collected I=635, C=630 **Loss to FU**: I/C: 22/25 died; 11/8 moved; 4/2 dementia; 1/3 terminal cancer; 0/2 severe stroke Withdrawals reported as similar I/C total=92 Loss to follow up = 245 @ 4 years Intention to treat analysis **PC**: 80% to detect 10% change in patients receiving secondary prevention. with 10% dropout which study was well within at completion	**COMPLEX INTERVENTION** Nurse run clinics, 1st attendance in first 3 months, then follow up every 2-6 months depending on clinical circs. Each clinic visit: symptom review →referral; review drugs; Blood pressure & lipids assessed → general practitioner (GP); behavioural risk factors (diet, exercise, smoking)→ change negotiated Diet & exercise leaflets. **Control:** Usual care. **Provider:** Health Visitors, District Nurse, Practice Nurse	1 year, follow up 1 year,1year outcome, 4 years outcome	2

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Campbell 2008	Patients with stage 4 chronic kidney disease	Pre dialysis out patient clinic **Country** Australia	**N= 62** (I =24, C =26) Variety according to outcome collected **Loss to FU.**5/1 total 6 NOT analysed on intention to treat. See p 751 66 originally in sample, 4 refused consent, 6 excluded before baseline assessment. **PC:** underpowered	**NUTRITIONAL EDUCATION** Nutritional counselling, individualised dietary prescription & regular telephone follow up **Control:** Written material only As provided in regular clinical practice **Provider:** Dietician	12 weeks, consisted of Individual consultation at baseline for up to 60 minutes followed by telephone consultation biweekly for 1st month, then monthly	3
Elder 1995	Members of Health Maintenance Organisation (HMO*) aged 65+ (medicare beneficiaries engaged in risk sharing w HMO*)	Community centres **Country** USA	**N=** enrolled 1800, but 798 "active" at 4 years (I =405, C =393) **Loss to FU.**1002 over 4 years **PC** not reported	**COMPLEX INTERVENTION** 8 x 2 hr workshops with written manuals for each participant, 4 looked at exercise, nutrition, relaxation and self care. Completed Health risk assessment (HRA$^{\Delta}$). Goal setting, individual counselling, which featured nutrition management. 33% goals set=nutritional **Control:** Completed Health risk assessment HRA$^{\Delta}$ only No related feedback **Provider:** HMO*	24 months; workshops& goal setting (1st 12 months) counselling, goal setting (next 12 month). Annual interviews for 3 additional years	3
Harari 2004	Constipated and faecally impacted stroke patients	Out patient, ward setting or at home. **Country** England	**N= 146** (I =73, C =73) **Loss to FU.** at 12 month completion: I/C=55/51 remained **PC** 90% power, assuming 20% dropout. Actual dropout 27% at 12 months	**COMPLEX INTERVENTION** Physical function history, digital rectal exam, bowel symptom history, Education **Control:** Usual care, but provider notified so alerted to fact of bowel problem. **Provider:** Nurse	One off assessment, leading to targetted patient and carer education, diagnostic summary & treatment recommendations to general practitioner	2

