



Centro di Riferimento per l'Epidemiologia  
e la Prevenzione Oncologica in Piemonte

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# Revisione esperienze nazionali e internazionali

**Carlo Senore**

 Regione  
Lombardia  
ASL Mantova

**GISCOR**  
Gruppo  
Italiano  
Screening  
ColoRettale

Con il Patrocinio di  
**EXPO**  
MILANO 2015  
SOSTENERE IL MONDO  
ENERGIA PER LA VITA



*Workshop*

**Dallo screening alla prevenzione primaria:  
andata e ritorno**

*Gli screening e la promozione della salute*

**Mantova, 29 maggio 2015**

# Prevezione primaria e screening

**Screening come “teachable moment”**

**Favorevole rapporto costo-efficacia  
infrastruttura organizzativa già presente  
nei programmi di popolazione**

**Continuità nel tempo del contatto con le  
persone e possibilità di rinforzo/follow-up**

# Focus sullo screening colorettaie (1)

**Uno studio di follow-up di persone invitate in un programma pilota di screening con FS ha mostrato come, rispetto ai non aderenti, gli aderenti con esame negativo, a 3 anni dall'esame, avessero**

- Ridotto il consumo di frutta e verdura**
- Guadagnato peso**
- Meno probabilità di modificare l'abitudine al fumo  
la pratica di attività fisica**

*Larsen et al. CGH 2007*

# Focus sullo screening colorettaile (2)

**Le persone che hanno avuto un esito negativo all'endoscopia di screening o hanno avuto una asportazione di adenomi sembrano interpretare l'esito dell'esame come una conferma del loro stile di vita**

*Stead et al. Prev Med 2012*

First Author (Year) Country	Sample size	Participants and Setting	Intervention	Outcome	Follow up	Relevant result
McBride et al. (1999), USA	288 Intervention 292 usual care participants	Women attending cervical screening, mean age. 36.4 years, current smokers, health maintenance organization	Usual care or self-help smoking cessation kit	Smoking behaviour	6 and 15 months	Self-help intervention vs. usual care: at 6 and 15 months of follow up Point prevalence abstinence: $p = 0.56$ ; $p = 0.17$ Quit attempt: $p = 0.29$ ; $p = 0.62$ Change between follow-up: continuous abstinence: 4.7 vs. 5.6% $p = 0.38$ Smoking cessation: 12.1 vs. 5.6% $p = 0.02$ Relapse: 55.2 vs. 48.8% $p = 0.38$
Clark et al. (2004), USA	85 Intervention 86 standard group participants	51–74 years, 46% females, 60% heavy smokers, current smokers, low-dose fast spiral chest CT screening study	Written self-help materials (control) or internet sources for smoking cessation	Smoking behaviour	1 year	Intervention vs. control Quit attempts: 68 vs. 48% $p = 0.001$ Point prevalent of smoking: 5 vs. 10% $p = 0.17$ Readiness to quit smoking: 27 vs. 30% $p = 0.70$ Review material: standard group more likely to review all material $p = 0.001$
van der Aalst et al. (2010), The Netherlands	642 Standard brochure, 642 tailored information group participants	Males smokers enrolled in the Dutch–Belgian lung cancer screening trial (NELSON trial), mean age: 57 years, average cigarettes, smoked/day: 18, average smoking duration: 38 years, Dutch–Belgian lung cancer screening trial (NELSON trial)	Computer tailored smoking cessation intervention (and who completed the tailoring questionnaire received the tailored smoking cessation advice) or standard brochure on smoking cessation	Smoking behaviour	2 years	Brochure group vs. tailored information group: Quit attempts, mean (SD): 1.6 (2.4) vs. 1.6 (2.3) $p = 0.62$ Point prevalent smoking abstinence: 15.9 vs. 13.2 $p = 0.18$ Prolonged smoking abstinence: 15.6 vs. 12.5 $p = 0.11$ Continued smoking abstinence: 15.1 vs. 12.1 $p = 0.12$ Analysis with patients who completed tailoring questionnaire and thus received tailored advice (147/642 = 23%) Point prevalent smoking abstinence: 15.9 vs. 14.3 $p = 0.63$ Prolonged smoking abstinence: 15.6 vs. 14.3 $p = 0.70$ Continued smoking abstinence: 15.1 vs. 14.3 $p = 0.12$



