Keynote Presentation

The National Activity Therapy Service

Professor Sir Muir Gray
What is happening to us

AGEING

LOSS OF FITNESS

DISEASE

BELIEFS, ATTITUDES & EMOTION
Best possible rate of decline due to ageing alone

There is no stable phase in life biologically.
FOR MOST PEOPLE THE TURNING POINT COMES AS A RESULT OF A PERSON GETTING A SITTING JOB
What is happening to Roger Federer?
THE USUAL FATE OF PEOPLE WHO GET A SITTING JOB AT 23
THE FITNESS GAP OFTEN GETS WIDER FASTER AFTER THE ONSET OF A LONG TERM CONDITION, AND MAY DRAG THE PERSON BELOW THE LINE
Type 2 diabetes should not change the best possible rate of decline, but the social impact may accelerate the actual use rate of decline.
Best possible rate of decline after onset of heart failure

The Line
LEVEL OF ABILITY REQUIRED TO GET TO THE TOILET IN TIME

ABILITY

AGE

NARROWING OF THE FITNESS GAP AND PREVENTION OF LOSS OF ABILITY TO GET TO THE TOILET IN TIME AS RESULT OF TRAINING

AT ANY AGE AND WITH ANY NUMBER OF LONG TERM CONDITIONS PEOPLE CAN IMPROVE FITNESS AND STAY ABOVE THE LINE
Exercise: The miracle cure and the role of the doctor in promoting it

February 2015

THE KEY DOCUMENT WAS PRODUCED BY THE ACADEMY OF MEDICAL ROYAL COLLEGES IN 2015
KEEPING WELL & REDUCING RISK
EDUCATION & PREVENTION THROUGH ACTIVITY
ACTIVITY THERAPY & DRUG THERAPY
COPING WITH CONDITIONS
The Doctor Who Gave Up Drugs
THE BENEFITS OF ACTIVITY THERAPY,

Activity Therapy -

• AFFECTS THE DISEASE PROCESS DIRECTLY IN SOME CONDITIONS
• PREVENTS THE LOSS OF FITNESS AND ACCELERATED DECLINE THAT OFTEN FOLLOWS DIAGNOSIS
• REDUCES THE RISK OF OTHER LONG TERM CONDITIONS EG REDUCING THE RISK OF HEART DISEASE AND DEMENTIA
• MAKES PEOPLE FEEL BETTER
Some people need activity therapy not drug therapy
Some people need activity therapy before starting drug therapy
All people with long term conditions needing drug therapy also need activity therapy

this requires
Double and triple prescribing &
Double dispensing using
Diabetes UK backs this approach
WHAT DO WE NEED?

• JUST 9 SECONDS IN MOST CONSULTATIONS ABOUT LONG TERM CONDITIONS, ABOUT 500 MILLION A YEAR
• JUST 9 SECONDS WHEN SOMEONE IN THE PHARMACY IS HANDING OVER THE MEDS FOR LONG TERM CONDITIONS, ABOUT 750 MILLION A YEAR
• DIGITAL PROMPTS AND ENCOURAGEMENT IN

• HALF A BILLION LAB REPORTS EG HBA1C
• HALF A BILLION LETTERS
• HALF A BILLION PRESCRIPTIONS
• 5 MILLION ONE YOU / HEALTH CHECK MESSAGES
WE ARE NOT MAKING USE OF LAB REPORTS, 500 MILLION A YEAR, HERE IS AN EXAMPLE OF WHAT WAS SENT TO SOMEONE WHO HAD A ‘CHECK UP’ AFTER A HEART ATTACK, AND ONLY SENT TO HIM AFTER HE ASKED FOR ‘SOMETHING’
### Full blood count - FBC

**Patient:** John Gray  
**Date Of Birth:** 21-06-1944  
**NHS Number:** 6001868897  
**Recipient GP:** CURTIS, SIMON (DR)  
**Status:** Filed  
**Viewed:** CURTIS, SIMON (DR)

