

Healthy living - healthy ageing

Healthy lifestyles, dementia and chronic diseases



Belfast: 3rd May 2013



Healthy living - healthy ageing

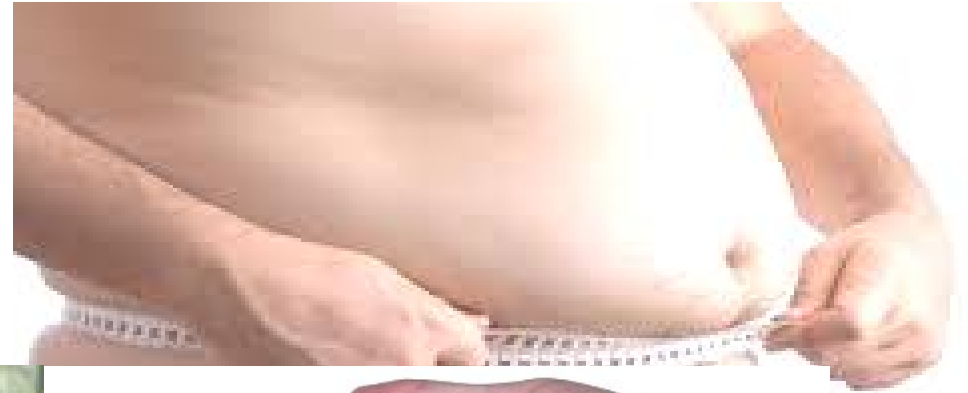
The five healthy behaviours



Healthy living - healthy ageing

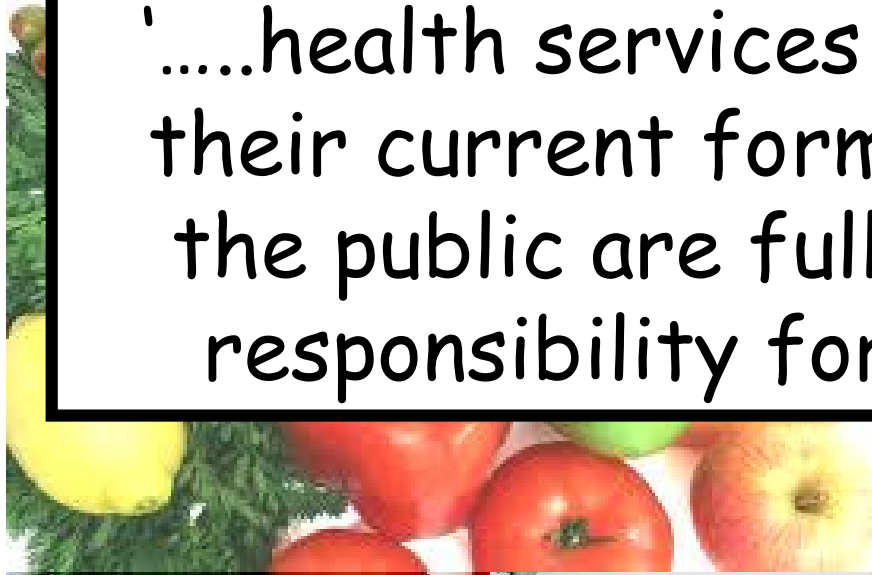
The six healthy behaviours





Wanless report (2004): 'Securing good health for the whole population'

'.....health services are unsustainable in their current form unless members of the public are fully engaged and take responsibility for their own health.'



In making choices about health....

'first choose your philosophy'

McKee, Raine Choosing Health? Lancet 2005;365:369-71

There is a difference between
preventive medicine
therapeutic medicine

Treatment has been delegated to healthcare professionals

Prevention is the responsibility of each individual person

It is my decision *whether or not I smoke,*

...what diet I take,

...how much I drink,

...what my body weight is,

...whether or not I take exercise.....

...whether or not I take a preventive medicine

The five healthy behaviours



TARGET:

non-smoking!

A major cause of
lung and other cancers
heart disease
hypertension
respiratory disease
renal disease

BUT....

Regular smoking in Wales

- 25% of adults
- 19% of 15-year-old boys
- 28% of 15-year-old girls.