## Population based cancer screening programmes as a teachable moment for primary prevention interventions. A review of the literature

Carlo Senore\*, Livia Giordano, Cristina Bellisario, Francesca Di Stefano and Nereo Segnan

Epidemiologia dei Tumori I, AOU S Giovanni Battista – CRO Piemonte, Torino, Italy

First Author (Year) Country	Sample size	Participants and Setting	Intervention	Outcome	Follow up	Relevant result
Emmons et al. (2005a), USA	591 Intervention (PREVENT), 656 usual care (UC) group participants	40–75 years, 58.1% males, individuals with an adenomatous colon polyp removed within 4 weeks, PREVENT trial (flexible sigmoidoscopy or colonoscopy in four health care system)	Telephone – delivered intervention by health educator plus tailored self-help materials or information sheet on colorectal cancer prevention (usual care group)	Behavioural risk factors for colorectal cancer: red meat consumption, fruit and vegetable intake, multivitamin intake, alcohol, smoking, and physical inactivity	8 months	Dropped the risk factor Multivitamin intake: 30 vs. 14% ( $p = 0.000$ ) Red meat: 18 vs. 12% ( $p = 0.002$ ) Fruit and vegetables: 47 vs. 17% ( $p = ns$ ) Alcohol: 4 vs. 2% ( $p = ns$ ) Smoking: 3 vs. 2% ( $p = 0.11$ ) Physical activity: 13 vs. 15% ( $p = 0.007$ ) Patients with (2 risk factors at follow-up among 203 patients with (4 risk factors at baseline: Intervention vs. UC: 43 vs. 19%
Baker and Wardle (2002), UK	742 Intervention 309 control group participants	55–64 years, 52% females, National Colorectal cancer screening pilot (sigmoidoscopy)	Brief, tailored, psycho-educational intervention or control group	Fruit and vegetable intake, awareness, attitude	6 months	Intervention vs. control Daily fruit intake increased with 0.59 servings vs. 0.14 servings ( $p < 0.001$ ) Daily vegetable intake increased with 0.47 servings vs. 0.12 servings ( $p < 0.001$ ) Total daily intake increased with 1.06 servings vs. 0.26 servings ( $p < 0.001$ )
Robb et al. (2010), UK	109 Standard leaflet, 103 tailored feedback, 153 control group participants	59% Female, mean age: 59.2, participants in a CRC screening pilot, pilot programme: flexible sigmoidoscopy screening for colorectal cancer	No behavioural advice, standard leaflet on healthy lifestyle or standard leaflet plus brief, tailored feedback based on responses to a pre-screening questionnaire	Behaviour and knowledge of health recommendations for fruit and vegetable intake, alcohol consumption, and activity levels	6 months	Meeting health behaviour recommendations controlling for pre-screening level, OR [CI] <u>Fruit and vegetables intake per day</u> Control: 1.00 Standard leaflet: 1.92 [0.94,3.97] Tailored feedback: 2.28 [1.09,4.76] <u>Alcohol units per week</u> Control: 1.00 Standard leaflet: 2.02 [0.40,10.3] Tailored feedback: 1.28 [0.28,6.01] <u>Activity per week</u> Control: 1.00 Standard leaflet: 0.86 [0.41,1.77] Tailored feedback: 1.26 [0.62,2.55]



