

Dysponesis & the woman in transition: Diagnosis and NIP Management

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Narrative: Dysponesis has been described as a pathophysiological state in which energy expenditure is inappropriately distributed, leading to interference with neurological processing. The consequences of this is an inability of the patient to appropriately regulate excitatory and inhibitory signals within peripheral points of the nervous system.

In turn this results in reduced productivity, altered emotional states, ideation and central regulation of organ systems, presenting a challenge to the Chiropractor for successful management. Due clinical diligence demands that a carefully integrated clinical care plan be customised to each patient in order to address the destructive impact of dysponesis on multiple body systems.

I provide a guide to the assessment of the female patient in transition with recommendations for clinical interventions where indicated.

Indexing Terms: Chiropractic, Clinical management; Dysponesis; Neuro Impulse Protocol.

Introduction

The term '*woman in transition*' has been coined to refer to that period of time in the female life cycle centred around menopause as representative of the median in a population's normal distribution curve, but intended by definition to include the period of time when the woman moves from a biological state of childbearing capability to non-childbearing capability and beyond.

The health status of women during this period of their lives is affected by a number of influences which all interact and impact on one another. Some of these influences include adverse childhood events, genetic constitutional makeup, temperament, personality type, economic status, relationship dynamics, emotional wellbeing and the impact of previous age-related disease experience.

For many women, the fourth, fifth and even the sixth decade of life is dominated by what Dr Hans Selye (1976) termed '*the syndrome of just being sick*' which will be referred to in this paper as dysponesis.

... NIP chiropractic is uniquely placed to help restore neurological homeostasis of the dysponetic patient. Due clinical diligence however, demands that a carefully integrated clinical care plan be customised to each patient in order to address the destructive impact of dysponesis on multiple body systems...



Dysponesis

A Definition

The concept of dysponesis has been described as a pathophysiological state in which energy expenditure is inappropriately distributed, leading to interference with neurological processing. The consequences of this is an inability of the patient to appropriately regulate excitatory and inhibitory signals within peripheral points of the nervous system. This in turn results in reduced productivity, altered emotional states, ideation and central regulation of organ systems. (Whatmore & Kohli, 1968)

Characteristic Clinical Presentation of Dysponesis

While the symptoms shown in Table 1 are characteristic of the dysponetic woman in the transition phase of her life, most patients will experience some combination but not all and it is not uncommon for the particular combination of symptoms to vary at different stages during this transition in the life cycle.

Table 1: Symptoms characteristic of the dysponetic woman in life cycle transition

Anxiety	Headache	Poor quality sleep
Irritable bowel syndrome Chronic fatigue, malaise and a general lack of energy Depression	Widespread, migrating muscular pain particularly low back pain Circulatory and skin disorders	Environmentally inappropriate sweating Mood swings Decreased sexual libido and inability to achieve orgasm

Critical Clinical Point 1

It is imperative to note that the following differential diagnoses need to be considered when confronted by a female patient in life cycle transition with symptoms of dysponesis.

Hypothyroidism, Addison's disease, Pituitary adenoma, Infection, Leukaemia, Ovarian cancer, Idiopathic thrombocytopenic purpura, Iron deficiency anaemia, Pernicious anaemia, Primary amyloidosis, Systemic Lupus Erythematosus, Dermatomyositis, Hypercalcemia, post-viral syndrome from conditions such as COVID-19, glandular fever, fibromyalgia and polymyalgia rheumatica.

The Neuroscience of Dysponesis

In the very simplest understanding of the neuroscience of dysponesis, it can be summed up as the total stress factor described by Hans Selye in his book *'The Stress of Life'*, (Selye 1956) its impact on the brain and the neurological response to that stress load.

In the study of the health sciences many of the body systems are taught independently of one another in order to facilitate effective learning. However, the separation of systems is artificial and ultimately not helpful since all the body systems function interdependently with each impacting and influencing the function of the other.



This synthesis is quite clearly demonstrated in the function of the somatic and autonomic nervous 'systems' where they work in unison, with each relying on the other to maintain homeostasis within the body.