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Hjerkinn 2005	Men with high risk of coronary vascular disease (CVD)	Unclear ? hospital out patient, or health clinic **Country** Norway	**N= 563** (I: 1=139, 2=141, 3=139 C = 142) loss of 2 participants unexplained table 4; loss of 5 participants in table 2 at baseline **Loss to FU** given as 76 p585, but table 2=73; table 4 = 72 **P C** Not reported	**COMPLEX INTERVENTION** 4 groups: 1=Individualised dietary counselling with vegetable spread provision & placebo caps 2=Dietary counselling + polyunsaturated fatty acid (PUFA) supplementation ; 3=PUFA supplementation **Control:** Placebo supplementation. **Provider:** Nutritionist	3 year follow up; Counselling 30-45 minute at randomisation, 30 minute at 3 months, 6 monthly phone contact or visit thereafter	3
Ho 1991	Those aged over 50 years free living ambulatory, no history of invasive cancer.	Retirement community **Country** USA	**N= 180** (I1 A =60 I2B = 59, C =58) **Loss to FU** =38 at 3 months p 218 **PC:** Not reported Group C excluded from many analyses "to avoid Hawthorne effect" group C letter only	**COMPLEX INTERVENTION** I1 (A). Comprehensive educational program including compliance enhancement and free fibre cereal I2 (B) Free fibre cereal plus letter **Control:** Letter only **Provider:** Not specified	3 months : Group A only contingency contracts, Monthly newsletter, 2 group meetings, daily record keeping, recipe contest & book	3
Ives 1993	Ambulatory no life threatening cancer in previous 5 years, Aged 65-79 Medicare part B beneficiaries High risk with serum cholesterol> equal to 240 g/dl	Hospital and primary care physicians Rural counties **Country** USA	**N= 3884** (hospital I = 1312, primary care (p.c.) physician = 1347 C =1225) **Loss to FU** Hospital I 103 p.c. physician = 82, C = 93 **PC** not reported	**COMPLEX INTERVENTION** All groups screened using health risk appraisal including controls Hospital and physician groups offered health screening and promotion. Voucher for health screening. Non-pharmacological lowering cholesterol prevention. **Control:** No screening / health promotion **Provider:** Family physician or community hospital providers	I =between 1 & 5 visits. (46% attended 1 or more) Follow up "2-3 years"	4
Kumanyika 2002; **Whelton 1998**	Hypertensive men and women treated w singled hypertensive agent whose blood pressure lower than 145mmHg / 85mmHg	4 academic health centres **Country** USA	**N= 975** (I1 = 339; I2 = 147; I3 = 146 C =341) **Loss to FU** 26 **PC** 80% power to detect 30% reduction in rate of occurrence of the primary end point for those assigned to weight loss; 25% reduction in rate of occurrence of the primary end point for those assigned to sodium reduction.	**NUTRITIONAL EDUCATION** small group and individual meetings I1= Education for sodium reduction I2=Education for weight loss 13=Combined education **Control:** Usual care + invited to meetings unrelated to aims of trial. **Provider:** Nutritionists and exercise counsellors	Intensive stage = 4 months weekly contact Extended = 4 months bi-weekly Maintenance = monthly contact	2

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Lewin 2002	Newly diagnosed angina pectoris	Primary care compared with self help in home **Country** England	**N= 142** (I =68, C = 74) **Loss to FU.** I=5 C=7 **PC:** 80% for Hospital anxiety depression scale Intention to treat analysis	**COMPLEX INTERVENTION** Routine practice nurse led CHD clinics plus Angina Plan (Education about disease and lifestyle factors, Risk factor management / goal setting (Exercise & nutrition); relaxation techniques **Control:** 1 general educational session **Provider:** Practice nurse	I interview / booklet + 5-10 minute phone call at end of 1,4,8,12 weeks C unclear	2
Lopez-Cabezas 2006	Heart Failure Patients in the cardiology department of general hospital	Out patients clinic on day of discharge **Country** Spain	**N= 134** (I =70, C =64*) **Loss to FU** Not reported **PC:** 80% if 67* in each group, assuming loss of 10%	**COMPLEX INTERVENTION** Personal interview on hospital discharge information on: disease, diet education, drug therapy, telephone number to contact pharmacist if required,. **Control:** Conventional clinic assessment at 2, 6 and 12 months by cardiologist. **Provider:** Pharmacist	Monthly telephone follow up for 6 months and every 2 months thereafter – over 12 months	2
Masley 2001	Coronary Artery Disease (CAD) patients With high low density lipoprotein (LDL$^{\infty}$) levels>3.4 g/dl or total cholesterol HDL levels > 5.5 g/dl	Community outpatient clinics ? location **Country** USA	**N= 120** (I =45, C =45) **Loss to FU:** 7+23 **PC:** 80% to detect a 15% change in diet & LDL$^{\infty}$ levels based on the 120 initially enrolled in study. "Not powered to yield significant improvements in clinical outcomes" p239	**COMPLEX INTERVENTION** 14x 90 minute group visits with Licensed Practical Nurse & leaflet re: diet, recipes, etc and gradual increase in exercise recommended **Control:** Written information on diet as above, no group visits, usual care **Provider:** Licensed Practical Nurse	1 year	3
Messier 2004 Miller 2004* *(Messier 2000 is pilot study)*	Older (60 years or more) overweight & obese adults with knee Osteo Arthritis	Older Americans independence centre of a university **Country** USA	**N= 316** (I exercise =80 I exercise + diet =76 I diet =82 C = 78) (*I exercise =79 I exercise + diet =74 I diet =80 C = 76) **Loss to FU.** N=64/ 20% (*N=71) **PC**: 90% power to detect 25% difference in Western Ontario & Mcmasters Osteoarthritis Index (WOMAC) scale	**COMPLEX INTERVENTION** Exercise Intervention:3 days a week aerobic, resistance and cool down exercise for 1 hour for 4 months. Choice to continue at facility at home or mixture for 18 months Diet weight loss intervention only:3 group sessions 1 individual session per month for 4 months, sessions every other week for 8 weeks, monthly meetings & phone contact alternating every 2 weeks Exercise + Diet weight loss intervention **Control:** Healthy Lifestyle to provide attention, social interaction and health education (diet & exercise advice) monthly for 1 hour for 3 months monthly telephone calls 4-6 months; bi-monthly contact 7-18 months **Provider**: ? multidisciplinary team dietician	18 months	3

