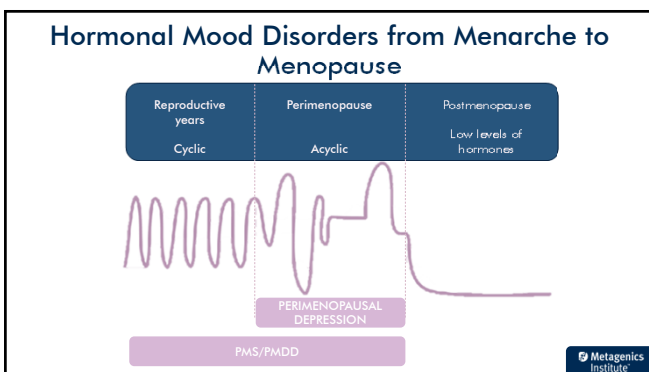


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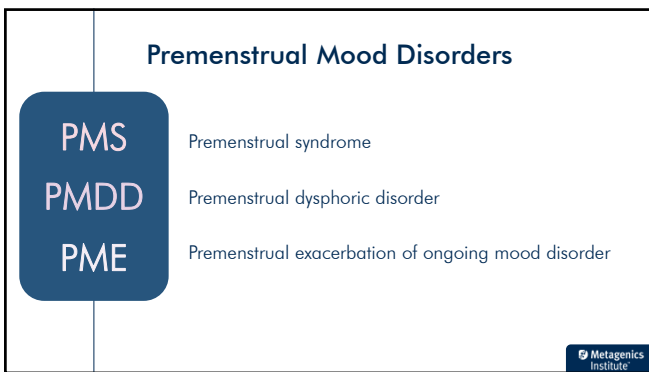
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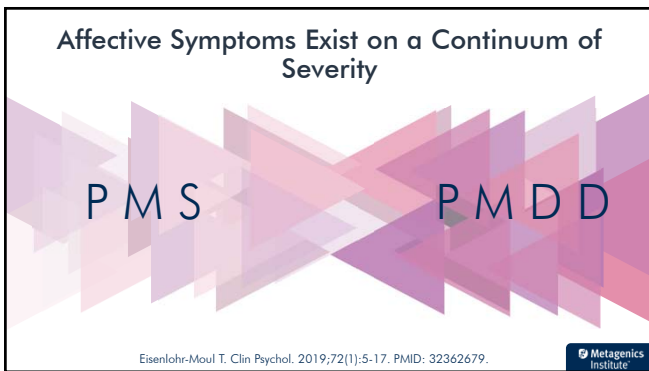
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6

Diagnostic Criteria for Premenstrual Syndrome

Affective symptoms


- Angry outbursts
- Anxiety
- Confusion
- Depression
- Irritability
- Social withdrawal

Somatic symptoms

- Abdominal bloating
- Breast tenderness or swelling
- Headache
- Joint or muscle pain
- Swelling of extremities
- Weight gain

- At least 1 symptom present 5 consecutive days before period for at least 3 menstrual cycles in a row
- End within 4 days after her period starts
- Interferes with some of her normal activities

ACOG. Premenstrual syndrome. 2020. Available at: <https://www.acog.org/womens-health/faqs/premenstrual-syndrome>



7

Lauren*, 30

Case study

Presenting with PMS




* Name changed for confidentiality purposes

8

Case study

Lauren, 30
Presentation & History



Presentation – PMS symptoms:

Depression
Anxiety, mild chest pain, panic attacks
Breast tenderness
Snappy/ intolerant
Suspicious

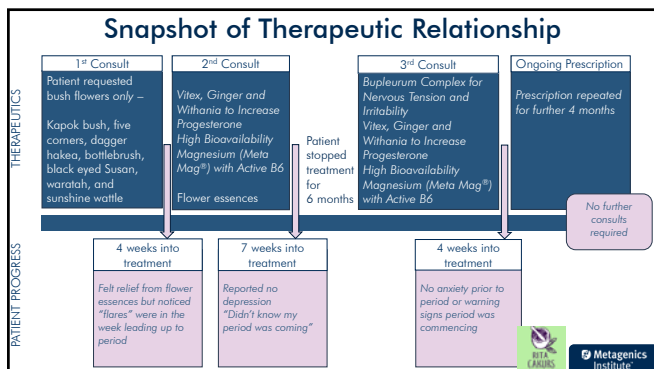
Period: Menstrual flow variable 3 days, then heavy for 2 days

Other relevant information:

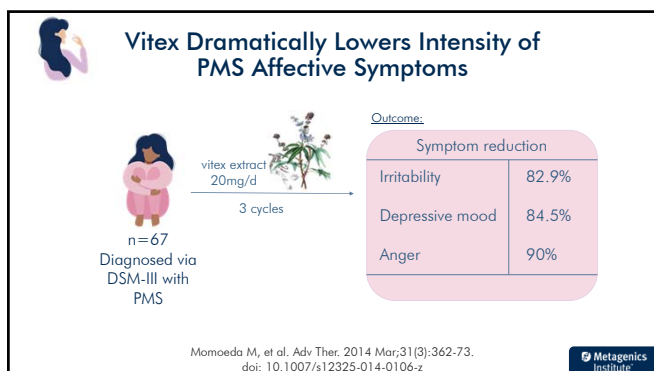
Busy working mum
Very little exercise
Perpetual yoyo dieter, average 20-30 kg over healthy body weight
History of poor compliance with diet and lifestyle suggestions

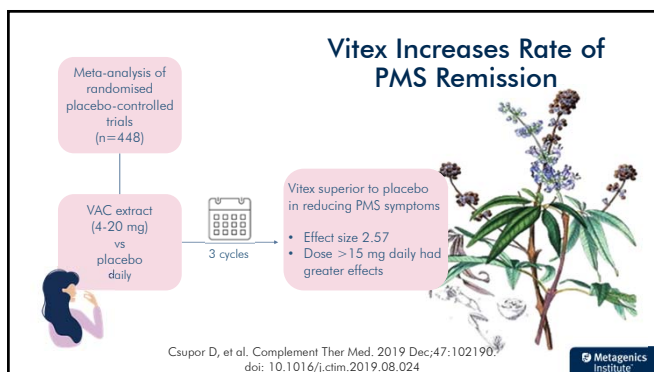
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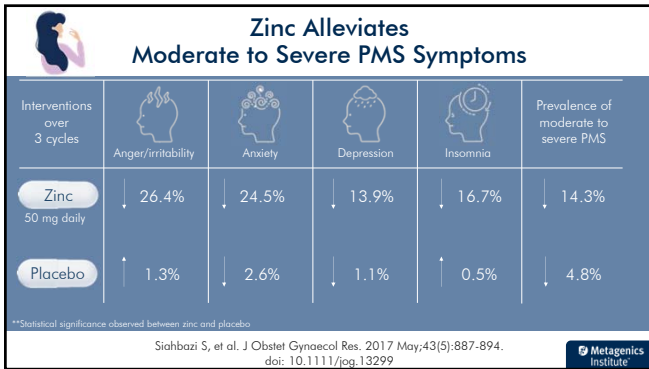
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12



13

Vitex, Ginger and Withania to Increase Progesterone



Ingredients

- Withania somnifera
- Vitex agnus-castus
- Zingiber officinale
- Vitamin B6 (Pyridoxine hydrochloride)
- Vitamin E (Tocopherols concentrate – mixed (low alpha type))
- Zinc (Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate))

Clinical applications

- Premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD)
- Infertility
- Subclinical hypothyroidism



14

What did Rita do?

Using a holistic approach, Rita's prescription:



- ♥ Provided hormonal support
- ♥ Supported neurotransmitter systems
- ♥ Supported a healthy stress response



15

DSM-5 Criteria for PMDD


Core symptoms

- Marked affective lability
- Marked anxiety
- Marked depression
- Persistent irritability

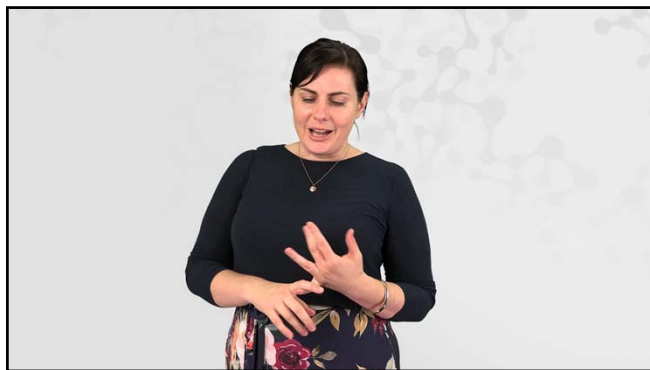
- Decreased interest in usual activities
- Subjective sense of difficulty in concentrating
- Lethargy
- Appetite changes
- Hypersomnia or insomnia
- Physical symptoms such as breast tenderness, swelling, headaches, joint or muscle pain, bloating, weight gain

- At least 1 symptom must be a **core symptom**
- At least **5 sx** must present for most of the last week of luteal phase and remit within a few days of menses
- **Disturbance markedly interferes with usual activities**
- Not an exacerbation of another disorder

Criteria for Premenstrual Dysphoric Disorder. 2017. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK279045/table/premenstrual-syndrom.table1.diag/>




16




17

Unheard Pleas for Help



I said I can't carry on like this, I just can't carry on like this-I need help. I was crying out for years and years and years. And there was no one listening.

