

# CHRONIC FATIGUE SYNDROME: THE CASE FOR THE DEFENCE

## *The Browning or Browened Off Syndrome*

The defence congratulates Dr C Ellis on his articulate presentation of the case for the prosecution of chronic fatigue syndrome (CFS). Tired himself, he aptly describes the dilemma that exists about pigeon-holing and treating his *tired* patient's multiple symptoms, criteria for diagnosing CFS. Dealing with philosophical and mythical opinions, he fails to address the problem.<sup>1</sup>

Chronic fatigue (CF), its duration and accompanying maladies adding to fatigue, is the problem. When poly-psycho-pharmaceutical therapy has failed, fatigue may be relieved by removing environmental factors such as caffeine, sugars, salicylate, goitrin and phenols in foods and inhalants, provoking the multiple symptoms, condoned by some physicians as psychosomatic.<sup>2</sup>

Our very being, emotions, perception and actions are the result of chemical reactions. The jury is requested to imagine that the human is *one huge chemical factory*, protected by the skin, living in constant battle with the environment, whether physical or chemical. Chemicals gain entry by inhalation, digestion or absorption via the skin. One such chemical is salicylate which erodes the skin and stomach at the site locally or after absorption and affects the body systemically. Salicylates lessen headaches, muscular pains, platelet adhesiveness, fevers and stimulate respiration, cardiac function, adrenaline and gastric ulceration<sup>3</sup> and provoke asthma.<sup>4</sup>

Supported by worldwide literature<sup>5</sup>, the defence pleads its argument on the results of more than 5 000 subjects placed on an elimination and rotation programme (E&RP)<sup>6</sup>. Tiredness, the most common symptom, was relieved in all but a few. The above sketch will help the jury understand how the body functions in relation to its environment.

Twenty-nine patients satisfying the criteria of CFS will testify to this court the relief of their multiple symptoms by removing environmental factors identified by the E&RP<sup>7</sup>. Most had atopic symptoms and had been exposed to viral infections<sup>9</sup> Coxsackie, that aggravated the tiredness they had previously experienced. Sugars, bread (wheat or yeast content), cakes, chocolate and maize commonly triggered the tiredness, depression and emotional symptoms. Milk, yoghurt, cheese, beef, citrus, apples, cabbage and nightshade families triggered both emotional and many other accompanying symptoms such as headaches, bloating, colic, diuresis, frequency, rhinorrhoea, asthma, fibromyalgic and joint pains, satisfying the criteria for diagnosis of CFS.<sup>1</sup>

### Discussion

The defence has shown that high glucose consumption was related to tiredness, emotional and other symptoms. CFS may be due to foods, especially refined grains, because of their physiological, glycosological, pharmacological and chemical properties, related to genetic factors.<sup>5</sup>

### Physiological properties

The complex carbohydrates in milled foods such as white bread, pastas, cakes, chocolates, ices, chips and sweets which the witnesses ate in abundance are easily converted to di- and monosaccharides by amylase in both sputum and pancreatic juices. Readily absorbed, high glucose levels trigger high insulin secretion, pushing glucose into cells with hypoglycaemia resulting. An adrenaline response brings glucose back intravascularly<sup>8</sup>. With little fibre in refined foods to act on, the gastric juices released act on the gastric mucosa causing gastric symptoms<sup>9,10</sup> common in CFS.

Unfortunately increasing amounts of sugared foods are needed

to maintain the same stimulation keeping the pancreas fit. A low glucose rise then stimulates excess insulin production resulting in low glucose levels for hours on end, with increasing tiredness and depressive symptoms.

The methylxanthines caffeine, phenylethylamine and vanillic acid in coffee, chocolate and cake combined with endogenous adrenaline triggered by sugars they contain, stimulate:

- The cardiovascular system with symptoms of increased pulse and blood pressure, palpitations, flushing, tinnitus and throbbing in the head<sup>11</sup>
- The respiratory system with hyperventilation<sup>2</sup>
- The nervous system with being more alert, anxious, restless, nervous, active and insomnia<sup>12</sup>
- The urinary system with diuresis, frequency and enuresis<sup>13,14</sup>
- The gastro-intestinal system with sphincter incoordination and diminished motility with reflux, heartburn, and distension.<sup>9</sup>

Post-prandial irritability and somnolence are common with high carbohydrate intake.<sup>2</sup> Hence refined foods, alone, may provoke the multiple symptoms of CFS, besides other types of foods, inhalants and skin applications.<sup>14,15,16</sup>

When foods are eaten in the natural state, the fibre and cellulose have to be first digested by gastric juices before the complex carbohydrates which they hold are slowly released. The low glucose level available is used for a normal metabolism, with no insulin or adrenaline response. That hungry feeling and craving for food abates<sup>17</sup> resulting in loss of weight.<sup>17,18</sup> Without free gastric juices to act on the mucosa, gastric symptoms are avoided.