**Specimen:** Blood  
**Taken:** 24/03/2017 12:03  
**Received:** 24/03/2017 19:07

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Normal</th>
<th>Action Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin estimation</td>
<td>139 g/L</td>
<td>(130 - 170)</td>
<td>-</td>
</tr>
<tr>
<td>Total white cell count</td>
<td>6.12 x10^9/L</td>
<td>(4.0 - 11.0)</td>
<td>-</td>
</tr>
<tr>
<td>Platelet count</td>
<td>217 x10^9/L</td>
<td>(150 - 400)</td>
<td>-</td>
</tr>
<tr>
<td>Haematocrit</td>
<td>0.424 L/L</td>
<td>(0.40 - 0.50)</td>
<td>-</td>
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<tr>
<td>Red blood cell (RBC) count</td>
<td>4.59 x10^12/L</td>
<td>(4.5 - 5.5)</td>
<td>-</td>
</tr>
<tr>
<td>Mean corpuscular volume (MCV)</td>
<td>89.4 fl</td>
<td>(83 - 105)</td>
<td>-</td>
</tr>
<tr>
<td>Mean corpus. haemoglobin (MCH)</td>
<td>30.3 pg</td>
<td>(27.0 - 32.0)</td>
<td>-</td>
</tr>
<tr>
<td>Mean corpus. Hb. conc. (MCHC)</td>
<td>328 g/L</td>
<td>(315 - 345)</td>
<td>-</td>
</tr>
<tr>
<td>Neutrophil count</td>
<td>5.07 x10^9/L</td>
<td>(2.0 - 7.0)</td>
<td>-</td>
</tr>
<tr>
<td>Lymphocyte count</td>
<td>1.92 x10^9/L</td>
<td>(1.0 - 4.0)</td>
<td>-</td>
</tr>
<tr>
<td>Monocyte count</td>
<td>0.74 x10^9/L</td>
<td>(0.2 - 1.0)</td>
<td>-</td>
</tr>
<tr>
<td>Eosinophil count</td>
<td>0.34 x10^9/L</td>
<td>(0.0 - 0.5)</td>
<td>-</td>
</tr>
<tr>
<td>Basophil count</td>
<td>0.05 x10^9/L</td>
<td>(0.0 - 0.1)</td>
<td>-</td>
</tr>
<tr>
<td>Percentage nucleated RBCs</td>
<td>0 /100WBC</td>
<td>(0.0 - 0.2)</td>
<td>-</td>
</tr>
<tr>
<td>Nucleated red blood cell count</td>
<td>0 x10^9/L</td>
<td>(0.0 - 0.5)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Notes:** REVIEW

**KMIC Report ID:** 337200  
**Lab Report ID:** H214430H201703242210  
**Issued:** 24/03/2017 22:10  
**Received:** 25/03/2017 04:15
GFR calculated abbreviated MDRD

**Patient:** John Gray  
**Date of Birth:** 21-06-1944  
**NHS Number:** 6001866897  
**Recipient GP:** CURTIS, SIMON (CR)  
**Status:** Filed  
**Viewed:** CURTIS, SIMON (CR)

**Specimen:** Blood  
**Taken:** 24/03/2017 12:03  
**Received:** 24/03/2017 19:07

**GFR calculated abbreviated MDRD**  
74 ml/min/1.73m² < 60  
(Normal) - No Action needed

For patients of African-American origin the best estimate of eGFR is 1.21 x the value given above.