In its simplest form the spinal cord, brainstem and cortex receive sensory input which is integrated into somatosensory and viscerosomatic processes resulting in appropriate somatic output. The energy needed for this to occur is a function of the autonomic nervous system

In their monograph '*Segmental Neuropathy*' Himes and Peterson proposed the concept of a '*neural image*' dependent upon the functional integrity of neural receptors and afferent pathways. They proposed that this '*neural image*' is a representation of the perception of the combined effects of the elements of the external and internal environment being experienced by an individual at any point in time, or consistently across any period of time. If afferent input is compromised, efferent output may be quantitatively or qualitatively altered with subsequent negative effect on target structures.

This is similar to altered function of the hypothalamic-pituitary-adrenal-axis (HPA) and its influence on central sensation (Baron et al, 2013). In this process the stress placed on an individual results in increased inflammatory cells which stimulate the dorsal horn of the spinal cord leading to sensitisation of non-nociceptive nerves. The impact of dorsal horn sensitisation to nociception is due to increased levels of neuropeptides. These neuropeptides accumulate as a result of fluctuating cortisol levels from dysfunction of the HPA.

The human brain is susceptible to cortisol influence from the very beginning of life. Cortisol is able to cross the placental barrier and exert a negative effect on the developing foetus which in turn may impair the cognitive ability of the infant (Davis & Sandman, 2010). Adverse experiences as a child or adolescent may also predispose an individual to developing an altered HPA (McBeth et al, 2007) thereby perpetuating a state of somato-autonomic dysfunction

Critical Clinical Point 2

NIP chiropractic is uniquely placed to help restore neurological homeostasis of the dysponetic patient. Due clinical diligence however, demands that a carefully integrated clinical care plan be customised to each patient in order to address the destructive impact of dysponesis on multiple body systems.

Referral to a psychologist, nutritionist, general medical practitioner, gynaecologist, endocrinologist or exercise physiologist may be necessary in individual cases depending on their clinical status.

The General Adaptative Syndrome (G.A.S) & Dysponesis

The seminal work of Hans Selye on stress and adaptation remains worthy as the basis of any discussion of dysponesis. Selye asserts that the response of the body to stress, which he termed the general adaptation syndrome (GAS), is largely due to the function of the nervous system and in turn may cause important changes to it. (Selye & Fortier 1950) GAS follows an observed pattern of three distinct stages: alarm reaction, resistance and exhaustion (Selye 1950). While all

three phases can legitimately be referred to as being dysponetic in nature, the clinical reality is that patients are most likely to seek care at the exhaustion phase. For the woman in transition, this exhaustion phase will generally be seen between the ages of 35 and 55, although sporadic cases do occur outside those age parameters.

Most of the characteristic manifestations of the alarm reaction (tissue catabolism, hypoglycaemia, gastro-intestinal erosions, discharge of secretory granules from the adrenal cortex, haemoconcentration, etc.) disappear or are actually reversed during the stage of resistance but reappear during the stage of exhaustion. This suggests that the ability of living organisms to adapt themselves to changes in their surroundings, their adaptability or 'adaptation energy' is a finite quantity; its magnitude appears to depend largely upon genetic/constitutional factors.

In GAS the manifestations of passive non-specific damage are intricately intermixed with those of active defense. This is an inherent characteristic of the stress which elicits the general adaptation syndrome. In the biological sense stress is the interaction between damage and defense, just as in physics tension or pressure represents the interplay between a force and the resistance offered to it. (Selye 1950)

Risk factors for developing Dysponesis

While dysponesis is essentially a neurological problem arising from errors of energy expenditure, risk factors for acquiring it are more diverse than those inherent within the brain.

Genetics & constitutional factors

Whatmore and Kohli (1968) describe the following as the inherited constitutional characteristics of the individual which may be considered as risk factors for developing dysponesis:

- ▶ Acquired characteristics of the individual, resulting from the person's total past experience
- ▶ Activity going on within the neuronal networks of the nervous system at the time the patient is subjected to dysponetic influences.
- ▶ The duration, magnitude, and distribution of the particular dysponetic influences present at that time

Temperament & personality

Temperament and personality characteristics of individual patients need to be taken into account when considering a diagnosis of dysponesis. To understand these influences, one needs to have a sound comprehension of the positive and negative characteristics of the two personality types and four basic human temperaments.

