



Peter Fenner

# The pre-employment medical

## Nuisance or great opportunity?

This article forms part of our 'Paperwork' series for 2011, providing information about a range of paperwork that general practitioners complete regularly. The aim of the series is to provide information on the purpose of the paperwork, and hints on how to complete it accurately. This will allow the GP to be more efficient and the patient to have an accurately completed piece of paperwork for the purpose required.

### Background

Requests for general practitioners to conduct pre-employment medicals are increasing, encouraged by the increasing costs of workplace injuries, insurance claims, premiums and common law claims. In many industries, especially mining and natural gas, legislation demands that a medical be undertaken before the employee is allowed onsite.

### Objective

This article describes the nature of a pre-employment medical and the role of the GP in providing a medical. It also provides tips on how to make the medical part of a preventive health assessment.

### Discussion

Pre-employment medicals are often unpopular as practices struggle to cope with excessive workloads. However, with good time management, prior assessment of the supplied paperwork and the addition of some further questions on health and lifestyle, medicals can provide a good assessment of a patient and assist in the prevention or management of potential or chronic health problems.

The medical also provides an excellent opportunity to promote health and to assist in disease and injury prevention by providing feedback for a healthier lifestyle and injury prevention. This is an especially great opportunity for male patients, who rarely visit their GP for routine health checks.

**Keywords:** accidents, occupational/prevention and control; occupational diseases/prevention and control; risk assessment

is to assess for any physical impairments such as injuries, weaknesses or medical problems that may put the worker at a greater risk of harm; and to advise the employer of ways to minimise these risks and prevent time off work through injury or illness.<sup>3</sup>

Pre-employment medicals are often unpopular in the busy general practitioner's working day, as GPs may feel they are irritating and boring, infringing on their already limited time to see patients. However, such medicals provide an opportunity to assess and promote healthy lifestyle practices and present an opportunity to explore any anxiety or depression that may need further evaluation. Such an assessment also allows the employer to place the worker in an environment, modified if necessary, where they will be as safe and productive as possible – to the benefit of both parties. It is also a great opportunity to assess a large group of people who frequently would never see a doctor – men! It enables the worker to have disease and injury prevention explained, and an opportunity to provide them with feedback on a healthier lifestyle and safer working practices.

### The opportunity

As many men do not attend for a 'general health check,' the little extra time spent expanding the information available from a pre-employment medical is invaluable, as discussion and advice can occur between the usual questions and physical examination.

Men (and women) need to know their 'figures' including their blood pressure, cholesterol and blood glucose levels. They need to appreciate how their family history and smoking habits impact on their risk of disease, especially heart disease. They need to know that their weight (and shape)

With the increase in litigation for workplace injuries and increasing costs for WorkCover insurance, more employers are requesting pre-employment medicals in an attempt to reduce costs from injuries and time off work.<sup>1,2</sup> The goal of the assessment of the potential employee

and obesity can increase their risk of injury, hypertension, sleep apnoea, diabetes, and a host of other medical problems including arthritis of their weight bearing joints.<sup>4</sup>

Cardiovascular disease is the number one single killer in the community.<sup>5</sup> Many cardiac deaths are preventable, with 90% of Australian adults having at least one modifiable risk factor, such as raised cholesterol (51%), high blood pressure (30%) and smoking (20%);<sup>5</sup> well controlled diabetes will also reduce the risks associated with this disease.<sup>6</sup> The risk of heart disease can be assessed from the Australian cardiac risk index charts.<sup>7</sup> A cardiac event can occur equally at work, at home, or at play. Deaths at work can often be attributed to acute cardiac events, although no accurate statistics exist.

## The medical paperwork

The company requesting the medical often supplies the necessary paperwork (although they may request that the surgery supply their own). It is important to evaluate the paperwork before the appointment. If the examining doctor assesses medicals regularly from a particular company it benefits both parties if a worksite visit can be conducted. Most companies appreciate the interest of a trip to their worksite and it assists the GP in understanding particular tasks and the physical requirements of the various job descriptions. If a worksite visit is not practical, it is essential that a detailed job description is supplied, ideally with photographs, to advise the physical demands of the job for which the employee is being assessed.

Often, questions and information required by the employer enable the GP to elaborate on certain issues and turn a routine task into a general preventive health check. The additional information may also assist the employer in ensuring the safest workplace for an individual worker. If the examiner is not the treating GP, this information may be supplied to the examinee to hand to their GP, or faxed/copied directly to the GP with the patient's permission.

## History section of the medical

This section is often brief and basic, mainly enquiring about past or present illnesses, operations and injuries as well as a basic lifestyle history (eg. smoking, alcohol intake). Expansion of

this area will often give worthwhile information that will help in assessing health and family history traits and allow health and safety advice to be given.