**Liver function test**  
(Norm) - Normal - No Action needed

- **Plasma total bilirubin level:** 14 umol/L  
- **Plasma ALT level:** 28 IU/L  
- **Plasma alkaline phosphatase level:** 56 IU/L  
- **Plasma albumin level:** 39 g/L

**Serum lipids**  
(Norm) - Normal - No Action needed

- **Plasma total cholesterol level:** 3.8 mmol/L  
- **Plasma triglyceride level:** 1.08 mmol/L  
- **Plasma HDL cholesterol level:** 1.2 mmol/L  
- **Plasma LDL cholesterol level:** 2.1 mmol/L  
- **Total cholesterol:HDLC ratio:** 3.1 ratio

**Renal profile**  
(Norm) - Normal - No Action needed

- **Plasma sodium level:** 141 mmol/L  
- **Plasma potassium level:** 4.1 mmol/L  
- **Plasma creatinine level:** 88 umol/L

**HDL cholesterol level:** 2.6 mmol/L  
(Norm) - Normal - No Action needed
**HbA1c level (DCCT aligned)**

**Patient:** John Gray  
**Date of Birth:** 21-06-1944  
**NHS Number:** 4001966097  
**Recipient GP:** CURTIS, SIMON (DR)  
**Status:** Filed  
**Viewed:** CURTIS, SIMON (DR)

**Specimen:** Blood  
**Taken:** 24/03/2017 12:03  
**Received:** 24/03/2017 19:07

**HbA1c level (DCCT aligned)**  
5.4%  
(4.0 - 6.0)

|sc| - Normal - No Action needed

HbA1c reported in both IFCC and DCCT aligned units  
www.national-guidelines.com from 01/07/09  

**HbA1c level - IFCC standardised**  
36 MNOL/MOL  
(20 - 42)

|sc| - Normal - No Action needed

**Notes:** REVIEW

**EMIS Report ID:** 337234  
**Lab Report ID:** H214430H201703250410  
**Issued:** 23/03/2017 04:10  
**Received:** 25/03/2017 05:04
"Diabetes UK emphasises that if you have Type 2, you may initially be able to manage your condition with diet and exercise. Many people will still need drug therapy, but starting with the pills sends the wrong message."

The need for activity therapy

The epidemic of the 21st century is environmental as well as behavioural change. The car, the desk job, and the screen have changed an environment that leads to ranges of disorders with different names given by different specialists: hypercholesterolaemia, type 2 diabetes, the metabolic syndrome, vascular dementia, obesity, high blood pressure, and obesity are consequences stemming from other things: of eating during television and inputting syndromes – but if we do nothing to reverse these habits, the problems will worsen. The working day of many GPs now results in sitting only about 4000 steps. If the GP is still allowed to walk to the waiting room to meet the next patient, and fewer if they use the lift in the hospital.

Physical activity is not only preventive but also therapeutic, and the RCGP is signatory to the excellent Academy report called Exercise the Miracle Cure. The College also has a role to champion for physical activity who are making a big impression. But how can activity therapy be delivered at scale?

One approach is to issue an activity prescription with every drug prescription. It takes only 10 seconds to advise patients to look at the Active 10 website or even better, give them a practical and write their name on with the prescription – download the Active 10 app. The Active 10 is a 10-minute extra brisk walking every day, and the name of the new Public Health England programme already promoted on bus stops. There is also a Walking for Health website listing the walkcrews, which should be advertised in every health centre and surgery, and shops (https://walkforhealth.org.uk), which find local authority health centre developments to promote. Walking thus, running, walking plus 10 minutes of exercise for the car and upper body to improve strength, suppleness, and skill.

One is working to change the culture of primary care with regards to its understanding of and beliefs about physical activity, as well as its benefits. GPs have a appetite to encourage people to be more active, but don’t have the time to find out what is out there. They need more tools and insights into how to gear patients towards physical activity, which becomes more important the older the patient and with every new condition diagnosed. For those unable to walk 10 minutes briskly outside, simply prescribe that they get up from their chairs briefly to walk on their spots, or they might find stairs; they can walking for shops and back before closing down again, and repeat 10 times. Strong muscles and strength are essential to carry out the key tasks of getting to the kitchen or the setting.

The model for social care can be explained or prescripted by activity therapy, prescribed for every condition, by double prescribing and reinforced by pharmacists by double dispensing.