Osborn E, et al. BMC Women's Health. 2020;20:242. doi: 10.1186/s12905-020-01100-8



18

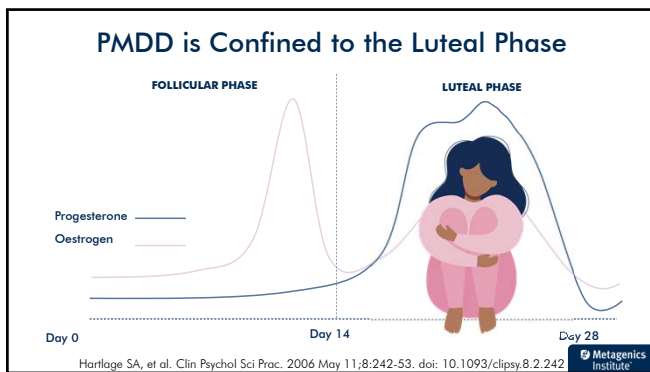
Differential Diagnoses of PMDD

Psychiatric disorders	Neurologic disorders	Endocrine disorders	Blood disorders	Gynaecologic disorders	MSK disorders	GI disorders
Major depressive disorders Anxiety Dysthymic disorder Panic disorder Personality disorder Substance abuse Bulimia	Epilepsy Migraine headaches Menstrual headaches	Hypothyroidism Hyperthyroidism Diabetes Hypoglycaemia	Anaemia	Physiologic ovarian cyst Pelvic inflammatory disease Endometriosis Perimenopause Chronic pelvic pain Early menopause	Arthralgia Arthritis Fibromyalgia	Irritable bowel syndrome Crohn's disease Functional bowel disorder

Adapted from: Rijac J, Varela SA. Clin Rev. 2018 Nov/Dec;40:1-6.

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20

Apps for Tracking PMS/PMDD Symptoms

- Me v PMDD
- Flo
- Clue
- Daylio
- T2 Mood tracker
- Mood log
- iMood journal
- What's up
- Period Tracker

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21

Premenstrual Exacerbation of Ongoing Disorder

Chronic psychiatric disorders can worsen before or during menses

Harlage SA, et al. Clin Psychol Sci Pract. 2006 May 11;8:242-53. doi: 10.1093/clipsy.8.2.242

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Distinguishing PMDD from Premenstrual Exacerbation

Look for a pattern in your patient

How?

- Menstrual diary
- Tracker apps
- Monthly mood chart

Tips for menstrual diary recording

- Type of psychological symptoms
- Severity and duration of symptoms
- Time of cycle symptoms occur
- Prior treatments and response

Eisenlohr-Moul T. Clin Psychol. 2019;72(1):5-17. PMID: 32362679.

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23

Differentiating PME from PMS and PMDD

```

    graph TD
      A[Mental health history] --> B{Primary mood and/or anxiety disorder beyond late luteal phase/early menstruation}
      B -- No --> C{>5 symptoms present and severe? (At least 1 core affective symptom)}
      B -- Yes --> D{Symptoms worse premenstrually?}
      C -- No --> E[PMS]
      C -- Yes --> F[Provisional diagnosis of PMDD  
Track Sx for 2 months for diagnosis]
      D -- No --> G[Not menstrual-related]
      D -- Yes --> H[PME]
      H --> I{If premenstrual symptoms persist}
      I --> F
  
```


Raffi ER, et al. Current Psychiatry. 2017 Sep;16(9):20-28.

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24


If you Suspect PME

Support individual according to chronic mental health presentation



See Clinically Effective Solutions for Stress, Anxiety and Mood


Eisenlohr-Moul T. Clin Psychol. 2019;72(1):5-17. PMID: 32362679.




25

Hormonal Mood Disorders from Menarche to Menopause

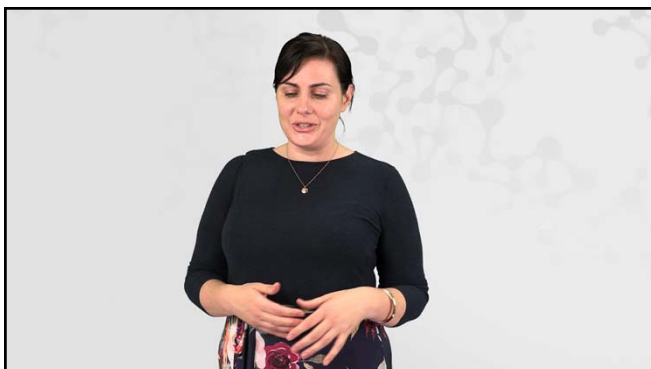
Reproductive years	Perimenopause	Postmenopause
Cyclic	Acyclic	Low levels of hormones



