

## OCCUPATIONAL MEDICINE

# Fitness for work after surgery

Occupational physician **Dr Tony Williams** and **Dr Sarah Maxted** continue our series with a discussion of fitness for work after surgery

This article will consider some of the issues surrounding fitness for work after surgery and the factors that affect individual patients. Detailed guidance on specific operations and their expected return to work times can be found at [www.workingfit.com](http://www.workingfit.com), on the Royal College of Surgeons' website,<sup>1</sup> and on the Royal College of Obstetricians and Gynaecologists' website<sup>2</sup>.

## Advising patients

Advising patients on how much time is needed off work after surgery can be difficult. One study found that GPs' recommendations for time off heavy lifting work following hernia repair ranged from two to 13 weeks, while surgeons' recommendations ranged from one to 12 weeks. But evidence showed that open prosthetic mesh repair can withstand any degree of stress immediately<sup>3</sup> and post-operative activity does not need to be restricted at all.

Despite this, clinicians' recommendations are the most important factor in determining a patients' length of absence from work,<sup>4</sup> so if you recommend 12 weeks off, the patient is likely to take 12 weeks off. On the other hand, one study followed up patients after discectomy who were advised to return to full activities as soon as possible.<sup>5</sup> The mean duration of absence was 1.7 weeks and none developed any complications as a result.

Unnecessary time off unpaid can have a serious effect on a household budget. Also, after weeks of rest, many patients will never regain full fitness. Evidence suggests that many doctors recommend an unnecessarily long time off work, so it is important to consider whether work could be adjusted during recovery instead.

## Assessing fitness for work

The issues to consider when assessing fitness for work after surgery can be broadly divided into three categories: capability, safety and motivation.

### Capability

Can the patient get out of bed and get to work? Can they cope with work, and what can they physically manage? For many people, work is actually physically less demanding than living at home, and – provided they can get to work – they are capable of working.

### Safety

Will patients be harmed or potentially cause harm to others by going to work or by



doing any particular activity at work? Safety considerations will vary depending on the patient's profession. If a job involves machinery, the employee must be able to use and control it safely. Anybody who drives at work must be able to execute an emergency stop. The employee must also feel safe, particularly if they have demanding physical duties such as control and restraint of offenders.

### Motivation

Does the patient want to return to work? Do they want the opportunity of time off? How well do they cope with pain? Motivation will be governed by what the patient can do, what they believe they can do and what they want to do.

This will vary enormously, even between patients who have had identical procedures. A non-judgmental approach is best and it may be appropriate to simply advise that the patient is medically fit to return. Leave the employer to deal with motivational aspects and suggest a phased return with reduced hours and workload.

Pain or discomfort is a difficult issue. It is not necessary to wait until a patient is symptom-free for a return to work, and in many cases pain does not equate to harm. Analgesia and reassurance can be very important in overcoming worry about pain. But persistent pain should be taken seriously, particularly if it is associated with erythema.

## Medical factors

Several medical factors may affect when a patient can return to work after surgery.

### Wound healing

Wound healing depends on the reparative ability of the tissue involved. A simple physical assessment of the wound can often indicate whether healing is progressing as expected.

Normal movement around the home or office should not disrupt most wounds, but lifting more than around 5-10kg may do in the first couple of weeks, and the patient should also avoid getting the wound wet or dirty during this time.

Remodeling of collagen starts after a few weeks and wounds will have strengthened enough by four to six weeks to allow manual handling tasks to be done safely. Wound healing may be delayed by infection, malignancy – particularly with associated radiotherapy – and circulatory problems.

Bones take longer to heal completely. Initial healing with fibrocartilage takes around three weeks, but small bones and upper-limb bones will not be strong enough for significant activity until around eight weeks, and long lower-limb bones generally take 12 weeks.

It is important to know what surgery was undertaken – for example, bunion surgery may involve a distal osteotomy with a

walking plaster after a couple of weeks, while a proximal osteotomy may require non-weight bearing for six weeks.

### Diabetes

During the initial healing phase, endothelial cells need to mobilise for revascularisation. This is inhibited in diabetes – in some cases, catastrophic wound failure and dehiscence occurs, and in other cases there is failure or delay of complete healing.

Diabetes also affects the immune system and the resulting macrophage dysfunction leads to reduced clearance of dead cells and persistent inflammation.

### Obesity

Overexpression of tumour necrosis factor by adipose tissue leads to a state of chronic low-level inflammation, interfering with wound healing and exacerbating symptoms during the healing process.

Obesity is also linked to impaired antibody responses and increased risk of chest infections.

### Smoking

Smoking has a profound adverse effect on healing. Carbon monoxide and hydrogen cyanide reduce oxygenation of the blood. Nicotine impairs angiogenesis and so further reduces oxygen supply to the wound.

Smoking also impairs collagen production and maintenance, weakening any scar formation – smokers have four times the risk of incisional hernia of non-smokers. It is important to explain this to patients awaiting surgery.

### Age

Counterintuitively, age has only a minimal effect on recovery times. Recovery takes only an additional one or two days overall between ages 18 and 65.

Most of the delays seen in recovery in older patients are caused by comorbidities.

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The faculty of occupational medicine sets standards for specialists and also seeks to support GPs who are working part-time in occupational medicine or have an interest in work and health as it affects their patients. The diploma in occupational medicine, taken by many GPs, covers the effects of work on health, assessment of fitness for work, health surveillance, rehabilitation, workplace visits, ethics and the law. For further details on the diploma, other training and careers, and for more information on occupational medicine for GPs, visit [www.facocmed.ac.uk](http://www.facocmed.ac.uk).

**Coming up in this series Occupational mental health, dermatitis work-related upper limb disorder and working in occupational health**

### References

- 1 The Royal College of Surgeons. Patient information. *Get well soon*. 2012. [www.rcseng.ac.uk/patient\\_information/get-well-soon](http://www.rcseng.ac.uk/patient_information/get-well-soon)
- 2 Royal College of Obstetricians and Gynaecologists. Patient information. *Return to fitness: recovering well*. 2011. [www.rcog.org.uk/recovering-well](http://www.rcog.org.uk/recovering-well)
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- 5 Carragee EJ, Helms E and O'Sullivan GS. Are post-operative activity restrictions necessary after posterior lumbar discectomy? A prospective study of outcomes in 50 consecutive cases. *Spine* 1996;21:1893-7

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