For some patients activity therapy could be prescribed instead of drug therapy, either at the start of the condition or as a consequence of removing the medication of someone who has been on antidepressants or paracetamol for backache, for years or decades. The BBC television programme The Doctor Who Gave Up Drugs showed how difficult it is to persuade people to try non-drug treatments, but people who aren’t making any progress can be helped to reflect and recovery.

The social prescribing initiatives that is gathering momentum will help change the culture. For many patients, activity therapy should be prescribed for 3 months before drug therapy is introduced. Diabetes UK emphasises that if you have Type 2, you may initially be able to manage your condition without medication. Metaphors we use will novel drug therapy, but starting with the pills sends the wrong message.

But let’s not forget the secondary GP. Every surgery should have a staff activity programme that enables every member of staff to download the Active 10 app and work 10 minutes of exercise and to mean brisk – a walk in the middle of the day with 5 minutes of stretching and strengthening before and afterwards.

- Dan May
  - Wokingham Primary Healthcare Network, University of Reading School of Health Sciences, University of Reading, Reading, Berkshire RG6 5AA, UK
  - Email: dan.may@wokingham.nhs.uk

REFERENCES
WE NEED TO MAKE BETTER USE OF THE RELATIONSHIP THAT PEOPLE HAVE WITH THEIR PHARMACY FOR REPEAT PRESCRIPTIONS, ABOUT 500 MILLION A YEAR, HERE IS ALL THAT A TYPICAL PATIENT ON LONG TERM MEDICATION GETS WITH HIS DRUGS
PHYSICAL ACTIVITY CAN HAVE SIDE EFFECTS
BUT ALSO BENEFITS
Best possible rate of decline after onset of heart failure

**The Line**

LEVEL OF ABILITY REQUIRED TO GET TO THE TOILET IN TIME

AT ANY AGE AND WITH ANY NUMBER OF LONG TERM CONDITIONS PEOPLE CAN IMPROVE FITNESS AND STAY ABOVE THE LINE

NARROWING OF THE FITNESS GAP AND PREVENTION OF LOSS OF ABILITY TO GET TO THE TOILET IN TIME AS RESULT OF TRAINING
Focus on physical activity can help avoid unnecessary social care

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Cite this as: *BMJ* 2017;359:j4609
Focus on physical activity

Social care has received substantial media coverage over recent months. There is now widespread recognition of the direct link between the public face of the NHS and the social care of older people. More social and political commentators are voicing concern at the decline of social care, shortages of staff, an increasing number of financial failures of care homes providers, and slower recovery for the NHS. The NHS is actively seeking to persuade more of the public to stay healthy, and thus can be prevented or delayed.” This remarkable statement received little public attention at the time.

A patient’s need for care and support, whether provided by unpaid family carers or professional care paid for by personal budgets, is no longer to manage these activities of daily living such as walking, dressing, and feeding. Therefore, for exercise, for some people, the ability to get to the hospital is limited. Exercise is particularly important for older people, because it helps to maintain function and independence. The link between physical activity and health is well established and evidence from many studies has shown that regular physical activity can improve health and well-being, reduce the risk of chronic diseases, and improve mental health.
National Activity Therapy Service

Objectives

• To ensure that all people with one or more long term conditions are informed about the benefits of physical activity

• To provide support and encouragement to people with one or more long term conditions who wish to increase their level of activity and fitness

• To identify obstacles that people face and seek to reduce them

• To encourage community action and local solutions

• To build activity therapy into routine clinical practice and link it to drug therapy, psychological therapy and other types of intervention

• To promote and if possible commission research and evaluation

• To educate all relevant professionals about the benefits and risks of activity therapy for people with long term conditions

• Ensure that the whole population is covered by a set of population based services

• To engage with and involve people with long term conditions in the design and delivery of the service
KEEPING BUSY CAN FIGHT OFF DEMENTIA
EVERY MAN TO DO THE SAME NUMBER AS HIS AGE, IN 2 BATCHES IF NECESSARY
KNEE PUSH-UPS?
DUDE, THAT'S FOR BABIES!