PMDD



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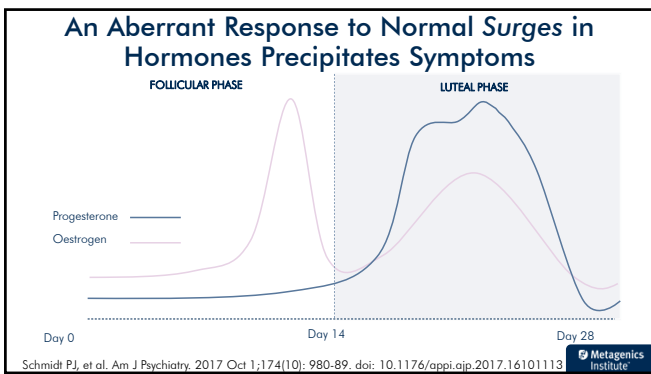
27

PM DD

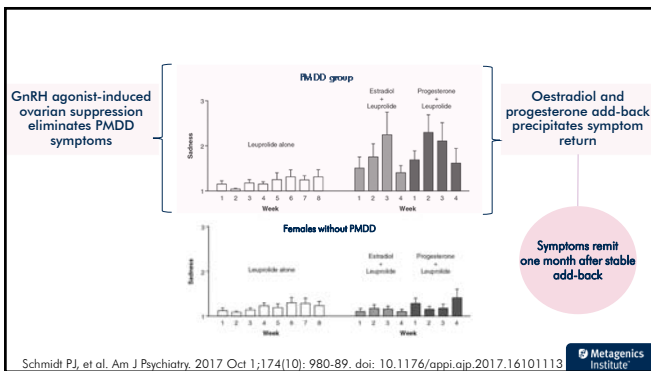
'All of a sudden it went pitch black, my emotional mood changed drastically and I could never see any outside things, like things had happened that made me upset or made me dark, so as a very young woman I was wondering why I felt that darkness. I felt like there was no point in living.'

Osborn E, et al. BMC Women's Health. 2020;20:242. doi: 10.1186/s12905-020-01100-8 Metagenics Institute

28



29





30

Why do some females experience heightened sensitivity to hormones?



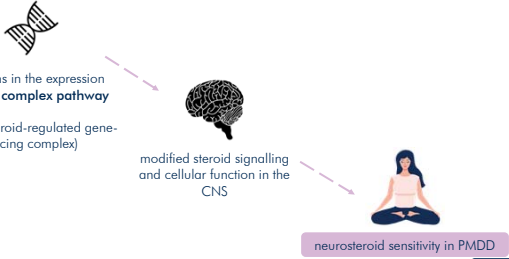
31

Interacting Factors Contribute to PMDD



32

Those with PMDD Differ on a Cellular Level




Alterations in the expression ESC/E(Z) complex pathway (ovarian steroid-regulated gene-silencing complex)

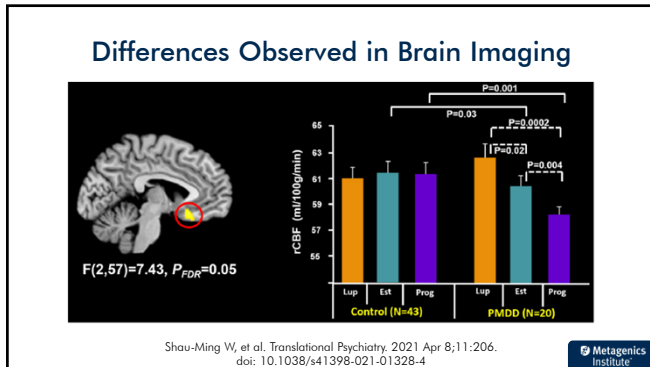
modified steroid signalling and cellular function in the CNS

neurosteroid sensitivity in PMDD

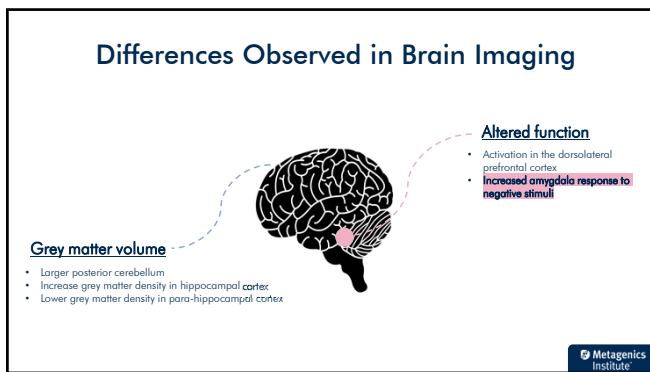
Dubey N, et al. Mol Psychiatry. 2017 August;22(8):1172-84. doi:10.1038/mp.2016.229