Standard family history questions usually have an almost 'Bon-Jovi' approach: 'dead or alive'! However, further questions to evaluate both deceased and current close family medical history and treatment will highlight any potential for familial diseases. These include hypertension, hyperlipidaemia, diabetes and any medications their family members are taking (often people do not associate hypertension with the fact that the parent is taking medication for it!). It is also important to explore familial cancers or other gene-related diseases so preventive advice or follow up appointments can be advised. Any smoking history needs a greater than 'yes' or 'no' answer, as a negative answer may identify a person as a nonsmoker who has only recently stopped smoking. Assessing the present and past amount smoked (including illicit drugs) is also important. Similarly, a good history of alcohol consumption for volume and regularity should be obtained – while also bearing in mind this is frequently understated.

Ask additional questions about previous injuries, illnesses and operations and get complete details of each one, including whether it still has any current impact. During the physical examination specifically check the injured areas for structure, mobility, strength, function and tenderness to assess for any residual or incompletely treated problems that may cause ongoing problems. All comments on your findings, normal or otherwise, should be fully recorded in the appropriate section of the medical paperwork. Back and neck injuries, including whiplash, require further questioning including the presence or absence of radiating pain (such as sciatica); the length of time off work or on modified duties; any active rehabilitation via a physiotherapist; and/or current visits to health practitioners.

Sleep apnoea is a major hazard in many occupations, especially when shifts are 12 hours a day for periods of 4–7 days. Many medicals contain the Epworth Sleepiness Scale.<sup>8</sup> The Queensland mining industry has recently moved to the Berlin Questionnaire assessment<sup>9</sup> which asks about day time sleepiness and covers more 'concrete' areas, including body mass index (BMI),

history of hypertension and diabetes, and neck circumference and the size of the pharynx to give a more complete picture of the signs and symptoms of possible snoring and/or sleep apnoea.

Epilepsy and its control must be questioned carefully. Follow up the history, even if there have been no fits for years, and ensure that if on medication the blood levels are checked and in the correct range. Good control is essential, and advice must be given to avoid getting overtired and to rest after finishing night duty before driving home. (Many workers drive several hundred kilometres home after completing a tour of four or more night shifts of 12 hours.) People with epilepsy have a higher risk of accidents, both at work and on the drive home.<sup>10</sup>

## The physical examination

As blood pressure is an important risk area, many authorities (eg. aviation, sea, mining), will only accept a maximum diastolic blood pressure of 95 mmHg or less, as higher pressures lead to increased heart workload and therefore, increased risk of heart failure or other cardiovascular events.

If glycosuria is found, check blood glucose and cholesterol levels, and HbA1c. Ask permission for a copy to be sent to the worker's own GP if you are not the usual primary healthcare provider. Measuring cholesterol levels is important in the evaluation of diabetes as well as providing an appraisal of general health, especially cardiac risk assessment.

If blood or protein is present in the urine, follow up with a laboratory midstream urine assessment as this may be an indication of early (or current) kidney disease or other renal tract pathology. Even a trace of blood or protein should be followed up, especially if hypertension is present. Urine dipsticks are so sensitive they may show haemoglobinuria as haematuria. Civil Aviation Safety Authority pilot medicals will not accept haematuria without further investigation<sup>11</sup> – the sudden incapacitating pain of a moving kidney stone is not the ideal scenario while flying an airplane, or performing other duties where the public may be put at risk.

Calculate BMI; obesity is a major risk factor for several diseases, including diabetes. It is also essential to assess the ability of the obese worker to escape from danger in restrictive spaces, keeping in mind that certain work areas involve

poor access or restricted egress from a confined space, particularly in an emergency.

Assess for early lung damage (from asthma, smoking, chronic obstructive pulmonary disease or any other lung disease) using spirometry, as this is important for some occupations. A forced expiratory volume in 1 second/forced vital capacity (FEV1/FVC) percentage below 70% may impair the ability of a person to escape from danger due to breathlessness.<sup>12</sup> Some companies have a cut-off point of 75%. Discussing the spirometry graph with the worker may motivate them to quit smoking or seek medical assistance for chronic pulmonary diseases, including poorly controlled chronic asthma. Regular follow up of impaired lung function is essential to assess and prevent ongoing damage or deterioration that may lead to impairment of the employee's working life and health.

All the major joints and muscle groups as well as the neck and back should be assessed for range of movement, strength and deformity. If a problem is identified, discuss with the worker how it could influence the ability to do the job safely. Provide the employee and employer with recommendations on how to modify or avoid potentially hazardous tasks.