In terms of personality, the two types are categorised as Type A and Type B. (Jenkins et al 1971) The negative effects of the behavioural characteristics of Type A and Type B are of critical importance in gaining an understanding of the age of appearance of the exhaustion phase of dysponesis.

Traits of Type A Behaviour

(Adapted from 'What it means to have Type A personality traits' by E Scott)

- ▶ Time urgency and impatience

This is demonstrated by people who, among other things, get frustrated while waiting in line, frequently interrupt others during work or conversation, walk or talk at a rapid pace and are always painfully aware of the time and how little they have to spare.

- ▶ Hostility or aggressiveness

This is manifest as impatience, rudeness, being easily upset over small things, or being ill tempered
- ▶ Competitiveness

This is seen as people who need to 'win' at everything from work to relationships, even when these activities aren't inherently competitive.
- ▶ Strong achievement-orientation

Type A people tend to develop their self-image and experience their feelings of self-worth from what they achieve.
- ▶ Dominance

Many Type A people try to show dominance in business and personal interactions, showing scant regard for the desires and needs of others in favour of their own.
- ▶ Physical characteristics

These result from stress and years of Type A behaviour (See Table 14.2)"

Table 2: Physical characteristics of Type A behaviour

<p>Facial tension (tight lips, clenched jaw, etc.)</p> <p>Tongue clicking or teeth grinding</p> <p>Dark circles under eyes</p> <p>Facial sweating (on forehead or upper lip)</p>
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The negative Effects of Type A Behaviour are given in Table 14.3:

Table3: Physical characteristics of Type B behaviour

<p>Hypertension: Although the relationship between personality types and high blood pressure is complex, there has been some association between hypertension and Type A personalities.</p> <p>Heart Disease: There is some ambiguity, but some research shows that there is a causal relationship between TABP and coronary heart disease. ³However, recent analysis has failed to confirm this.</p> <p>Job Stress: Type A people usually find themselves in stressful, demanding jobs (and sometimes the jobs create the Type A behaviour), which can lead to stress-related health problems.</p> <p>Social Isolation: Those with TABP often alienate others, or spend too much time on work and focus too little on relationships, putting them at risk for social isolation and the increased stress that comes with it.</p>

Traits of Type B Behaviour

People having a Type B personality generally appear free of hostility and aggression, they lack a compulsion to meet deadlines, are not highly competitive at work or play, and have a lower risk of heart attack.

Table4: Behavioural traits of Type B personality individuals

They are not concerned about time
They compete for fun, not to win
Mild-mannered
Never in a hurry and has no pressing deadlines
Does not brag
Focus on quality rather than quantity
Laid back and live stress-less life

While the traits of Type A and Type B personalities outlined above are a general guide, they find their clinical significance in the impact that the interaction of an individual's temperament has. Understanding these interactions will therefore guide the clinician in understanding how an individual patient may respond to and seek to cope with stress

The Four Temperaments

Temperament is distinct from personality. While personality refers to the entirety of a person's behaviour, emotions, and thought patterns, temperament more specifically refers to an individual's natural preferences and tendencies; it especially refers to how we react to things.

Importantly, temperament is our 'raw' basic material. It does not have anything to do with our personal baggage from family and ancestors, any traumatic experiences from childhood, or memories that have been repressed. Our temperament is not carved out by things we experience in life; it simply means that because of who we are as created by God, we will respond to certain things in certain ways and have consistent behaviours and preferences towards the things we encounter in life.

Temperament is not an excuse for obnoxious or otherwise poor behaviour. When an individual acts in an uncharitable way towards others, or seems stuck in certain patterns of socially offensive behaviour, using temperament and saying '*That's just how I am*', is inappropriate. Each temperament has particular strengths and weaknesses. But the strengths can be deepened, and the weaknesses can be marginalised.

For the clinician, understanding the characteristics of each of the four basic temperaments and their interaction with personality type is invaluable in anticipating and understanding the attitudes, opinions, expectations and responses of our patients. Nowhere is this more true than in the management of a dysponetic patient. The following is a concise overview of the four basic temperaments.

