FIRE BRIGADES UNION BRIEFING

# Spin buster:
# 100% of firefighters are able to work to 60?
## Government puts public and firefighter safety at risk

CLG fire minister Brandon Lewis claims in his open letter to firefighters (6 November 2013) that "no conscientious firefighter will leave the service without access to a job or a pension after the age of 55". The minister says: "Dr Williams in his independent report found that 100 per cent of firefighters, following an appropriate exercise regime, should be able to maintain fitness to the age of 60."

Actually, Dr Williams wrote:

> *"Based on current practices of setting a standard of 42 mL·kg·min-1 VO2max but allowing firefighters to remain operational at a 35 mL·kg·min-1 VO2max would ensure that 100% of firefighters who remain physically active will still be operational at age 60 assuming they remain free from injury and disease." (paragraph 11.2.3, p136-7)*

**Why 35 VO2 max is the wrong standard**

VO2max is a measure of cardiorespiratory fitness – it does not cover all aspects of fitness associated with firefighting.

Dr Williams uses the 42 mL·kg·min-1 level, because he recognises that recent studies have suggested that where a firefighter has a fitness standard below 42 mL·kg·min-1, the risk of **sudden catastrophic cardiac events increases** and below 35 mL·kg·min-1 the increase is even more significant, with a risk of sudden death particularly when undergoing high levels of physical exertion.

Dr Williams stresses that fire and rescue authorities have **a duty of care** to their firefighters. In other words, employers have a legal responsibility to ensure adequate levels of fitness. Employers should minimise the risks to employees by ensuring the maintenance of appropriate and safe fitness levels. Employers should not be sending firefighters into hazardous situations unless the employer is confident that the employee is fit enough to ensure that the risks are addressed.

Dr Williams' also warned that "significant numbers" of firefighters will "have their contracts terminated on capability grounds without early payment of pension".

The fire minister should know that many fitness professionals – including within the fire and rescue service – believe that a VO2 max standard of 35 is far too low on safety grounds. A FireFit report by Richard Stevenson, Paul Wilsher and Kevin Sykes, *Fitness for Fire and Rescue: Standards, Protocols and Policy* (2009), referred to in Williams' report, explains this point clearly.

- It is widely accepted that firefighting is one of **the most physically demanding and hazardous occupations** with the potential for exposure to severe physiological and environmental thermal loads;
- Numerous scientific studies have assessed the energy costs of firefighting, with researchers suggesting a range of values from 32 - 57 mL·kg·min-1, with an average of around 35 mL·kg·min-1;

- It is not generally physiologically possible for individuals to perform maximally for longer than **about 90 seconds** and usually firefighting tasks last significantly longer than this. So an individual with a VO2 of 35 **would not be capable of completing the task**.

It is logical that a safety margin should be applied - work can be sustained for longer if output is reduced by 20%. These authors recommended that "a 20% safety margin should be applied, to enable firefighting tasks to be carried out safely and effectively".

That means an operational firefighter undertaking a typical operational task at an energy cost of 35 mL·kg·min-1 would therefore need a 42 mL·kg·min-1, i.e. 35 + 7 (20% of 35) = **42 VO2 max**.

These researchers recommend a standard for aerobic fitness for all UK firefighters irrespective of age, gender or duty system of 42 VO2 max. They recommend that due to the inherent risks in the role of firefighter, the individual should be withdrawn from operational duty at levels below 35 VO2 max.

Using the 35 VO2 max instead of the 42 VO2 max may enable more firefighters to remain operational for longer, but such a step would significantly **increase the risks** faced by firefighters. Professional and **safety standards** for the occupation of firefighters cannot and should not be sacrificed because of the pensions fiasco created by central government.

Whether or not it is the right level for a national standard – and the minister has dismissed calls for such a standard – the 42 VO2max level is much closer to the right safe standard than 35 VO2 max.

An **occupational pension scheme** should be designed to fit the occupation; the job and **occupational standards for firefighters** should not be made to fit the inappropriate proposals for a new firefighters' pension scheme.

**<u>Why the "best case" is not realistic</u>**

Dr Williams assumes a standard of 42 mL·kg·min-1 throughout his report – which is the position advocated by FireFit and others. He also estimates how many firefighters would be fit enough to work beyond 55 with this standard:

- In Dr Williams' worst case scenario, **85-92%** of firefighters would not be able to maintain fitness between 55 and 60;
- Even his best case predicts **15-23%** would not make it aged 55-60;
- His best case prediction assumes future firefighters will be recruited at a new, higher starting VO2max of **47 mL·kg·min-1** , way above current expectations and above the levels all currently serving firefighters were recruited at;
- It assumes a **BMI of 20** or less – better than many professional athletes;
- It is vague about the particular exercise regime, diet and other factors firefighters would have to adhere to, to maintain fitness;

To get another view on current fitness levels, Dr Williams also took data from four fire and rescue authorities, which showed that:

- **51% of firefighters** age 50-54 were below the 42 mL·kg·min-1 standard;
- At age 55-60 this figure had risen to **66%.**

**The majority of firefighters will <u>NOT</u> be fit to work beyond 55**
**The 35 VO2 max standard is <u>NOT</u> safe**
**The government is putting firefighters and the public at risk**