CFS is a clinical condition now recognised by the medical profession as a syndrome (ie collection of symptoms) in its own right, for which no specific cause has yet been found.

Various factors are thought to possibly contribute to it, including Epstein Barr Virus (which causes glandular fever), neck problems, nutritional deficiency and yeast overgrowth.

Characteristic symptoms of CFS include: incapacitating fatigue (profound exhaustion and very poor stamina), problems with concentration and short-term memory, ?flu-like symptoms such as joint and muscle pains and sore throat, headache and unrefreshing sleep.

Some patients also suffer from Neurally Mediated Hypotension (see below).

Possible links between CFS and brainstem/cervical cord compression

1. Compression of the cervical spinal cord

Brain mapping techniques suggest that part of the brain has an abnormal blood flow in 60% of people with CFS. Lack of blood flow means that the vital supply of oxygen and glucose to the brain is impaired.

In 1999, an article in The CFIDS* Chronicle (from the Chronic Fatigue Association of America) reported on research which suggested that some patients with CFS and fibromyalgia may have undetected compression of the brain stem or upper part of the spinal cord.

Some individuals may have a congenitally narrowed or misshaped spinal canal or foramen magnum (through which the spinal cord passes to join the base of the brain).

However, MRI scans may not pick this up because the curvature of the spine is not taken into account, which makes the diameter of the spinal canal appear larger than it really is.

Dr. Rosner, an American expert, believes that Neurally Mediated Hypotension (NMH) seen in CFS may well be a good marker for previously undetected cervical stenosis (narrowing of the spinal canal in the neck).

Neurally mediated hypotension - NMH

Hypotension = low blood pressure, syncope = fainting

Neurally mediated hypotension is also known as the fainting reflex, neurocardiogenic syncope, vasodepressor syncope and the vaso-vagal reflex. It is a form of autonomic dysfunction.

NMH happens when there is an abnormal reflex interaction between the heart and the brain, although both are structurally normal. Typically it can occur in susceptible individuals in the following situations:

- after prolonged periods of quiet upright posture (such as standing in a queue,
- standing in a shower, or even sitting for long periods),
- after being in a warm environment (such as in hot summer weather, a hot crowded room, a hot shower/ bath),
- immediately after exercise
- after emotionally stressful events
- after eating, when blood flow has shifted to the gut during the process of digestion.

Researchers at the Johns Hopkins Institute have found that NMH can cause chronic fatigue, muscle aches (or fibromyalgia), headaches, and mental confusion in the sense of difficulty concentrating, paying attention, or finding the right words - being in a ?mental fog'.

These symptoms occur because blood pressure is not being properly regulated. NMH can occur in people with relatively high resting blood pressure as well as those with low resting blood pressure.

The condition can be diagnosed using a tilt table test which assesses the blood pressure at different angles of tilt.

Various strategies can be used to improve the condition. In some individuals, a simple strategy of increasing salt intake may suffice, in others, medication can be helpful.

However, if NMH is secondary to neck problems, then these should be examined first.

2. Cervical stenosis

The term cervical stenosis: (spondylosis) refers to a degenerative process of the cervical spine resulting in narrowing of the spinal canal and neural foramina (where nerve roots exit) in the neck, producing compression of the spinal cord (SC) and nerve roots.

Often this occurs due to wear and tear with ageing, with bony spurs (osteophytes) being formed, or enlarging of the large ligament running down the back of the spinal canal, the ligamentum flavum, which may buckle and put external pressure on the spinal canal.