The Choleric

People with this temperament tend to be egocentric and extroverted. They may be excitable, impulsive, and restless, with reserves of aggression, energy, and/or passion, and try to instil that in others.

They tend to be task-oriented people and are focused on getting a job done efficiently; their motto is usually 'do it now'. They can be ambitious, strong-willed and like to be in charge. They can show leadership, are good at planning, and are often practical and solution-oriented. They appreciate receiving respect and esteem for their work

The Melancholic

It has been said that the melancholy personality is the 'richest of all temperaments, but at the largest cost'. History would probably reveal this to be true. Melancholy personalities are people who have a deep love for others, while usually holding themselves in contempt. They tend to be deep-thinkers and feelers who often see the negative attributes of life, rather than the good and positive things.

Melancholies are often very gifted people in art, literature, music, healthcare, ministry and so forth. They long to make a significant and lasting difference in their world. Sadly, many melancholies are also victims of deep bouts of depression that come from great dissatisfaction, disappointment, hurtful words or events. In short, melancholies take life very seriously ... too much so sometimes, and it often leaves them feeling blue, helpless or even hopeless.

Melancholies usually have a high degree of perfectionistic tendencies ... especially in regards to their own lives or performance. They are very 'introspective' and hold themselves to a very high standard ... one that can rarely be achieved

The Sanguine

People with this temperament tend to be lively, sociable, carefree, talkative, and pleasure-seeking. They may be warm-hearted and optimistic. They can make new friends easily, be imaginative and artistic, and often have many ideas.

They can be flighty and changeable; thus sanguine personalities may struggle with following tasks all the way through and be chronically late or forgetful.

The Phlegmatic

People with this temperament may be inward and private, thoughtful, reasonable, calm, patient, caring, and tolerant. They tend to have a rich inner life, seek a quiet, peaceful atmosphere, and be content with themselves. They tend to be steadfast, consistent in their habits, and thus steady and faithful friends.

People of this temperament may appear somewhat ponderous or clumsy. Their speech tends to be slow or appear hesitant

They barely express emotion at all. While the sanguine might whoop and cheer and jump for joy at the slightest provocation, phlegmatic individuals are unlikely to express more than a smile or a frown. Their emotions happen mainly internally

A Humorous Clinical Summary

An exaggerated way of understanding the four temperaments is to consider four people who see a star fall to earth. The Sanguine talks about it animatedly to all present; the Choleric wants to form an expedition to find it and analyse it; the Melancholic ponders what it means and how he feels about it; and the Phlegmatic waits for the others to decide what to do as whatever decision they make is fine by him.

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Adverse childhood experiences and dysponesis

McBeth et al (2007) hypothesised that alterations in HPA function and subsequent hormonal cascade is due to stress experienced during childhood and adulthood. Therefore, the patient is at risk of developing a syndrome such as dysponesis if exposed to sufficient levels of psychological stress (McBeth et al, 2007;368).

The significance then of an accurate history is imperative as well as screening for adverse childhood events using the *Adverse Childhood Experiences (ACES)* questionnaire. The ACES questionnaire has been demonstrated to show that those who experienced adverse events as children are more likely to experience significant disease in later years. (Felitti et al, 1998) Patients with dysponesis will often score in the 3 - 4 range but may be as high as 8 on the ACES questionnaire. Consideration must always be given to referring these patients to an appropriate health practitioner depending on the clinical presentation at the time of consultation in order to achieve an optimal clinical outcome.

A copy of the standard questionnaire can be found as Addendum I at the end of this manual and a detailed discussion of the ACE study can be accessed electronically here <https://www.cdc.gov/violenceprevention/acestudy/index.html>

While dysponetic symptom clusters can appear across all four temperaments, (LaHaye 1984) in both Type A and Type B personalities, (Jenkins et al 1971) and with even small ACES scores, generally speaking those patients with higher ACES scores are more likely to become dysponetic in adult life, albeit at different ages.

In typical choleric, type A personality patients, despite their natural inclination toward high stress life experiences, dysponesis seems to be delayed until the late sixth and seventh decades of life or later, often associated with retirement or change in occupational status. It is possible that these individuals are addicted to high stress levels and are drawn to competitive environments where they can be confrontational and therefore reinforce aberrant cortisol production. The significance of a recording of any adverse childhood events becomes vitally important as it may give you some idea of why this individual thrives in such environments.