TARGET:

A BMI below 25



*Overweight is a major cause
in about 60% of diabetes
and about 14% of cancer in men and about 20% in women
strongly associated with early death*

BUT....

In Wales, overweight is
57% of adults; 21% obese
19% of 15-year-old boys overweight
28% of 15-year-old girls overweight
.....and increasing!

Exercise

TARGET:

½ hr moderate activity, X 5/wk
'Heavy gardening or fast walking'
OR develop a more active lifestyle

*Inactivity is a factor in:
heart disease,
diabetes,
cancer,
osteooporosis,
dementia*

BUT....

In Wales

Only 30% claim to fulfill the criterion
12% take no regular exercise



The paradox of alcohol

TARGET:

*Within the guidelines
With food and one alcohol
free day each week*

Benefit:

a small reduction in heart disease

BUT in Wales....

Alcohol-related deaths have doubled since 1992.....

*45% of subjects admitted drinking above the guidelines***

*27% admitted 'binge' drinking during the past week***



A 'healthy' behaviour..... ***Really?***

** "Welsh Health Survey 2009". Welsh Assembly Government

TARGET:

five a day!

*Poor diet is a factor in:
heart disease,
diabetes,
cancer,
ostoeoporosis,*

BUT....

In Wales

only one third of adults claim to fulfill the 'five a day' criterion



TARGET:

five a day!



	Diabetes	Vasc.dis.	Cancer	Dementia	Death
Fruit and veg	0.90	0.97	1.00	0.70	0.84

TARGET:

five a day!



	Diabetes	Vasc.dis.	Cancer	Dementia	Death
Fruit and veg	0.90	0.97	1.00	0.70	0.84
.....plus milk	0.84	0.87	0.82	0.58	0.84

Benefits of the five healthy behaviours

The five healthy behaviours.....

- non-smoking,
- a low body weight
- a healthy diet
- regular exercise
- a low alcohol intake

Benefits of the five healthy behaviours

The five healthy behaviours.....

- non-smoking,
- a low body weight
- a healthy diet
- regular exercise
- a low alcohol intake



Reductions in:

- *Diabetes*
- *Heart disease*
- *Stroke*
- *Cancer*
- *Dementia*
- *Death*

The 30-year Caerphilly cohort study

The source of evidence:

HEALTHY BEHAVIOURS at baseline in 1979.....

Non-smoking Body weight Diet Exercise Alcohol intake

Recorded for 2,500 men aged 45-59 yrs

OUTCOMES during the following 30 years

Diabetes, vascular disease, cancer, dementia and death

The effectiveness of a healthy lifestyle

HEALTHY LIFESTYLES	REDUCTIONS (based on ORs) over the following 30 years			
	Diabetes	Heart disease & stroke	Cancer	All-cause deaths
No healthy behaviour (172 men)	100	100	100	100
Any two (813 men)				
Any three (436)				
Four/five (112)				
<i>Significance of trend</i>				

The effectiveness of a healthy lifestyle

TOTAL COHORT 2,500 men	REDUCTIONS (based on ORs) over the following 30 years			
	Diabetes	Vascular disease	Cancer	All-cause deaths
No healthy behaviour	100			
Any two (813 men)	16%			
Any three (436)	37%			
Four/five (112)	48%			
<i>Significance of trend</i>	<i>0.0005</i>			

All relationships adjusted for age and social class

The effectiveness of a healthy lifestyle

TOTAL COHORT 2,500 men	REDUCTIONS (based on ORs) over the following 30 years			
	Diabetes	Vascular disease	Cancer	All-cause deaths
No healthy behaviour	100	100	100	100
Any two (813 men)	16%	30%	13%	15%
Any three (436)	37%	35%	7%	30%
Four/five (112)	48%	38%	15%	35%
<i>Significance of trend</i>	0.0005	0.0005	0.41	0.0005

The effectiveness of a healthy lifestyle

1,023 'CONSISTENT' Men**	REDUCTIONS (based on ORs) over the following 30 years			
	Diabetes	Vascular disease	Cancer	All-cause deaths
No healthy behaviour	100	100	100	100
Any two (813 men)	-35%	-17%	-3%	-8%
Any three (436)	-66%	-34%	-5%	-36%
Four/five (112)	-72%	-67%	-15 %	-32%
<i>Significance of trend</i>	<i>0.001</i>	<i>0.0005</i>	<i>0.88</i>	<i>0.002</i>

