PREPARE for Surgery

Imperial College London,
Imperial College Healthcare
NHS Trust

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Oesophago-gastric cancer surgery

High post-operative morbidity

– Complication rate 60%
– Post operative pneumonia 20-40%

Average length of stay 12,14 days
Patient factors

- Older, frail, obese
- Multiple co-morbidities

Treatment factors

Surgical procedure

- Stress response
- Cardio-pulmonary demand
- Muscle proteolysis
What is prehabilitation?

“The process of enhancing one's functional capacity to protect against the potential deleterious effects of a significant stressor”
Traditional care: siloed, reactive and fragmented leading to:

Pre-treatment: Reduced Access

During treatment: Increased side effects
- Increased complications
- Reduced tolerance to treatment
- Poor outcomes

Recovery: Late-effects of treatment
- Poor quality of life
- Increased risk of cancer recurrence
- Poor survival
Structured exercise

Submaximal exercise testing
  – Chester Step Test (CST)

Measures
  – Predicted Vo2 Max
  – O2 Pulse (VO2/HR)
  – 300 mins per week of moderate intensity full body exercise (cardiovascular + resistance)
# Personalised | Home-based | FITT

## Patient Exercise Diary to Fill In

**Name:**

**Week Number:**

**Date at start of the week:** 7/12/15

### Important:
When activity is completed please tick ✔ opposite the exercise on the relevant day. Also state how you felt on the Borg Scale (RPE).

<table>
<thead>
<tr>
<th>Activity (perform if ticked)</th>
<th>Reps/Sets/Time</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
<th>If not completed please state why</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example</strong> Seat to Stand ✔</td>
<td>2 sets of 10 reps</td>
<td>✓ RPE 13</td>
<td>✓ RPE 13</td>
<td>✓ RPE 11</td>
<td>✓</td>
<td>✓ RPE 11</td>
<td>✓</td>
<td>✓ RPE 11</td>
<td>Did not complete on Thurs and Sat because I felt unwell.</td>
</tr>
<tr>
<td>Walking @ 6MWT Pace (6min walk test pace)</td>
<td>30-60 mins@6MWT pace Intersperse with slower periods as required</td>
<td>X</td>
<td>40 mins RPE 14</td>
<td>50 mins RPE 14</td>
<td>10 mins RPE 14</td>
<td>30 Mins RPE 14</td>
<td>3C Mins RPE 14</td>
<td>30 mins RPE 14</td>
<td>Monday all day at hospital Thursday bad constipation and high laxative so substituted x-trainer 4* 6 minutes Sunday Grandchildren all day</td>
</tr>
<tr>
<td>Seat to stand (use a chair, or a bench if outside)</td>
<td>3 set(s) x 15 reps</td>
<td>X</td>
<td>OK RPE 14</td>
<td>OK RPE 14</td>
<td>OK RPE 14</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td>OK RPE 14</td>
<td></td>
</tr>
<tr>
<td>Step Ups</td>
<td>3 set(s) x 12 reps Each leg</td>
<td>X</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td>OK RPE 13</td>
<td></td>
</tr>
</tbody>
</table>

Any additional activity done during the week? (E.g. gardening, car washing. NB: Please state how long for and your (Borg) RPE rating)

X-trainer 90 minutes total RPE 14, 5 kg dumbbells 10 minutes per day for triceps RPE 11, decorating house for Christmas, up and down ladders 3 hours RPE 12
Psychological

Implicit

Tailored, timely multi-modal information
Sense of trust and safety

Explicit

Measures:
HADS
Self efficacy

Goal setting and feedback
Vicarious social modelling
Peer support
Manage affective state

Cancer nurse
PREPARE team

Psychologist
“Self-efficacy

“One’s belief in one’s own ability to succeed in specific situations or accomplish a task ... one’s sense of self-efficacy can play a major role in how one approaches goals, tasks and challenges.”

- Bandura

“... I felt fitter and stronger. I felt being able to control this aspect of my illness ... helped me to manage my mood - I felt in control.”

Mr. M
Psychological status and outcomes

Pre-Surgery Depression and Confidence to Manage Problems Predict Recovery Trajectories of Health and Wellbeing in the First Two Years following Colorectal Cancer: Results from the CREW Cohort Study.

Claire Foster1,2*, Joanne Haviland3, Jane Winter1,2, Chloe Grimmett3, Kim Chivers, Seymour2, Lynne Bateup2, Lynn Calman1,2, Jessica Corner4, Amy Dio1,2, Deborah Fenlon2, Christine M. May1,2, Alison Richardson3,2, Peter W. Smith5, the Study Advisory Committee7

(a) QLACS-GSS (Generic Summary Score); n=768 with QLACS-GSS data

Group 1 = consistently good QoL
Group 2 = consistently average QoL
Group 3 = QoL worse in short-term
Group 4 = consistently poor QoL

Poor pre-operative self efficacy and depression- Group 3 and 4 trajectory
Rehabilitation
Patients as Partners
Final thoughts.....

- Should prehab be for ALL or just ‘high risk’ patients
- Model of delivery
- Medical outcomes vs Patient reported outcomes.
- Cost-effectiveness: short term v long-term
Acknowledgments

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Questions

#fitterbettersooner