In melancholy individuals, particularly with Type B personalities, dysponetic symptom clusters tend to appear much earlier in life, even late third decade. Finally, it is very common to encounter dysponesis in both Type A or Type B personality, non-choleric women in their fifth decade of life, possibly related to 'empty nest syndrome' and menopause.

Sex Hormones & The Menstrual Cycle

The menstrual cycle is influenced by four hormones, namely; *oestrogen*, *progesterone*, *follicle stimulating hormone (FSH)* and *luteinising hormone (LH)*.

Oestrogen exists as *estrodial* (C₁₈H₂₄O₂), designated E₂, which is the primary form of *oestrogen* during the reproductive years. When pregnancy occurs, so does the need for *oestrogen* which now takes on one more oxygen atom (C₁₈H₂₄O₃), and finally, when menopause arrives it changes again to a single oxygen atom (C₁₈H₂₄O₁). *Oestrogen* is highest during the follicular phase of the menstrual cycle and is responsible for preparing the uterine endometrium for implantation of the fertilised ovum.

Progesterone is low during the follicular phase, but rises in the days following ovulation to undo all the preparatory work done by *oestrogen* during the follicular phase.

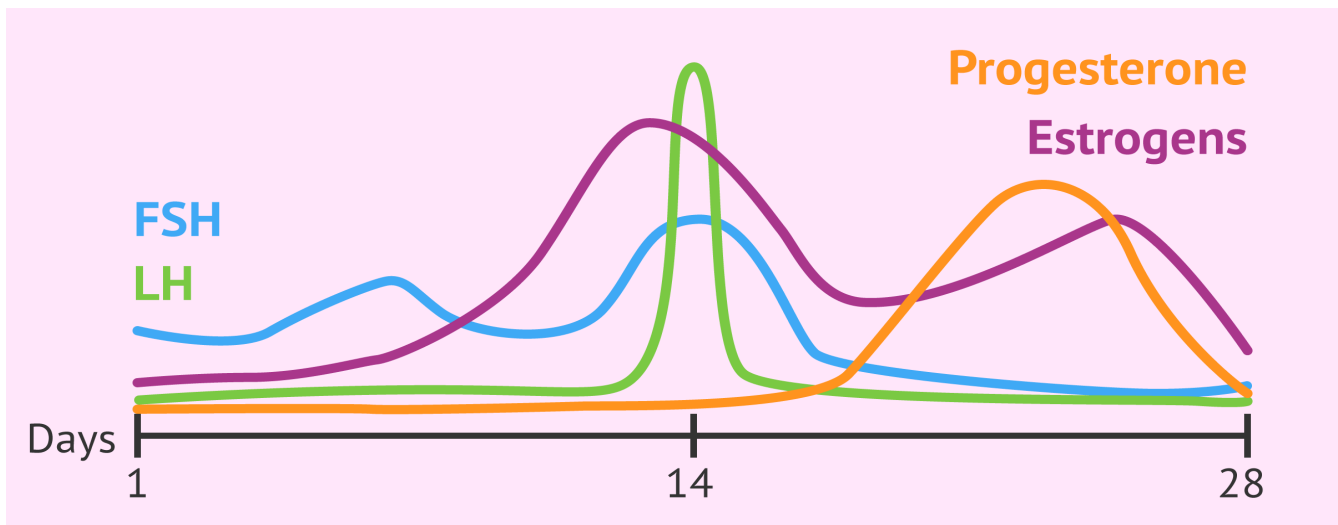
The *luteal hormone (LH)* initiates the so-called luteal phase following ovulation that does not result in pregnancy. After ovulation, cells in the ovary (the *corpus luteum*), release *progesterone* and a small amount of *oestrogen*. This causes the lining of the uterus to thicken in preparation for pregnancy.

If a fertilised egg implants in the lining of the uterus, the *corpus luteum* continues to produce *progesterone*, which maintains the thickened lining of the uterus. If pregnancy does not occur, the *corpus luteum* dies, *progesterone* levels drop, the uterus lining sheds, and the period begins again.