All relationships adjusted for age and social class

** **'Consistent'** men: those who reported maintaining a healthy lifestyle
In later repeat questionings

The effectiveness of a healthy lifestyle

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Any two (813 men)	<i>16%</i>	<i>30%</i>	<i>13%</i>	<i>15%</i>
Any three (436)	<i>37%</i>	<i>35%</i>	<i>7%</i>	<i>30%</i>
Four/five (112)	<i>48%</i>	<i>38%</i>	<i>15%</i>	<i>35%</i>
<i>Significance of trend</i>	<i>0.0005</i>	<i>0.0005</i>	<i>0.41</i>	<i>0.0005</i>

Another measure of benefit:

The number of years before disease in men following a healthy lifestyle became that of men who followed no healthy behaviour (*Rate advancement*)

For vascular disease.....up to 13 years

For death..... up to 6 years

The effectiveness of a healthy lifestyle

The five healthy Behaviours	Reductions	
	Cognitive Impairment (219 men)	Dementia (79 men)
No healthy behaviour	100	100
Any two	-48%	-44%
Any three	-58%	-72%
Four or five	-59%	-68%
<i>Significance of trend</i>	<i>0.002</i>	<i>0.01</i>

Adjusted for age and social class and cognitive function at baseline

The effectiveness of a healthy lifestyle

The five healthy Behaviours	Reductions	
	Cognitive Impairment (219 men)	Dementia (79 men)
No healthy behaviour	100	100
Any two	-48%	-44%
Any three	-58%	-72%
Four or five	-59%	-68%
<i>Significance</i>	<i>0.002</i>	<i>0.01</i>

Another measure of benefit:

'Rate advancement' – the number of years before disease in men following a healthy lifestyle men became that of men who followed no healthy behaviour

For cognitive impairment.....
For dementia.....

up to 6-7 years

The effectiveness of a healthy lifestyle

Finding.....

Following a healthy lifestyle
substantially increases disease-free survival
and.... during the extra years
the risk of dementia is reduced

Strategy.....

....urge every person to adopt one
additional healthy behaviour

Outcome ã ã ..

....if only half them comply, there could be....
?12% less diabetes; ?6% less vascular disease
?13% less dementia; ?5% fewer deaths

A philosophy of health

In making choices about health....

'first choose your philosophy'

McKee, Raine Choosing Health? Lancet 2005;365:369-71

The treatment of disease

has been delegated to healthcare professionals

The preservation of health

is the responsibility of each individual person

It is my decision

...whether or not I smoke,

...what diet I take,

...how much I drink,

...what body weight I maintain,

...whether or not I take exercise.....

...whether or not I take a preventive medicine

A verdict from the public

A CITIZENS' JURY

Cardiff City Hall, October 2006

Facilitator: Penny Roberts, Former BBC Chief Reporter



MY HEALTH – *whose responsibility?*

My health – whose responsibility: *a jury decides.* Elwood PC, Longley M. 2010

A verdict from the public

A CITIZENS' JURY

Facilitator: Penny Roberts, BBS Chief Reporter

Cardiff City Hall 2006



Sixteen members of the public, chosen by strata sampling to represent the general community – with no vested interest in any aspect of health or disease

A woman in a dark suit is standing in a wood-paneled room, gesturing with her right hand as if speaking to a group of people. The room has wooden walls and a wooden bench in the foreground. The image is slightly blurred.

A verdict from the public

Over three days, the jurors were lectured to by twelve experts in a wide range of fields relevant to preventive medicine.