33



34



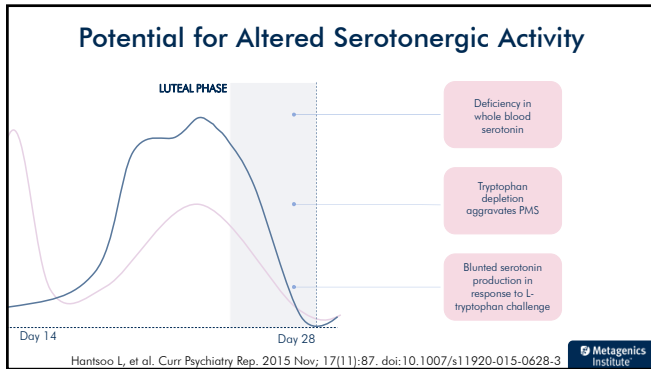
35

Differences Observed in Brain Imaging

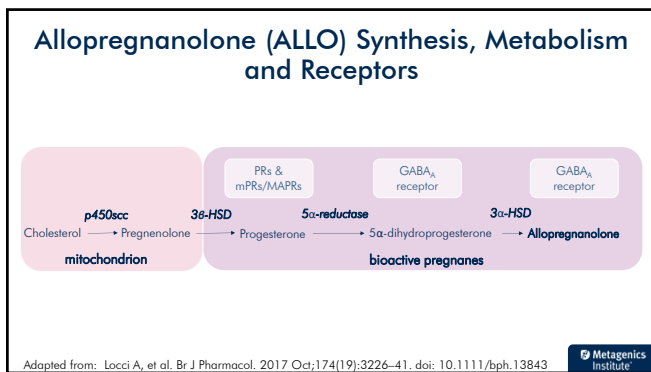
- Bannbers E, Gingnell M, Engman J, Morell A, Comasco E, Kask K, et al. The effect of premenstrual dysphoric disorder and menstrual cycle phase on brain activity during response inhibition. *J Affect Disord*. 2012;142:347–50. doi: 10.1016/j.jad.2012.04.006
- Gingnell M, Ahlstedt V, Bannbers E, Wikström J, Sundström-Paromaa I, Fredrikson M. Social stimulation and corticolimbic reactivity in premenstrual dysphoric disorder: a preliminary study. *Biol Mood Anxiety Disord*. 2014;4:3. doi: 10.1186/2045-5380-4-3
- Jeong HG, Ham BJ, Yeo HB, Jung IK, Joe SH. Gray matter abnormalities in patients with premenstrual dysphoric disorder: an optimized voxel-based morphometry. *J Affect Disord*. 2012;140:260–7. doi: 10.1016/j.jad.2012.02.010

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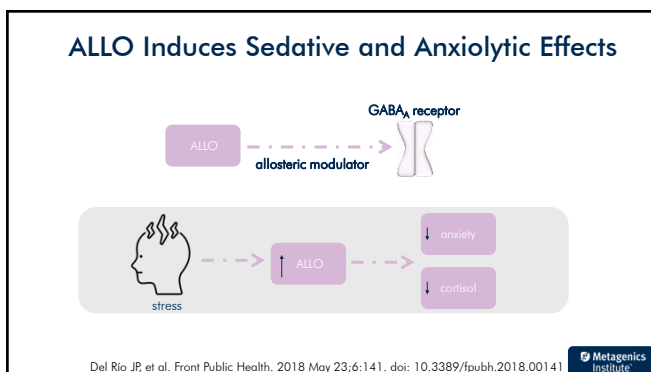
36



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39

Paradoxically, Women with PMDD Experience Increased Negative Mood Symptoms

Increased neural sensitivity to normal ALLO fluctuation

Abnormalities in GABA_A receptor plasticity

Bäckström T, et al. Prog Neurobiol. 2014;113:88-94. doi: 10.1016/j.pneurobio.2013.07.005

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5-alpha Reductase Inhibitor Significantly Reduces Core PMDD Symptoms

5- α -reductase

stabilisation of ALLO

Symptom	Phase	Placebo	Dutasteride
Irritability	Follicular	~1.2	~1.0
	Late luteal	~2.8	~1.5
Anxiety	Follicular	~1.2	~1.0
	Late luteal	~2.8	~1.5
Sadness	Follicular	~1.2	~1.0
	Late luteal	~2.2	~1.2

Martinez PE, et al. Neuropsychopharmacology. 2016;41:1093-102. doi: 10.1038/npp.2015.246

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Pathophysiology Differs in PME of Ongoing Disorder

Isoallopregnanolone
GABA_A allopregnanolone antagonist

strong benefit relative to placebo for PMDD

no benefit for patients with PME of an ongoing disorder

M Bixo, et al. J Neuroendocrinol. 2018 Feb;30(2). doi: 10.1111/jne.12553

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About GABA_A Subunit Expression

GABA_A receptors consist of 5 subunits

At least 19 different subunits identified - making numerous combinations possible

synaptic GABA_A receptors

G - GABA △ Low sensitivity ● Downregulated
 N - Neurosteroids ▴ Medium sensitivity ● Upregulated
 B - Benzodiazepines ▴ High sensitivity ● Normal expression