Follicle stimulating hormone is one of the hormones essential to pubertal development and the function of women's ovaries and men's testes. In women, this hormone stimulates the growth of ovarian follicles in the ovary before the release of an egg from one follicle at ovulation.

The following diagram (Fig 1) illustrates the rise and fall of the four hormones during the menstrual cycle.

Fig 1: Hormone levels throughout the menstrual cycle



Menopause and brain health

Menopause, variously referred to colloquially as the 'Big M' maybe 'the change' or even 'that time'.

This is the time in the life of a woman when her *oestrogen* wanes, her monthly periods end and she loses her ability to become pregnant and bear a child.

Menopausal symptoms are many and varied, but all are related to the neuroendocrine system. Typical symptoms are brain fog, memory loss, hot flashes, night sweats, disturbed sleep, low mood, decreased libido and depression. All these symptoms are related to the hormone *pregnenolone* which arises from cholesterol.

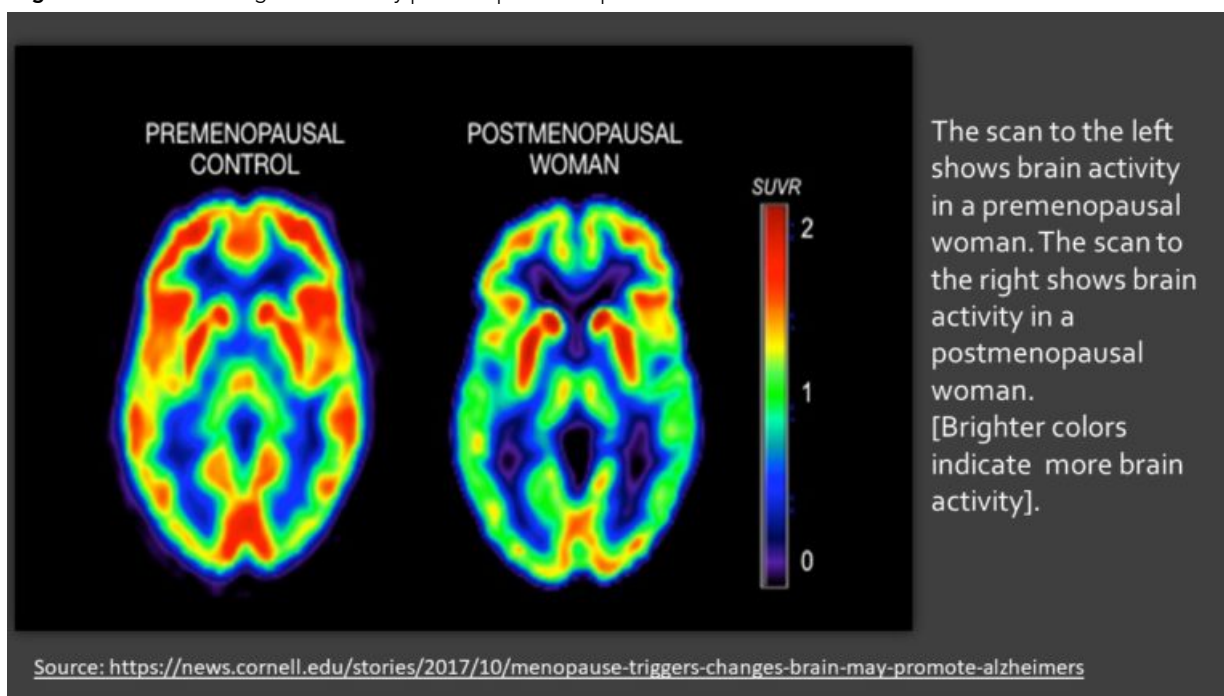
Pregnenolone converts to *progesterone*, which in turn converts to either *oestrogen* or *testosterone*. This biochemical chain tends to chug along quite smoothly until stress increases to unmanageable levels and then the *pregnenolone* is diverted to the adrenal glands which then make greater levels of cortisol. As *cortisol* levels rise and stay chronically high, several effects may be seen in the neuroendocrine system. *Pregnenolone* goes down (causing irritability),

progesterone plummets (keeping her awake at night), *œstrogen* subsides (hot flashes) which causes the thyroid to slow down metabolism which leads to exhaustion.