### Glycosological Properties

Glucose combines with proteins in cells in an enzymatic process called glycosylation.<sup>19</sup> Glycosylated haemoglobin (HbA1C) is used to measure blood sugar over weeks, the life of red blood cells.<sup>20</sup> Non-enzymatic glycosylation or glycation affects proteins, rendering them useless: a permanent change. Cataracts, atherosclerosis, stiffness of muscles and joints, neuritis, diabetes (pancreatic beta cells)<sup>21</sup> and nephrosis are examples<sup>22</sup>. These maladies are seen at a younger age in diabetics, due to exposure to higher blood sugar levels.<sup>21</sup>

### Pharmacological Properties

Besides glycation effect, goitrogens, phenols and anilines in foods, dyes and medicinals may diminish thyroid function by interfering with iodine uptake.<sup>23</sup> Goitrogens, a derivative of thiourea, present in turnips and cabbage, were found to cause goitres in humans and rabbits.<sup>24</sup> Goitrin (L-5-Vinyl-2-thioxazolidine) found in turnips is as powerful as thiouracil used to treat hyperthyroidism.<sup>25</sup> Phenols found in apples, fruits and vegetables<sup>26</sup> may affect behaviour. Apples and cabbage affected the moods, bowel and respiratory symptoms of witnesses. Aniline dyes in toilet rolls, perfumes and medicinals<sup>27</sup> and the phenacetin and acetaminophen<sup>28</sup> found in the hundreds of tablets consumed by one witness affected her mental state, provoked explosive diarrhoea and rashes on the buttocks from coloured toilet paper. Tablets to treat a symptom may aggravate that and other symptoms because of their maize, sugar and aniline content.

### Chemical properties

Salicylates, triggering symptoms of multiple systems, have been mentioned<sup>3,4</sup>, large amounts of which are found in herbs, spices, berries, tea, licorice and honey.<sup>29</sup> Benzoates, sulphates, glutamates and salicylates found in foods provoked nervous, respiratory, bowel and muscular symptoms<sup>5,30</sup>. Other chemicals such as histamine, vasoamine, tyramine and phenylethylamine present in the foods these patients reacted to, such as cheese, chocolate and

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bread (yeast) may have led to emotional, vascular, gastric, respiratory and dermal symptoms.<sup>31</sup> These reactions to chemicals mimic atopic reactions without any measurable response such as raised IgE levels.

It is the atopic patients who react abnormally to their environment with multiple symptoms<sup>7,32</sup> and who will react abnormally to virus infections with prolonged fatigue post virally. Tiredness does play a role in the acute and recuperative phase of a viral infection. But the twenty-nine witnesses testified that they were tired before viral infections that aggravated their tiredness. Chronic tiredness is experienced by all of us at one time or another. The chronic complaints that accompany CFS may be the cause of the tiredness but the virus gets the blame.

Innumerable names confusing the prosecution, add colour to the debate. "Melancholia", melano (black) cholio (bile) suggest black moods due to bile. "Chlorosis", green or yellow bile. "Blues" of 1930s should be "Browns" of 2 000. Apples turning brown, when cut, due to oxidation of phenols.<sup>26</sup> Edgar Allan Poe had "Brain Fever" or "White fever".<sup>33</sup> Popular amongst affluent spinsters "Hysteria" was blamed on their wombs seeking moisture and "Hypochondria" on vapours in abdomen.<sup>35</sup> These vapours when passed, lift the pain and "m" in the hypochondrium. The only colour missing in the rainbow, is red. Red is what I see when "Neurasthenia" (nerve debility) sets in and we blame "Viruses, Fungi or the Psyche". Jonah may not be the first man to suffer from CFS.<sup>34</sup> Adam surely was first. Phenols in the apple he ate changed him from a happy-go-lucky, peaceful man into a forgetful, depressed, guilt ridden, cowering man hiding in the bushes. Incompatible with paradise, he was evicted from the Garden of Eden.<sup>35</sup> Forced to work for his keep, Adam was "browned off" with his treatment, cast out as a psychosomatic. Unable to concentrate, he forgot to write down the name of the fruit he ate. Sages, today still dispute whether it was fig, grape, pomegranate, apple or wheat.<sup>36</sup> Since then, CF sufferers are "browned off" with the treatment they receive from the medical profession, cast out as psychosomatics, with its ominous connotations. It is our duty to investigate the foods they eat, in order to broaden our tree of knowledge of CF.

The defence admits it cannot match the philosophical and mythical manner the prosecution has so eloquently presented the dilemma regarding its concept of CFS. The defence has however proven beyond doubt that CF exists, confirmed by laboratory investigations; classification is unnecessary; treatment is simple; innumerable names explain the pathology, adding colour to fatigue that does not need an appendage: syndrome. It is understandable why the emphasis is on psychosomatic causes as any chronic discomfort will lead to psychological symptoms, the unhappy person of the prosecution.<sup>37,38</sup> Chorea, blepharospasm and writer's cramp once thought to be psychosomatic have been shown to be chemical.<sup>39</sup> The answer is simply to identify and remove offending environmental factors whether inhaled, applied to the skin or eaten. Refined grains, sugars, wheat and maize are the main triggers of tiredness and should be diligently investigated. The prosecution's case is aptly named by Shakespeare, "Much Ado About Nothing." ●

## ACKNOWLEDGEMENTS

I wish to thank Dr W M Guldenpfennig, a neurologist well known as Penny, and Dr G Davie, a GP, as George. Both have worked with me in relationship to migraine, in Penny's patients and irritable bowel in George's patients, and the elimination programme of foods, inhalants and skin applications. They are well aware of the benefits and relief of both organic and psychological symptoms in the patients after removal of identified trigger factors.

I further wish to thank Dr Leon van Mollendorf of Infrutec, Stellenbosch and Mrs AEC Burger of the Food, Science and Technology division of the CSIR, Pretoria, for their advice and references to the organic chemical composition such as phenols, goitrins, thioureas and anilines in fruits, grains, and dyes in general. Finally my appreciation to Lynne Snow, through the courtesy of Dr Matt Haus of Zeneca, for tracing and obtaining articles on the amount of chemicals such as salicylate, benzoate, sulphite and glutamate present in foods that have been shown to effect the human being.

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