

### **Joe has a problem**

You are a GP. Joe is 25 years old and is one of your patients. He comes to see you, complaining of breathlessness and a tight feeling in his chest. You don't have very much about him in your records. He had all his routine vaccinations when he was a baby and at school, but he hasn't been to the surgery for years. He has a black eye, but apart from that there is nothing remarkable in his appearance.

On questioning, he tells you, slightly sheepishly, that he got into a fight at the pub the previous weekend (though it wasn't his fault) and he got knocked over. He has only really noticed the breathlessness since the accident and he notices it mainly when he's exercising. However, he has been waking at night feeling breathlessness. He doesn't think he's had a temperature and no sore throat or rash and he hasn't been abroad recently. When you ask him some probing questions about his lifestyle, he looks embarrassed again and admits that he's been a smoker since he was 17, but he only smokes 2 or 3 a day, when he's having a pint with his mates. His nicotine stained fingers suggest he smokes more than he's admitting, but you let that go and ask about his work. He tells you that he's worked in "Deals on Wheels" for the last two years. It's a workshop under the railway arches where they repair cars that have been involved in accidents. He tells you proudly that he can do pretty well anything – panel beating, re-sprays, sorting out scuffs on bumpers and wheel trims. It's the longest he's been in one job and he really likes it. Before that, he worked on a series of building sites, demolition sites, and on road maintenance, but never stopped in anything for long. Joe stops abruptly and looks at you for a solution to his problem.

What will you do now in order to make a diagnosis and formulate some treatment?

### **Mentor notes**

Ideally students will come up with questions about the circumstances surrounding the onset of the symptom of breathlessness and its associated features. If they don't, they need to be given some prompting to get them there. Overall, they should come up with most of the following (in no particular order):

### Questions

- The nature of the fall when he had the fight – did he hurt his chest?
- The nature and duration of the breathlessness – is it constant, only on exercise, only at night and so on?

- More about his lifestyle – how much does he really smoke and could he have a smoking related problem?
- Some more questions about his work (more difficult for the students)
  - could he have been exposed to asbestos at work? Demolition workers are often exposed to asbestos
  - His current occupation – paint spraying is a well-known cause of occupational asthma

Students need to think about this and suggest the following examinations, either with, or without, prompting:

- Physical examination for any evidence of bruising or injury to chest
- Listen to lungs through stethoscope for evidence of infection or obstruction
- Take his temperature
- Check his height and weight

We want students to think about the physiology of breathing and why you might feel breathless. We can discuss and hopefully draw out the following possibilities and methods of investigation:

- Chest radiograph in case he has a broken rib or a tumour (from smoking)
- Blood test in case he has anaemia
- Lung function to differentiate between asthma, COPD and occupational related-small lung disease.

Students are likely to need much more help on the final point – they probably won't know a great deal about lung function. We will give them some data part way through the week to help them make a diagnosis.

Peak flow meter to use (best of 3 x a day and/or when he experiences symptoms)

Come back with the data in a week's time!

The students will then need to go and do some research and report back on what they might expect to find.

Students need to be well briefed on asthma and its diagnosis – you can find everything you need (and considerably more!) in the latest British Asthma Society guidelines.