As *œstrogen* wanes so too does overall brain function (Fig 2) with the potential for decreased cognitive function, memory and depression. Whilst it is likely that this is related to the changing hormonal milieu, the complex relationships that exist between gonadal steroids and neurotransmitters, and their receptors, mean that this pathophysiology is still poorly understood. A past history of depression seems to be the most important risk factor. (Sassarini J. 2016)



Fig 2: Brain scans showing neural activity pre- and post-menopause



The History & Physical Examination

The obvious role of a detailed case history is of vital importance, especially the review of systems. The patient is likely reporting to your clinic with a wide variety of symptoms including pain, exhaustion, sleep dysfunction and ideation issues. The systems review is so critically important as it will alert you to the broader focus of dysponosis.

On physical examination, dysponetic patients follow the characteristic neuro-adrenal axis syndrome presentation. The diagnostic criteria depends upon the demonstration of the following

three clinical signs which are all related to an incompetent or compromised sympathetic response:

- ▶ **Kidney punch test.** Typically this test will produce flank pain at the point of percussion when the kidney is involved and is known as Murphy's test. (Musana & Yale, 2005) Kidney involvement is almost universally unilateral. When the adrenals are involved with neuro-adrenal axis syndrome, the overwhelming sensation is a wave of nausea and possibly a little epigastric pain or discomfort from applying the punch test to both sides
- ▶ **Systolic pressure.** The blood pressure is taken in the supine position, the patient is then asked to quickly sit up and it is taken again within 10 seconds. A, immediate drop of 10mmHg or greater in the systolic value is considered a positive sign of incompetent sympathetic response
- ▶ **Pupillary Response.** When a bright light is flashed directly into the eye, the usual reaction is immediate, sustained pupillary constriction. A patient with neuro-adrenal axis syndrome is unable to maintain the constriction and the pupil alternately dilates and constricts. This inability of the pupil to maintain sustained constriction is considered characteristic of an incompetent sympathetic response

While not specific in any way to dysponesis, nonetheless the Fukuda stepping test (Honika et al 2009) will be universally present and it is not uncommon for patients to move 2 - 3 metres forward, 1 - 2 metres offline and rotate up to 60°.

NIP management

In the treatment of a patient with dysponesis it cannot be over-emphasised that in the initial stages of care:

less is more

A patient with dysponesis has a neurological system that is in a state of stress and high alert, increasing cortisol levels and maintaining a destructive fight or flight status. Imagine a walk in a picturesque forest and suddenly being confronted by a grizzly bear. The fight or flight mechanism switches on, cortisol levels rise and you run. Once in a safe place, this all returns to normal. In the modern world, however, exposed to constant stress which cannot be controlled, this fight or flight mechanism with its resultant elevated cortisol level remains on high alert. This is a destructive biological state that quickly leads to exhaustion and sleep dysfunction, etc

Too much therapeutic stimulation carries with it the potential to exacerbate this stress cycle. The fundamental principles of NIP management of dysponesis are as follows:

- ▶ The first 2 initial patterns very frequently involved a Type II cranial, an ileocaecal valve syndrome accompanied by or followed by the adrenal organosensory subluxation, all of which are intimately linked to ventricular cranial problems
- ▶ The key to getting these patients into a t-zone, and therefore susceptible to dark pattern quarantine is clearing fragmentation consultation by consultation. The importance of fragmentation must not be overlooked
- ▶ It is essential that developmental dark patterns are identified and quarantined
- ▶ An optimal patient outcome depends upon full quarantine of all active cortical patterns of dysafferentation (neurotag clusters)

- ▶ Fragmentation associated with the initial presenting patterns is most likely to involve the 3rd or 4th ventricle and the falx
- ▶ Careful assessment and pretesting needs to be undertaken in order to avoid placing further strain on an already stressed nervous system.

Nutritional support strategies in dysponesis management

As practicing chiropractors, it is entirely appropriate to offer general nutritional advice and to suggest the use of a range of nutritional supplements that may be useful to combat dysponesis during menopause.