Adapted from: Locci A, Pinna G. Br J Pharmacol. 2017 Oct;174(19):3226-41. doi: 10.1111/bph.13843. Metagenics Institute

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Protracted Stress Changes GABA_A Subunit Expression

before stress during protracted stress during protracted stress

synaptic GABA_A receptors extrasynaptic GABA_A receptors

G - GABA △ Low sensitivity ● Downregulated
 N - Neurosteroids ▴ Medium sensitivity ● Upregulated
 B - Benzodiazepines ▴ High sensitivity ● Normal expression

Adapted from: Locci A, Pinna G. Br J Pharmacol. 2017 Oct;174(19):3226-41. doi: 10.1111/bph.13843. Metagenics Institute

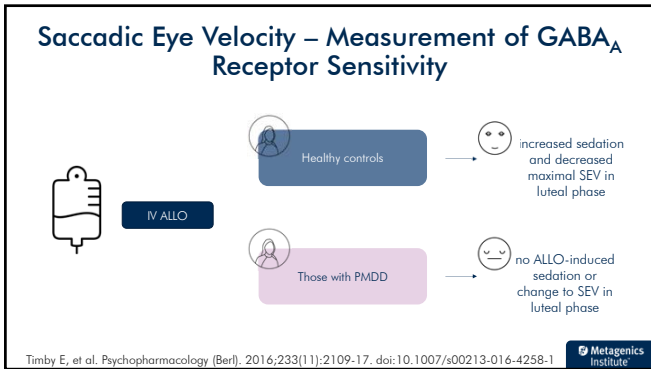
44

Subunit Composition of GABA_A Receptors is Plastic and Responsive to Neuroactive Steroids

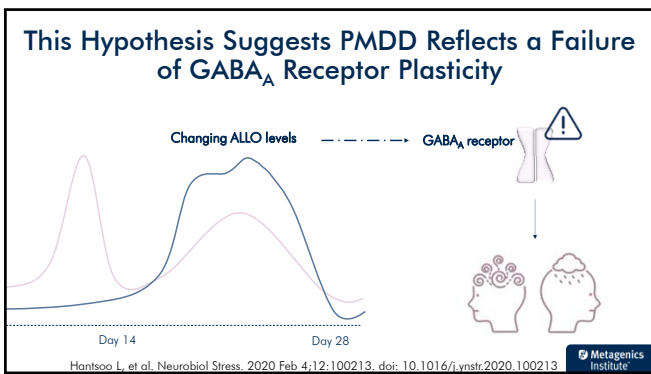
N - Neurosteroids △ Low sensitivity ● Downregulated

Maguire J, Mody I. Neuron. 2008;59(2):207-13. doi: 10.1016/j.neuron.2008.06.019. Metagenics Institute

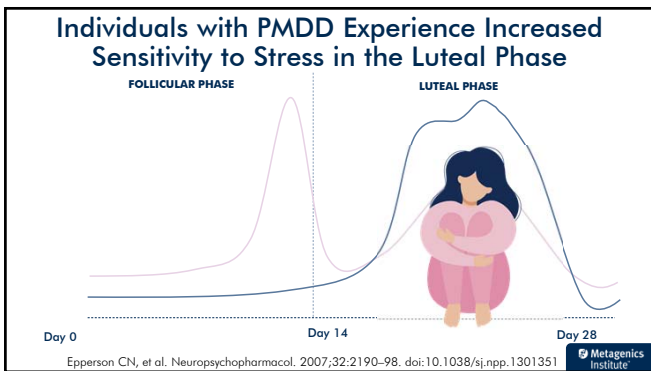
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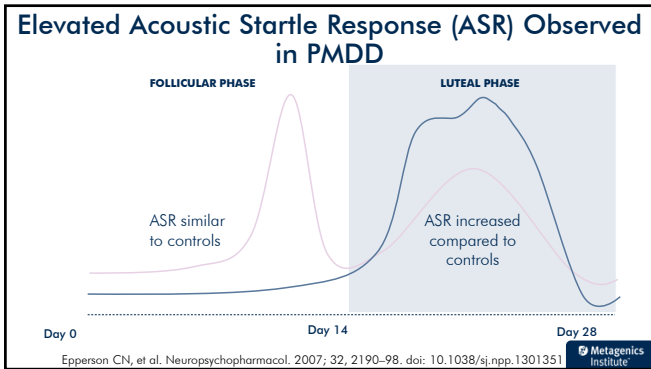
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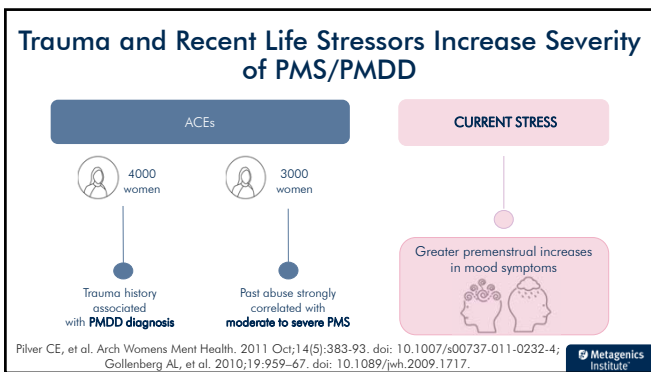
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Prioritise Stress Management