Jurors were encouraged to question/challenge the lecturers

The verdict of a jury

- 1. The preservation of health is a subject's own responsibility.**
- 2. Information on healthy behaviours should be made readily available and departments of public health should take a key role.**



The verdict of a jury

- 1. The preservation of health is a subject's own responsibility.**
- 2. Information on healthy behaviours should be made readily available and departments of public health should take a key role.**
- 3. The public should be informed about preventive medicines *even before there is agreement amongst doctors!***



The effectiveness of a healthy lifestyle

TOTAL COHORT 2,500 MEN	REDUCTIONS (based on ORs) over the following 30 years			
	Diabetes	Vascular disease	Cancer	All-cause deaths
No healthy behaviour	100	100	100	100
Any two	<i>-16%</i>	<i>-30%</i>	<i>-13%</i>	<i>-15%</i>
Any three	<i>-37%</i>	<i>-35%</i>	<i>-7%</i>	<i>-30%</i>
Four/five	<i>-48%</i>	<i>-38%</i>	<i>-18%</i>	<i>-35%</i>
<i>Significance of trend</i>	<i>0.0005</i>	<i>0.0005</i>	<i>0.41</i>	<i>0.0005</i>

All relationships adjusted for age and social class

Cancer prevention strategies

Healthy Lifestyles	Reductions in:			
	Diabetes	Vascular disease	Cancer	All-cause deaths
Non-smoking	<i>Non significant</i>	-21% <i>(11% to 31%)</i>	-29% <i>(16% to 37%)</i>	-33% <i>(26% to 40%)</i>
Four healthy behaviours	-72%	-23%	No further reduction	-18%

Cancer prevention strategies

Healthy Lifestyles	Reductions in:			
	Diabetes	Vascular disease	Cancer	All-cause deaths
Non-smoking	<i>Non significant</i>	-21% <i>(11% to 31%)</i>	-29% <i>(16% to 37%)</i>	-33% <i>(26% to 40%)</i>
Four healthy behaviours	-72%	-23%	No further reduction	-18%
Daily low-dose aspirin	Nil	-12% <i>(6% to 28%)</i>	-35% ** <i>(13% to 50%)</i>	-10% <i>(1% to 14%)</i>

Rothwell, Wilson et al 2010: 8 RCTs; **HR 0.64** (0.48, 0.84)

Rothwell & Price et al (2012) 51 RCTs **OR 0.63** (0.49,0.82)

Rothwell Fowkes et al 2012: 8 RCTs; >5 yrs, **HR 0.66** (0.50, 0.87)

Rothwell, Wilson, Elwin et al 2010; 4 RCTs; **HR 0.68** (0.54, 0.87)

Burn et al 2012: **HR 0.65** (0.42, 1.00)

Algra & Rothwell et al 2012; 61 c-c and 45 cohorts

La Rosa et al 1999:

Cancer prevention strategies

Healthy Lifestyles	Reductions in:			
	Diabetes	Vascular disease	Cancer	All-cause deaths
Non-smoking	<i>Non significant</i>	-21% <i>(11% to 31%)</i>	-29% <i>(16% to 37%)</i>	-33% <i>(26% to 40%)</i>
Four healthy behaviours	-72%	-23%	No further reduction	-18%
Daily low-dose aspirin	Nil	-12% <i>(6% to 28%)</i>	-35% * <i>Colorectal cancer</i> -60% **	-10% <i>(1% to 14%)</i>

*

Rothwell, Wilson et al 2010: 8 RCTs; HR 0.64 (0.48, 0.84)
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 Algra & Rothwell et al 2012; 61 c-c and 45 cohorts
 La Rosa et al 1999:

**

Rothwell Wilson Elwin et al (2010) four RCTs proximal colon **HR 0.35** (0.20, 0.63)
 Rothwell Fowkes et al (2010): 8 RCTs **HR 0.41** (0.17, 1.00)
 Rothwell Wilson et al (2012): 5 RCTs **HR 0.26** (0.11, 0.57)
 Burn et al (2011) Proximal colon **HR 0.41** (0.19, 0.86)

Cancer and the sixth healthy behaviour

Healthy Lifestyles	Reductions in:			
	Diabetes	Vascular disease	Cancer	All-cause deaths
Non-smoking	<i>Non significant</i>	-21% <i>(11% to 31%)</i>	-29% <i>(16% to 37%)</i>	-33% <i>(26% to 40%)</i>
The other four behaviours	-72%	-23%	<i>No further reduction</i>	-18%
Daily low-dose aspirin	Nil	-12%¹ <i>(6% to 28%)</i>	-35%²⁻⁷ <i>(13% to 50%)</i>	-10%^{1,8} <i>(1% to 14%)</i>

Stomach bleeds
Haemorrhagic strokes

STOMACH BLEEDS:

INCIDENCE: 2 or 3 per 1,000 subjects per year

(overviews by Sanmuganathan et al 2001; Guise et al 2002; McQuaid and Laine 2006;).