- ▶ Supplements which may support memory and prevent Alzheimer's disease

B-complex formulation that contains B6, B12 and folate. These vitamins are important for women who have low B vitamin blood levels and/or high homocysteine levels. They are particularly important for vegans and strict vegetarians.

Omega 3's are important for women over 50 who are post-menopausal and are known to be carriers of the APOE-4 gene. They are particularly important for vegans and strict vegetarians.

Vitamins C & E for women over 50 who are peri- or postmenopausal who smoke or have been smokers and known high CRP levels

Ginkgo biloba taken for no more than 6 months at 240mg/day. Particularly useful for women who have cardiovascular disease. Check carefully that the patient you are suggesting this strategy to is not on blood thinners, NSAID's, anti-platelet medication, anticonvulsants, antidepressants, diabetic medication or St John's wort.

- ▶ Supplements which may help support hormonal function and ease menopausal symptoms

Vitamin E 400-800IU/day mixed tocopherol complex, soy isoflavones 40-50mg/day for 3-4 months, red clover isoflavones 80mg/day for 3-4 months, black cohosh 20-40mg taken twice a day for no more than 6 months (Warning: Moderate interactions with contraceptive pills and blood pressure medications) and Siberian ginseng 400mg/day (Warning: Do not use alongside blood thinning medication)

- ▶ Supplements which may help support mood and mild depression

St John's wort and Omega 3's may offer support for low mood, mood swings and mild depression but both need to be used judiciously as they both interact with blood thinning and other cardiovascular medications

- ▶ Supplements which may help support sleep

Melatonin (Warning: do not use if taking sedative medication), valerian root, vitamin C and magnesium citrate may all promote healthy sleep patterns. Should be taken 1 hour before retiring.

- ▶ Supplements which may help with the management of stress and anxiety

B vitamins (especially in over 50's), rhodiola, ashwagandha and gamma-aminobutyric acid GABA may all be useful in offsetting the symptoms of stress and anxiety.

It must be emphasised, however, that Best Practice includes strong encouragement for referral to a clinical psychologist for women suffering high levels of stress, anxiety and depression.

Conclusion

This paper has presented a clinical account of dysponesis with recommendations for Chiropractors to consider when encountering such patients. This clinical approach is taught within the Neuro Impulse Protocol.

I wish to acknowledge the work done by Dr Lisa Mosconi, Director of the *Women's Brain Initiative* and author of the widely acclaimed book *'The XX Brain'* (Allen & Unwin ISBN 978 1 76087 549 7) from which the final section of this manual on brain health has been based.

A GIFT TO ALL WOMEN EVERYWHERE

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Addendum

Adverse Childhood Experience (ACE) Questionnaire

Finding your ACE Score in hbr 10 24 06

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** ...
Swear at you, insult you, put you down, or humiliate you?
or
Act in a way that made you afraid that you might be physically hurt?
Yes No If yes enter 1 _____
2. Did a parent or other adult in the household **often** ...
Push, grab, slap, or throw something at you?
or
Ever hit you so hard that you had marks or were injured?
Yes No If yes enter 1 _____
3. Did an adult or person at least 5 years older than you **ever**...
Touch or fondle you or have you touch their body in a sexual way?
or
Try to or actually have oral, anal, or vaginal sex with you?
Yes No If yes enter 1 _____
4. Did you **often** feel that ...
No one in your family loved you or thought you were important or special?
or
Your family didn't look out for each other, feel close to each other, or support each other?
Yes No If yes enter 1 _____
5. Did you **often** feel that ...
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
or
Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
Yes No If yes enter 1 _____
6. Were your parents **ever** separated or divorced?
Yes No If yes enter 1 _____
7. Was your mother or stepmother:
Often pushed, grabbed, slapped, or had something thrown at her?
or
Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
or
Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
Yes No If yes enter 1 _____
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
Yes No If yes enter 1 _____
9. Was a household member depressed or mentally ill or did a household member attempt suicide?
Yes No If yes enter 1 _____
10. Did a household member go to prison?
Yes No If yes enter 1 _____

Now add up your "Yes" answers: _____ This is your ACE Score