Oral therapeutics



Meditation and mindfulness



Psychological support



Self love and compassion

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Mood and Stress Protocol


I am stressed and I feel...	Anxious and Tense	Flat and Exhausted	Wired and Tired	Low Mood and Lethargic
RELIEVE the frequency, intensity and duration of symptoms	Herbal Support for Hyper-HPA and Stress	Herbal Blend of Nutrients and Support for Adrenal Health	Rhodiola Complex for Nervous Exhaustion and/or California Poppy and Passion Flower for Sleep	BCM-95™ Turmeric and Saffron for Depression and/or Mood, Adrenal and Thyroid Support
RESTORE appropriate stress response	Meta Mag® Magnesium, Taurine and Glutamine for Stress	Mental and Physical Energy Powder	Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support	Mental and Physical Energy Powder
Vitamins B5, B6 and C for Stress and Adrenal Health Lpc-37™ and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response				
REBUILD resilience by addressing chronic and modifying lifestyle	Emotional Support • Social support • Meaning and purpose • Therapy		Lifestyle Changes • Movement • Mindfulness • Sleep hygiene • Nutrition	

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Clinically Effective Magnesium

MAGNESIUM SUPPLEMENTATION
 Meta Mag



Everyday Magnesium Replenishment

High Bioavailability Magnesium Powder with active B6
 High Bioavailability Magnesium (Meta Mag™) with active B6
 Magnesium Supplement for Kids

Stress	Energy	Sleep	Pain	Women	Cardiovascular
Meta Mag™ Magnesium, Taurine and Glutamine for Stress	Mental and Physical Energy Powder	Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support	Meta Mag™ Magnesium Bisglycinate, Corydalis and California Poppy for Pain	Magnesium and Broccoli for Women's Health	High Potency Taurine, Glycine and Magnesium for Cardiovascular Health

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The Power of Nutrients in Premenstrual Disorders

Post trial results:

- Free of PMS - 72% micronutrient group and 60% vitamin B6 group
- No longer met PMDD diagnosis - 64% micronutrient group and 50% vitamin B6 group
- Micronutrient group experienced significantly greater improvement in quality of life compared with vitamin B6 group

Retallick-Brown H, et al. J Altern Complement Med. 2020 Feb;26(2):88-97. doi: 10.1089/acm.2019.0305

55

CBT Combined with Nutrients Effective for Moderate to Severe PMS

PMS Symptoms

- Control: 1%
- CBT 45 mins weekly: 24%
- Calcium/Vit D 500 mg/200 IU twice daily: 35%
- CBT + Ca/Vit D: 77%

The combinational intervention was more effective on symptoms of PMS (symptom intensity and effect of symptoms on life)

n=40 moderate to severe PMS

Karimi Z, et al. Psych J. 2018 Mar;7(1):41-50. doi: 10.1002/pchj.206

56

Calcium: An Effective Therapeutic for Psychological Symptoms in PMS

Study

Moderate to severe PMS

Calcium 500 mg daily (n=31) | Placebo daily (n=31)

2 cycles

Results

Anxiety subgroup

Time Point	Calcium	Placebo
Baseline	~2.3	~1.2
Cycle 1	~1.8	~1.5
Cycle 2	~1.3	~1.7

Depression subgroup

Time Point	Calcium	Placebo
Baseline	~2.2	~1.7
Cycle 1	~1.5	~1.8
Cycle 2	~1.1	~2.0

DRSP - Daily record of severity of problems

Shobeiri F, et al. Obstet Gynecol Sci. 2017 Jan;60(1):100-105. doi: 10.5468/ogs.2017.60.1.100

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Oestrogen Dependent Differences in Intracellular Calcium Homeostasis in PMDD

ESC/E(Z) genes → Endoplasmic reticulum → Blunted ER response altering calcium homeostasis affecting neuronal and synaptic function

Li HJ. Doctoral dissertation. 2019. Harvard Medical School. Metagenics Institute

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Amelia*, 31
Case study
Presenting with PMDD