Vision is also an important and frequently neglected area. With some 10% of men being colour deficient (not colour blind), it should be noted on the fitness report as a 'restriction', ie. 'jobs requiring accurate colour vision may require further onsite testing'. Red-green colour deficient people do not fail to see red or green, they see it as various shades of colours, eg. red is seen as a purplish colour. While in the majority of cases this causes no problem, some professions (eg. seamen or commercial pilots) must distinguish red and green navigation lights accurately, so further testing, such as the Farnsworth lantern or online colour vision testing, may be needed. However, such further testing can be difficult to obtain and many authorities, particularly the electrical industry, are happy with a 'coloured wire test', where wires of varying mixtures, shades and colours are identified by the examinee. Accurate colour vision is not seen to be essential nowadays, and even previous restrictions on commercial drivers have been relaxed as it has been shown that brake lights can be seen clearly and there are no more rear-end crashes

in this group than those with normal vision. While signs in a work area have specific colours, particularly red warning signs, so long as the employee recognises their significance, this is not a contraindication to work. However, care is required for certain tasks, as some instruments or colour monitors require accurate discrimination of various shade colour variations.

Similarly, near and far vision is both important to test and note if deficient. Good vision to enable reading of instructions and safe driving is an essential part of job safety. The necessity of wearing corrective lenses should be noted under 'restrictions' or 'conditions' and whether this is for near, far or both distances.

### The evaluation of risk factors

Consider an electrocardiograph (ECG), especially if hypertension or arrhythmia is present. Importantly, knowing the presence of any left ventricular hypertrophy allows better assessment of cardiovascular risk. Early follow up of those at risk may include an exercise stress test, nuclear cardiac testing or a full cardiologist assessment to predict and treat any underlying pathology if necessary.

A good physical examination will provide a more comprehensive evaluation of general health and the need for follow up, advice or referral to an appropriate health professional. It is an excellent opportunity to provide the worker with simple handouts on all aspects of general health, elements of health relevant to the employment, and to stress the importance of compliance and regular follow up.

### Assessment and advice

If the medical is comprehensive and the history and examination fully and accurately evaluated, the employer can be given good advice on safer work placement; including information that may be used to more accurately assist the employee and employer to modify or avoid potentially hazardous tasks. This can reduce the risk of injury and, consequently, time off work, as well as decreasing WorkCover and common law claims. A good medical history and assessment can also advise on changing modifiable health risk factors leading to an extended working life. This benefits both the employee, who earns more money during his/her longer working life, and the employer,

who retains a healthy and experienced worker to the benefit of the company. Furthermore, the employee benefits from their better quality and longer life to enjoy a healthier and well earned retirement.

### Easily made mistakes

The common mistake made by doctors is not completing all the tick and information boxes, or ticking a box as 'yes' and not giving any details. All questions are asked for a reason – medications may affect balance or levels of consciousness and also give a clue to medical conditions (especially heart and epilepsy). Any illness or injury mentioned should include: the date of occurrence; whether it was a work injury or not; what the treatment was; how long the person was off work or on alternate duties; if there have been further recurrences or re-injury to the area; and if there is any ongoing problem.

It is important to check that the potential employee has signed the required clearance. If they have not signed the clearance, it may mean that the medical cannot be released to the requesting body, causing important delays before the employee can be classed as suitable or unsuitable for the job. Last but not least, return the completed paperwork immediately. Any delay is unfair to both parties.

### Who pays?

Pre-employment medical checks are not usually eligible for Medicare benefits (the exception being if the person is unemployed).<sup>13</sup> Usually the requesting employer will be responsible for payment, however, who is responsible and the amount to be charged should be clarified before the consultation.

### Further information?

There are a number of training courses, qualifications and further information available from The Royal Australasian College of Physicians Faculty of Occupational and Environmental Medicine ([www.racp.edu.au/page/racp-faculties/australasian-faculty-of-occupational-and-environmental-medicine/](http://www.racp.edu.au/page/racp-faculties/australasian-faculty-of-occupational-and-environmental-medicine/)) and many universities.

### Resources

- [www.healthsite.gov.au/topics/Work\\_Related\\_Injuries\\_and\\_Diseases](http://www.healthsite.gov.au/topics/Work_Related_Injuries_and_Diseases)
- [www.occupationalhealthmackay.com.au](http://www.occupationalhealthmackay.com.au)

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[publishing.nsf/Content/B3424CE2210FFE9FCA2577E6007BFF08/\\$File/201101-Cat%201.pdf](http://publishing.nsf/Content/B3424CE2210FFE9FCA2577E6007BFF08/$File/201101-Cat%201.pdf) [Accessed 20 May 2011].

Conflict of interest: none declared.

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