

Iterative development and modification of a digital physical activity and a diet intervention for older cancer survivors

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Cancer Survivorship

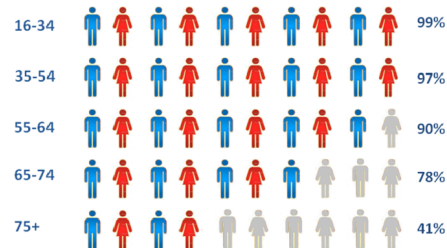
- UK estimates from 2008 suggest that more than 2 million people are living with or after cancer
- This is rising due to an ageing population and improved survival
- In the UK, the quality of life is poor in cancer survivors - equivalent to major chronic diseases - particularly for psychological distress, and fatigue
- Evidence suggests that addressing diet, exercise, and psychological wellbeing is likely to improve quality of life in several cancers, and may limit relapse.

Renewed Online

- Internet-delivered cognitive approaches are effective for depression and stress management
- Gap is closing for older adults internet use:

Almost 9 in 10 adults in the UK have recently used the internet (89%)

Almost all adults aged 16 – 54 years have recently used the internet ...



Source: Office for National Statistics

- The internet is now used extensively and successfully by older adults for disease self-management

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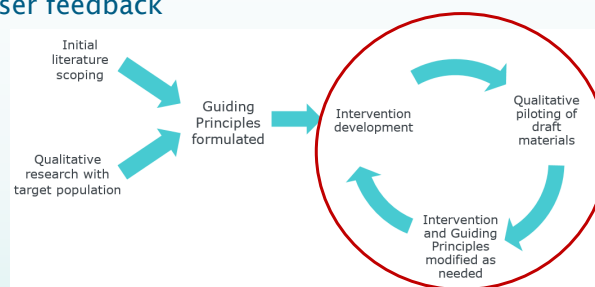
Renewed Online

- Developed to support cancer survivors within 10 years of completion of treatment of Prostate, Breast and Colorectal cancers.
- Helps instigate healthy lifestyle changes
- Tailored to quality of life and health measures
- Contains 5 modules: **Getting Active**, **Eat for Health**, **Healthy Paths**, **Healthy Mind App**, **POWeR** (weight loss)

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The Person-Based Approach

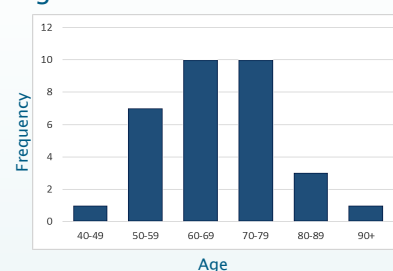
- Person-Based Approach (PBA):
 - Iterative development of an intervention to improve the **uptake, adherence and outcome**
 - Think-aloud interviews with core user group
 - Iterative modification of the intervention in response to user feedback



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Method

- 32 participants interviewed (18 male). Median age 68 (44-90)
- Participants were recruited through GPs who had
 - Internet access
 - Treatment <10 years
 - Reduced Quality of Life
 - Self-reported lifestyle issue
- Received £10 voucher
- Participants encouraged to verbalise their thoughts and reactions as they used the website. They were then asked to give their impression overall.



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Getting Active

Getting Active
for Health

My Getting Active Homepage **RENEWED Homepage**

This is where you can access the **Getting Active** content that suits **you**.

It's been a week or more since you set yourself a goal! Click on **My Goals** to record how you got on and receive personal feedback on your progress.

Click on **My Messages** to set up helpful email messages. Click on **My Support** for info on how to get active with your health condition, how it feels to get active and ideas on how to keep going with your activity.

Click on the buttons below for more info on **Getting Active**.

[Change my Password](#) [Quiz: The benefits of Getting Active](#) [Other helpful websites](#) [Log Out](#)

Problems viewing the website? [Click here](#)

Getting Active

Getting Active
for Health

My Getting Active Homepage **RENEWED Homepage**

- Quiz about benefits of Activity
- Concerns Page
- Activity Ideas
- Weekly goal-setting
- Weekly reminders
- Motivational emails
- Links to other resources

This is where you can access the **Getting Active** content that suits **you**.

It's been a week or more since you set yourself a goal! Click on **My Goals** to record how you got on and receive personal feedback on your progress.