A CRISIS! *but....*

- not the most serious bleeds, fatal bleeds are not increased by aspirin

(ATT 2009; Morgan 2009; Sostres & Lanas 2011; Cham 2012; Pirmohamed 2004; MRHA 2013)

- the risk of a bleed seems to diminish with time

(Garcia Rodriguez et al 2001; Rothwell et al 2012)

- gastroprotective drugs are highly effective but are seriously underused

(Lanas et al, 2000; Targownik 2008; Chan et al 2012)

Aspirin and bleeding

STOMACH BLEEDS:

INCIDENCE: 2 or 3 per 1,000 subjects per year

(overviews by Sanmuganathan et al 2001; Guise et al 2002; McQuaid and Laine 2006;).

A CRISIS! *But....*

- *not the most serious bleeds*
- *fatal haemorrhages are not increased by aspirin*
- *the risk of a bleed seems to diminish with time*
- *gastroprotective drugs are highly effective*

CEREBRAL BLEEDS **Haemorrhagic stroke:**

INCIDENCE: 1 or 2 per 10,000 subjects per year

(overviews by He et al Sanmuganathan et al 2001; McQuaid and Laine 2006;) Lanos et al

A TRAGEDY! *BUT...*

- *probably largely in patients with uncontrolled hypertension*

(The HOT trial. Hansson et al 1998)

Aspirin and bleeding

STOMACH BLEEDS:

INCIDENCE: 2 or 3 per 100

(overviews

If there is any past history, or any suspicion of present stomach disease, then a gastro-protective drug should be given

(2006;).

bleeds

are not increased by aspirin

bleed seems to diminish with time

(overviews by Lanas et al, Morgan, Elwood et al)

CEREBRAL BLEED Haem

INCIDENCE

year

Blood pressure should be checked before long-term aspirin is recommended

(2001; McQuaid and Laine 2006;) Lanas et al

BUT Probably only in patients

with uncontrolled hypertension

Aspirin and bleeding

STOMACH BLEEDS:

INCIDENCE: 2 or 3 per 100

(overviews)

If there is any past history, or any suspicion of present stomach disease, then a gastro-protective drug should be given

Good clinical practice

Blood pressure should be checked before long-term aspirin is recommended

BUT Probably only in patients with uncontrolled hypertension

(McQuaid and Laine 2006; Lanas et al

The risk/benefit balance of low-dose prophylactic aspirin

The risk/benefit balance of low-dose prophylactic aspirin

The risk/benefit balance of low-dose aspirin

(Thun, Jacobs, Patrono 2012; Hassan et al 2012; Ladabaum et al 2001)

Haemorrhage

Gastrointestinal

Cerebral

Reductions:

heart attacks

strokes

colorectal cancer

other cancers

The risk/benefit balance of low-dose prophylactic aspirin

*Who should evaluate,
who should decide?*

Haemorrhage

Gastrointestinal

Cerebral

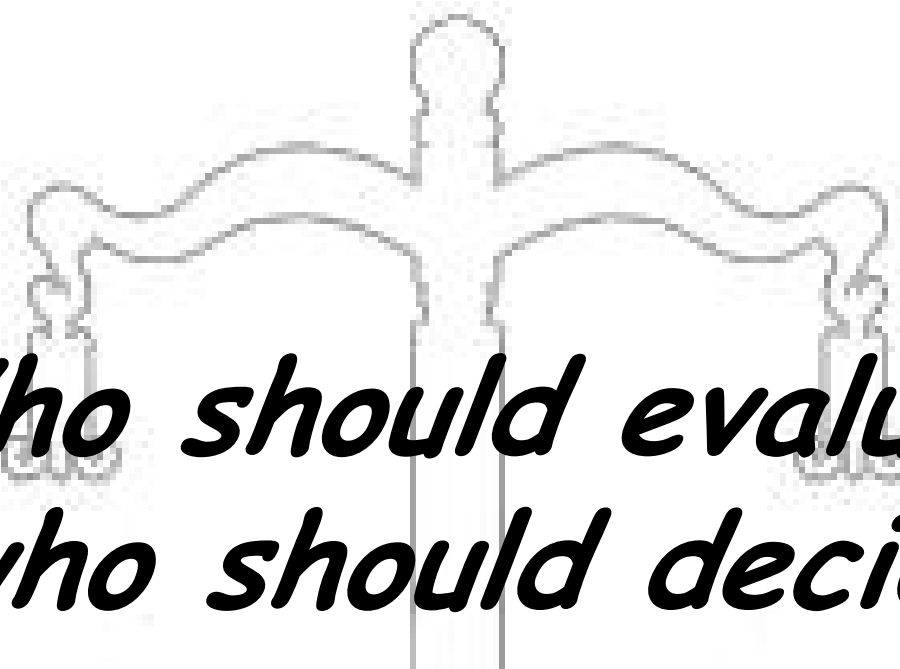
Reductions:

heart attacks

strokes

colorectal cancer

other cancers



Who should evaluate, who should decide?

It is my decision whether or not I smoke,

...what diet I take,

...how much I drink,

...what my body weight is,

...whether or not I take exercise.....

...whether or not I take a preventive medicine



SUMMARY

SUMMARY on healthy behaviours:

Following a healthy lifestyle

substantially increases

and.... during

survival

But, the up-take of the five healthy behaviours is abysmal

... which substantially reduces
... vascular disease and death

Uptake of preventive measures

Up-take of healthy behaviours in Wales

Healthy lifestyle

UP-take by men 45-59 yrs in 1979 ¹

3 Healthy behaviours	19%
4 healthy behaviours	5%
5 healthy behaviours	0.1%

1. Caerphilly Prospective Study
2. Welsh Health Survey (2008)

Uptake of preventive measures

Up-take of healthy behaviours in Wales

<u>Healthy lifestyle</u>	<u>UP-take by men 45-59 yrs</u>	
	in 1979 ¹	in 2009 ²
3 healthy behaviours	18%	19%
4 healthy behaviours	5%	7%
5 healthy behaviours	0.1%	0.5%

1. Caerphilly Prospective Study (1980 data)

2. Welsh Health Survey (2008)

3. Hale, Phillips Jewel (2012)

Uptake of preventive measures

Up-take of healthy behaviours in Wales

Healthy lifestyle

3 healthy behaviours
4 healthy behaviours
5 healthy behaviours

Welsh adults

in 2009 ¹

19%

7%

< 1%

Regular aspirin

37%²

1. Welsh Health Survey (2008)

2. Fone, White et al (2011)

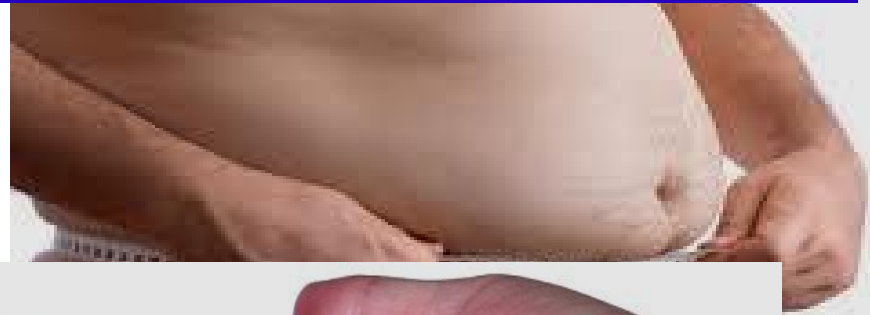
The six healthy behaviours



Healthy lifestyles: *the five healthy behaviours
what is being done simply ain't working!*

Prophylactic aspirin: *the sixth healthy behaviour
avoided by health authorities and health workers
because of serious misconceptions about the
seriousness and frequency of bleeding
BUT being taken up by increasing numbers !!*

The six healthy behaviours



RECOMMENDATION for all of us

Consider the benefits and the cost of a 'healthy lifestyle'

...and if you are over 45/50....

Consider the benefits and the risks of daily low-dose aspirin



The six healthy behaviours



RECOMMENDATION for those working in health care

Give patients/subjects the information and let them decide

.....after all – it is their health!



The six healthy behaviours