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First Author (Year) Country	Sample size	Participants and Setting	Intervention	Outcome	Follow up	Relevant result
Caswell et al. (2009), UK	41 Intervention, 33 control group participants	Males and females detected with an adenoma in a population based CRC screening program <u>Mean age</u>  Intervention 61.5  Control 63.5 years,  <u>Gender (n), intervention vs. control</u>  Males: 28 vs. 24  Females: 13 vs. 9  Scottish colorectal screening pilot study	3-Month intervention with personal contact on personalised lifestyle programme and with three personalised mailings on goal-setting and social support to promote physical activity and dietary fibre, fruit, and vegetable consumption	Fruit and vegetable intake and physical activity	12 weeks	Intervention vs. control  Fibre score: mean (SD) 41 (13) vs. 30 (11) Intervention effect, mean (SE) = + 13 (3) $P=0.000$ Fruit and vegetable (portions/d), mean (SD) = 7.9 (3.1) vs. 7.3 (4.2) Intervention effect, mean (SE) = +0.6 (0.8) $P=0.423$ Physical activity (min/day), mean (SD) = 85 (72) vs. 79 (70) Intervention effect, mean (SE) = +24 (16) $P=0.152$
Craigie et al. (2011), UK	158 Intervention 158 usual care participants	Screening patients, aged 50–74 years, NHS CRC screening programme (Study protocol)	General leaflet on healthy lifestyle plus BEWEL personalized intervention program, personal body weight scales supervised monthly body weight recordings and face-to face visits and monthly telephone/email contacts or a general leaflet on healthy lifestyle (usual care)	Behaviour change, diet, physical activity	3 and 12 months	Study protocol



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# The impact of a bodyweight and physical activity intervention (BeWEL) initiated through a national colorectal cancer screening programme: randomised controlled trial

Anderson AS et al. BMJ 2014;348

**Table 2** Changes in anthropometric measures from baseline to three and 12 months, by treatment group. Values are means (95% confidence intervals) unless stated otherwise

Baseline and follow-up measures	Intervention group			Control group			Between group differences*, P value
	No	Mean (SD)	Difference to baseline	No	Mean (SD)	Difference to baseline	
<b>Body weight (kg):</b>							
Baseline	163	90.2 (14.9)	—	166	88.4 (14.3)	—	—
3 months	153	88.7 (15.0)	-2.10 (-2.57 to -1.63)	161	88.1 (14.2)	-0.67 (-1.00 to -0.34)	1.42 (0.84 to 1.99), <0.001
12 months	148	87.2 (15.7)	-3.50 (-4.30 to -2.71)	157	88.1 (14.2)	-0.78 (-1.38 to -0.19)	2.69 (1.70 to 3.67), <0.001
<b>Body mass index†:</b>							
Baseline	163	31.0 (4.5)	—	166	30.4 (3.9)	—	—
3 months	153	30.4 (4.6)	-0.72 (-0.89 to -0.56)	161	30.2 (4.0)	-0.23 (-0.34 to -0.11)	0.48 (0.20 to 0.75), 0.0007
12 months	148	29.9 (4.8)	-1.22 (-1.50 to -0.94)	157	30.1 (3.8)	-0.27 (-0.47 to -0.07)	0.92 (0.64 to -1.20), <0.001
<b>Waist circumference (cm):</b>							
Baseline	163	104.7 (10.9)	—	166	103.9 (10.9)	—	—
3 months	153	102.6 (11.1)	-2.55 (-3.14 to -1.97)	159	102.7 (11.1)	-1.34 (-1.82 to -0.87)	1.17 (0.25 to 2.10), 0.015
12 months	145	100.2 (12.0)	-4.91 (-5.79 to -4.03)	157	102.1 (11.1)	-2.16 (-2.85 to -1.47)	2.68 (1.74 to 3.62), <0.001



# The impact of a bodyweight and physical activity intervention (BeWEL) initiated through a national colorectal cancer screening programme: randomised controlled trial

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BMJ 2014;348

Table 4| Changes in dietary intake and physical activity. Values are means (95% confidence intervals) unless stated otherwise