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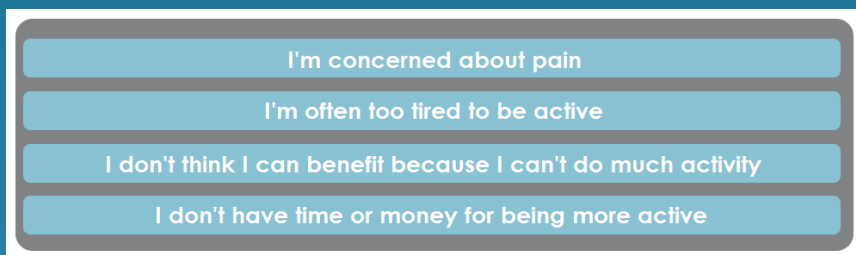
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Getting Active Feedback

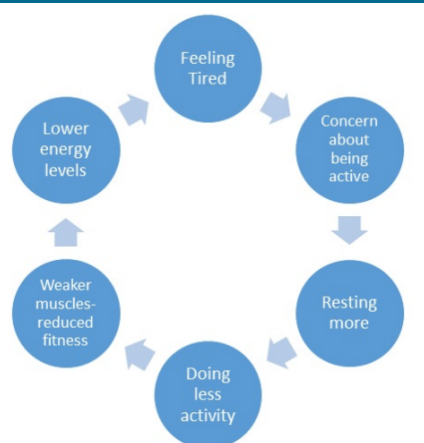
- **Concerns** page was not representative.
- Iteratively refined concerns to reflect participants' experience



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Getting Active Feedback

- Participants concerned that activity increases tiredness
- Acknowledge this and highlight reduction in overall tiredness



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Getting Active Feedback

- Participants worried about 'overdoing it'
- Acknowledge this and emphasize starting small and slowly increasing activity

How do I make sure I don't overdo it?

The key is to do a little activity every day so that you build up your strength. **Avoid extremes of activity** - start small and **slowly increase your activity levels**.

As you get fitter, you can do more.

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Getting Active Feedback

- Activity Ideas page was refined to suit participants e.g. 'Family' changed to 'Family and Friends'



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Getting Active Feedback

- Information on local activity groups was requested
- Links to find groups in the area added

Local activity options

Macmillan

[Activities near you](#)

NHS-Change 4 Life

[Find activities near to your home](#)

Walking for health

[Find a local health walk scheme](#)

UK Men's Shed Association

[Find local sheds](#)

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Getting Active Feedback

- Participants wanted the choice to write their own activity goals.

Think about the activities you already do. There is probably an easy way to do a bit more.

Below you can enter what activities you would like to do this week.

Please enter the activity/ies you want to do.

You can either pick from our list or write your own.

Goal 1

Choose your activity

Choose your activity

Walking

Housework / DIY

Family / Friends activities

To write your own

Home exercise

Other

and write your goal in the text box.

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Getting Active Outcome

- After making modifications, more participants were persuaded that they could be more active by addressing barriers:

“Everyone can be active regardless of health and age”

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Eat for Health
Online healthy eating plan

Welcome back to your personal healthy eating plan!

Welcome back!

It's now time to **review your goals** and see how you have got on this week. To do this just click on the button below.

[Review my goals](#)

On this page you can find **useful information** that can help you **stick to your eating goals**.

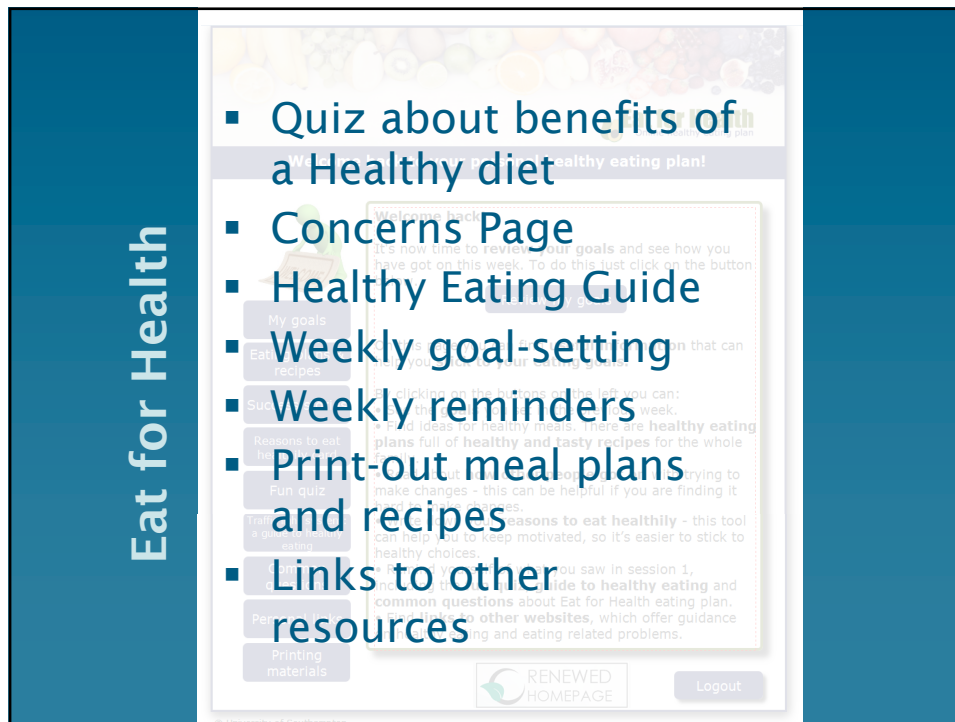
By clicking on the buttons on the left you can:

- ★ See the **goals** you set in the previous week.
- ★ Find ideas for healthy meals. There are **healthy eating plans** full of **healthy and tasty recipes** for the whole family.
- ★ Read about **how other people got on** with trying to make changes - this can be helpful if you are finding it hard to make changes.
- ★ Write down your **reasons to eat healthily** - this tool can help you to keep motivated, so it's easier to stick to healthy choices.
- ★ Remind yourself of what you saw in session 1, including the **fun quiz**, **guide to healthy eating** and **common questions** about Eat for Health eating plan.
- ★ Find **links to other websites**, which offer guidance on healthy eating and eating related problems.

[My goals](#)
[Eating plans & recipes](#)
[Success stories](#)
[Reasons to eat healthily card](#)
[Fun quiz](#)
[Traffic light system: a guide to healthy eating](#)
[Common questions](#)
[Personal links](#)
[Printing materials](#)

[RENEWED HOMEPAGE](#) [Logout](#)

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Eat for Health Feedback

- Web design inconsistent with the rest of Renewed
- Design was improved for usability:
 - Increased white space
 - Simplified layout
 - More concise wording


To get the biggest health benefits eat:

- lots of fruit and vegetables
- some wholegrain starchy foods
- some protein
- some dairy
- very little fatty, salty and sugary food

The next few pages show the foods to include in your eating plan using a simple **traffic light system**. A [summary of the traffic light foods](#) is available to print.

Try sticking the **list on your fridge** to remind you of the **green, amber** and **red** foods.

[Click here](#) to learn how Richard used these tools to eat better.



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Eat for Health Feedback

- Many concerns of how to overcome barriers to healthy eating e.g. getting family involved, reducing meat, cost
- New **Concerns** page addresses these issues

How do I know this eating plan is right for me?

How long before I notice the benefits of my healthy eating plan?

Will I have any problems with this eating plan?

Isn't eating more fruit and veg expensive?

What if my family don't want to eat healthily?

If I cut down on meat what will I eat?

Will I have enough energy if I eat less meat?

Aren't meat-free meals just for vegetarians?

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Eat for Health Feedback

- Participants wanted explanations and evidence to back up our recommendations
- 'Did you know?' sections added with more explanation

Some people think that they need to eat meat because it contains protein and iron. But **you can get all the protein and iron your body needs from other foods**, such as nuts, eggs, soya, fruit and vegetables.

Research shows that cutting down on meat is good for your health. Large amounts of red meat and processed meat are the least healthy, so cutting down on these can help to protect your health.



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Eat for Health Feedback

- Participants wanted diagrams and stories to help make the eating plan clearer
- Food Pyramid was illustrated, stories about how to stick to it were added, and food groups tabbed



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Eat for Health Feedback

- Participants wanted meal plans and recipes earlier
- Links to meal plans were provided in session 1

	Breakfast	Morning snack	Lunch	Afternoon snack	Dinner
	Easy to make banana pancakes	An apple	Chicken garden	Pea hummus	Potato curry
Day 1			Pea hummus with crackers (Serves 2) Preparation 10 minutes <ul style="list-style-type: none"> 1 cup frozen peas 4 tbsp. chopped walnuts 2 tbsp. fresh lemon juice 4 garlic clove, minced Pinch of salt and pepper Rye crispbread crackers 1. Blend peas with chopped walnuts, lemon juice, garlic, pinch of salt and pepper. 2. Serve on crackers.		
Day 2	Mushroom and tomato scrambled eggs	Half of a n			
Day 3	Avocado and pomegranate toast	A banana			

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Eat for Health Feedback

- Participants were concerned about the trustworthiness of our advice (due to conflicting/outdated advice from the media)
- Addressed this in the introduction. Aligned advice with government recommendations as a minimum (e.g. more than 5 fruit and veg, minimal meat and alcohol)

Eat for health is **made for people who have experienced cancer**. It may be different to other eating plans you've read about online or seen on TV. That's because it's **based on the most up to date research** about the best foods for your health.

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Eat for Health Outcome

- Participants generally more positive after modifications
- Website more relatable and diet changes achievable
- Print-out meal plans, food pyramid and recipes popular

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Conclusions

- Person-based approach revealed barriers to behaviour change for older adults
- Qualitative feedback revealed where problems were and suggested modifications
- Iterative modifications improved acceptability

More on PBA: <https://www.lifeguideonline.org/pba>

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