

## The EPIC-Norfolk Fourth Health Check (4HC) signifies a new era for the EPIC-Norfolk Study

Having achieved the targets set for the Third Health Check (3HC), EPIC-Norfolk is now embarking upon a joint collaboration with the MRC Epidemiology\* Unit, Addenbrookes Hospital and launching the EPIC-Norfolk Fourth Health Check (4HC). Whilst the principle aim of the 3HC was to continue with the central research theme of investigating the important health issues contributing to mortality\* and morbidity\* in later life, the rationale of the 4HC is to investigate strategies for the prevention of more common diseases, such as diabetes, obesity and cardiovascular disease – all of which pose considerable and increasing problems to public health.



As before, this health check will be conducted at the EPIC-Norfolk Research Unit, Norwich Community Hospital, but at approximately 50-60 minutes, it is set to be much shorter than the previous 3HC appointment. As EPIC-Norfolk is looking at changes in results over time, certain measurements will be repeated. However, the exciting new measurement addition to this health check is the GE Healthcare Lunar iDEXA (Fig 1),

a very low dose x-ray scanner which determines the actual distribution of fat within the body. As fat location and distribution are important risk factors across a range of serious diseases, the expectation is that these measurements may eventually be used to assist diagnosis and to help guide effective treatment plans to reduce the incidence\* of these diseases.



Fig. 1

### Ongoing Analysis of Data Collected

Data from previous health checks, in particular the 3HC, is currently being reviewed and various members of both our own research team and those of our collaborators are preparing the data for analysis. Several papers have, however, already been published and a complete list of these published papers, along with media items and a comprehensive summary of our key findings, can be found on our website: [www.epic-norfolk.org.uk](http://www.epic-norfolk.org.uk). If, however, you are unable to access the internet and would like to request a copy of this information, please call the EPIC research team on Tel: 0800 616911

### EPIC-Norfolk- most recent findings



#### Eye Data

EPIC-Norfolk is collaborating with several academic, clinical and research institutions, including the Institute of Ophthalmology, London and a large part of the data analysis is investigating Glaucoma. Dr Jennifer Yip based at the Department of Public Health and Primary Care, University of Cambridge, for example, has recently looked into the relationship between exercise and a consistent risk factor for glaucoma: low ocular perfusion pressure\* (OPP). Dr Yip found an association between low levels of physical activity and low OPP; meaning that in participants with a low level of physical activity, she found that there is an increased risk of developing glaucoma. Further research is now being undertaken to investigate the apparent positive effect of exercise as a simple method of reducing glaucoma risk.



### Memory Data

Certain aspects of the memory tests we were using in the 3HC are pioneering. As such, it is important for us to detail the procedures we used and to comment on any advantages or disadvantages we encountered when using these approaches. One such paper, published in March 2011 (<http://tinyurl.com/7ttjgg8> ) describes how our memory tests are effective at predicting levels of cognitive impairment\* in undiagnosed patients at a much faster rate than other, standard tests. The future use of this abbreviated test could therefore be advantageous when testing under time constraints.

### Diary Data

During the past 19 years, EPIC participants have regularly completed food diaries, which has involved transcribing everything they eat or drink over a 7 day period. To date, all 25,521 first health check diaries have been entered into a specially developed program and can now be used to look at food intake in relation to the other data we have collected. Some of the findings to come out of the diary data include its validation as a more precise dietary research tool compared to the food frequency questionnaire (a method which requires the participant to recall, on average, the quantity of specific foods eaten over the course of a year). Using this method, we also found that a higher fibre (roughage) intake decreases the risk of colorectal cancer (paper to be found at <http://tinyurl.com/7q9le2n> )

### 'Ology' Box

**Epidemiology** – The scientific study of factors affecting health and disease in the general population.

**Incidence**- The number of new cases of a disease per population in a given time period.

**Mortality** – (in the context written) death especially on a large scale.

**Morbidity** – the incidence and nature of disease.

**Ocular Perfusion Pressure** - the difference between the arterial blood pressure (obtained from normal blood pressure measurement at the arm) and intraocular pressure (the pressure in the eye).

**Cognitive Impairment** – Deterioration in the ability to think, concentrate, formulate ideas, reason and remember.

### The EPIC Word Search

perfusion	impairment	ocular
mortality	morbidity	epidemiology
cognitive	pressure	incidence

d	f	g	n	m	c	l	l	p	s	a	m
y	g	o	l	o	i	m	e	d	i	p	e
m	b	q	w	r	r	y	i	d	f	h	k
c	d	b	f	b	k	o	l	s	a	x	a
v	r	n	o	i	s	u	f	r	e	p	y
b	h	v	b	d	z	d	t	j	o	p	i
n	d	b	w	i	r	y	n	l	k	b	n
d	a	y	n	t	o	s	i	b	f	m	c
s	k	v	d	y	c	e	m	a	d	v	i
w	u	n	q	e	u	h	p	x	t	u	d
a	i	s	f	c	l	b	a	p	p	s	e
l	m	o	r	t	a	l	i	t	y	m	n
g	l	w	k	u	r	j	r	a	g	o	c
t	g	f	d	n	l	s	m	h	p	f	e
y	m	e	r	u	s	s	e	r	p	f	w
h	b	x	s	f	v	f	n	v	z	h	j
f	n	c	o	g	n	i	t	i	v	e	m

### Future Newsletters

We would really welcome your input. If there is anything in particular that you would like us to report on, please contact our team with your suggestions and queries.

Furthermore, if you are an EPIC participant and wish to receive any additional newsletters direct to an email account, please ring the EPIC team (0800 616911) to register your details or go onto our website at [www.epic-norfolk.org.uk](http://www.epic-norfolk.org.uk)