Measures	Baseline		3 months		12 months		Between group differences, P value	
	No	Mean (SD)	No	Mean (SD)	No	Mean (SD)	3 months*	12 months*
<b>Daily average physical activity</b>								
Time spent active (mins):								
Intervention	156	82 (62.3)	145	88 (56.6)	140	89 (65.3)	-3.7 (-14.5 to 7.1), 0.500	-12.9 (-23.8 to -1.9), 0.021
Control	157	79 (55.9)	150	80 (62.4)	148	74 (62.0)		
Time spent in sedentary activity (mins):								
Intervention	153	1287 (130.6)	141	1274 (141.5)	137	1275 (175.5)	3.5 (-29.3 to 36.2), 0.835	17.1 (-15.8 to 50.0), 0.308
Control	153	1299 (144.8)	144	1296 (136.2)	144	1296 (155.1)		
Time spent in moderate activity (mins):								
Intervention	153	81 (58.0)	141	87 (54.9)	137	86 (63.4)	-5.6 (-16.3 to 5.1), 0.305	-10.9 (-21.7 to -0.1), 0.047
Control	153	77 (53.7)	144	78 (60.6)	144	73 (60.7)		
Time spent in vigorous activity (mins)								
Intervention	153	2 (11.3)	141	2 (3.2)	137	1 (3.0)	-0.05 (-1.0 to 0.9), 0.915	0.3 (-0.6 to 1.3), 0.53
Control	153	2 (4.3)	144	2 (4.5)	144	2 (4.9)		
Step count:								
Intervention	156	8429 (3995)	145	8994 (4430)	140	8697 (4404)	-619 (-1241 to 3), 0.051	-694 (-1321 to -67), 0.030
Control	157	7734 (3538)	150	7753 (3833)	148	7460 (3873)		

# The impact of a bodyweight and physical activity intervention (BeWEL) initiated through a national colorectal cancer screening programme: randomised controlled trial

Table 4| Changes in dietary intake and physical activity. Values are means (95% confidence intervals) unless stated otherwise

Measures	Baseline		3 months		12 months		Between group differences, P value	
	No	Mean (SD)	No	Mean (SD)	No	Mean (SD)	3 months*	12 months*
<b>Dietary intake</b>								
Fat consumption score:								
Intervention	163	30 (10.6)	152	24 (8.5)	146	24 (7.4)	4.6 (2.9 to 6.3), <0.001	3.8 (2.1 to 5.6), <0.001
Control	166	32 (10.6)	159	29 (10.6)	156	28 (10.3)		
Unsaturated fat score:								
Intervention	161	9 (1.6)	152	9 (1.4)	147	9 (1.2)	-0.2 (-0.5 to 0.1), 0.117	-0.2 (-0.5 to 0.1), 0.154
Control	165	9 (1.7)	160	9 (1.7)	156	9 (1.5)		
Fibre food consumption score:								
Intervention	163	33 (10.0)	153	35 (10.6)	148	33 (10.4)	-2.6 (-4.4 to -0.8), 0.005	-0.4 (-2.3 to 1.4), 0.669
Control	166	32 (9.8)	161	32 (9.3)	157	32 (9.1)		
Fruit and vegetable (portion/day):								
Intervention	163	4 (2.2)	153	5 (2.2)	148	5 (2.4)	-0.9 (-1.3 to -0.4), <0.001	-0.8 (-1.2 to -0.3), 0.0004
Control	166	4 (2.2)	161	4 (2.1)	157	4 (2.4)		

# **Modalità di intervento**

**Interventi personalizzati in funzione del grado di disponibilità al cambiamento del soggetto contattato**

**Materiale informativo e/o contatti telefonici**

**Non previsti interventi su potenziali barriere logistico-organizzative**

# Criticità

**Durata del follow-up ridotta non permette di valutare il mantenimento nel tempo dei cambiamenti osservati**

**Quasi tutti gli studi misurano cambiamenti delle abitudini (self-report).**

**I dati relativi a cambiamenti di parametri metabolici associati al rischio sono molto limitati**

# Conclusioni

**Interventi mirati alla modifica dello stile di vita  
rivolti a persone aderenti a programmi di  
screening**

- ❑ **Favoriscono cambiamenti delle abitudini alimentari e della pratica di attività fisica**
- ❑ **Possono avere effetti favorevoli su alcuni parametri metabolici e sul peso**
- ❑ **Sono accolti con favore dagli assistiti**

Fisher et al. Health Prom Int 2007

# Conclusioni

**Ma occorre valutare**

- **Impatto organizzativo**
- **Equità di accesso**

Grazie per l'attenzione!

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