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Middleton 2005	Carotid endarterectomy	Patients in own homes **Country** Australia	**N= 133** (I =66, C =67) **Loss to FU:** 0 **PC:** Not reported	**COMPLEX INTERVENTION** Nurse-led Telephone calls to patients post discharge & prompted to change diet as part of call; sent written educational materials; general practitioner liaison and individualised information sent about patient preferences for changing behaviour; surgeon liaison about any patient health concerns **Control:** general practitioners informed patient had had enderarterectomy. No Nurse contact **Provider:** Nurse	3 months Telephone contact at 2 weeks, 6 weeks and 12 weeks	2
Miller 2002a Miller 2002b	Adults with type 2 diabetes 65 years or older without functional limitation	Out patient clinic but supermarket setting in 1 session **Country** USA	**N= 98** **(I =45, C =47)** **N=98, (I=46, C=47)** **Loss to FU** 6 / 5 . Neither analysed according to intention to treat 6 /5 taken out of analysis from beginning **PC** 80% to detect a 1% difference in glycated haemoglobin	**COMPLEX INTERVENTION** 1.5-2 hour x 10 group sessions on meal planning how to evaluate food labels & diabetes management **Control:** Conventional care until after the study outcomes were collected, then 6 weeks of sessions, or mailing information. **Provider:** Dietician	Post test time not specified but after 10 weeks.	3
Miller 2008 Miller 2006Δ	Obese adults with self reported Osteoarthritis (OA) 60 years and over with knee pain	Community base **Country** USA	N= 87 (I =31, C =36) Δ N=87; (I=44, C=43) NB different Ns for different outcomes. **Loss to FU** N=20 **PC**: not reported	**COMPLEX INTERVENTION** Partial meal replacement, nutrition education, lifestyle behaviour modification **Control:** Bi monthly in group receiving presentations about OA, general health and exercise. (attention control) **Provider:** Dietician and Exercise physiologist	6 months 3x Weekly groups each month, 1x 1 hr individual session, 3x 1hour sessions per week exercise training program	3
Patrick 1999 *Grembowski 1993 methods & baseline characteristics only.* *Follow up to Durham 1991 which was original RCT*	Group health co-operative (GHC) members of senior age (NB only 51% agreed to participate & high loss to follow up at 4 years)	Medical centres **Country** USA	**N= 2558** **(I =1282, C =1276)** **Loss to FU** 24 months = 114 I=1211 C=1234 48 months =390 I=1073 C=1095 **PC:** not reported	**COMPLEX INTERVENTION** Health risk assessment, health promotion / disease prevention visit, FU classes Counselling to improve exercise behaviour, promote a diet low in fat and high in fibre, & to complete advance directives **Control:** Usual care which included HP material when requested by patient or ordered by physician. NB GHC provides an existing set of services p 38 to which C would have had access. **Provider**: Nurse in liaison with physician	Sub-study 3 years after; follow up at 24 months and 48 months	4

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Rich 1995 Rich 1996 *Rich 1993*	Hospitalised Coronary Heart Disease (CHD[Ø]) patient 70 years+ at risk of readmission	Hospital to community **Country** USA	**N= 282** (I =142, C =140) **Loss to FU** Not reported for all outcomes but QOL lost 156 patients =55%).They appear to pick and choose what numbers of patients they use for which outcome. *Rich 1993 says "No patient was lost to follow up at 90 days. P 587* **PC:** Not reported	**COMPLEX INTERVENTION** Intensive education on CHD[Ø] & its treatment, individualised diet assessment & instruction, consultation with social services re discharge package, supplementary home visits& phone calls by study team **Control:** Usual care standard treatment and services ordered by physician **Provider:** Nurse, dietician & unspecified member of study team.	Follow up 90 days after discharge or until death	4
Salminem 2005	CHD[Ø] patients aged 65 or older	Not specified **Country** Finland	**N= 268** (I =137, C =131) **Loss to FU:** 41 (24%) **PC:** not reported	**COMPLEX INTERVENTION** Included lectures (1 on diet /nutrition), group discussions with dietary component, group exercise sessions and social activities **Control:** Standard treatment **Provider:** Physicians, physiotherapists, and nurses	16 months 16 lectures (90-120 minutes long) 6 group discussions 6 exercise sessions 3 social activities	4

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