*Name changed for confidentiality purposes

Karen Saunders
NATUROPATHY Metagenics Institute

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Case study

Amelia, 31 Presentation & History

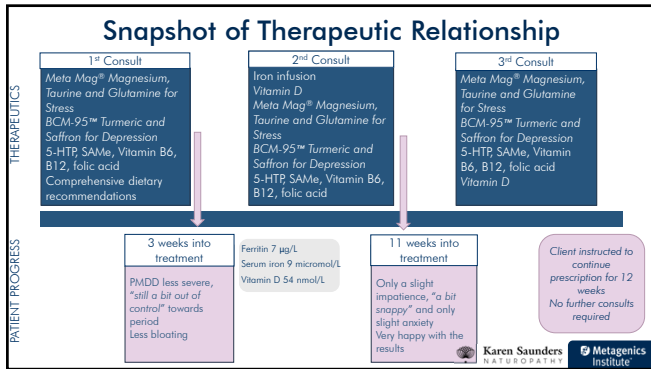
Presentation:
Diagnosed PMDD (PMS escalated to PMDD post-termination)

- Severe depression
- Grief
- Anxiety
- Social anxiety
- Period is regular, 28-30 days, some clois, normal amount, some pain on day 1

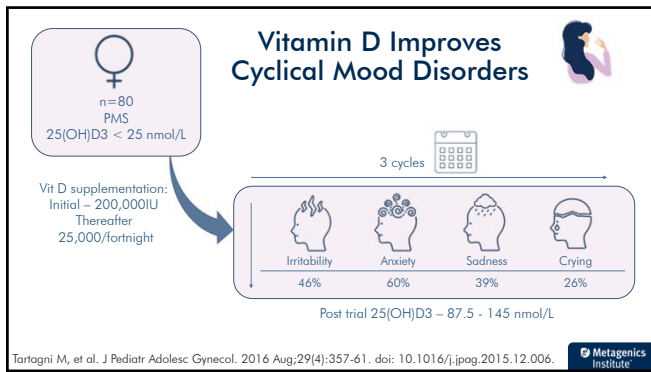
Other relevant information:
Over-exercising and under-eating
Gut health: Daily formed bowel motion, loose if anxious, some bloating after food, occasional spasmodic pain, suspect hypochlorhydria.
Sleep: OK, sometimes difficult to turn brain off, early riser.

Karen Saunders
NATUROPATHY Metagenics Institute


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Vitamin D3



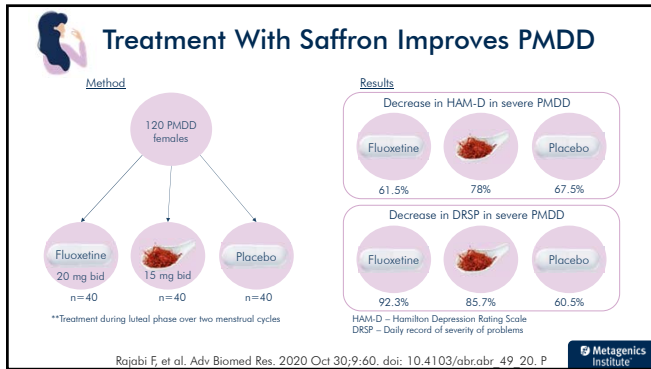
Ingredients
Colecalciferol (vitamin D)

Clinical applications

- Individuals at risk of vitamin D deficiency
- Support musculoskeletal health
- Chronic disease

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Efficacy of Saffron in PMS/PMDD

	Rajabi, et al. 2020	Beiranvand, et al. 2016	Nemat-Shahi, et al. 2020
Subjects	120 females with PMDD	78 females with PMS	164 females with PMS
Interventions	<ul style="list-style-type: none"> Fluoxetine 20 mg bid (n=40) Saffron 15 mg bid (n=40) Placebo bid (n=40) 	<ul style="list-style-type: none"> Saffron 30 mg qd (n=39) Placebo qd (n=39) 	<ul style="list-style-type: none"> Fluoxetine 20 mg qd (n=82) Saffron 30 mg qd (n=82)
Stage of cycle and duration	During luteal phase until first day of active bleeding over two menstrual cycles	Over two menstrual cycles	During luteal phase (day 14-28) over two menstrual cycles
Assessment method	Hamilton depression rating scale Daily record of severity of problems	Shortened premenstrual assessment form	Beck anxiety inventory (determined severity of anxiety and depression)
Results	Saffron found to be efficacious for treatment of PMDD with minimal adverse effects	Saffron found to reduce severity of PMS symptoms	Both interventions alleviated anxiety and depressive symptoms associated with PMS No significant difference found between treatments


65

Efficacy of Saffron in PMS/PMDD

- Beiranvand SP, Beiranvand NS, Moghadam ZB, Birjandi M, Azhari S, Rezaei E, et al. The effect of *Crocus sativus* (saffron) on the severity of premenstrual syndrome. Eur J Integr Med. 2016 Feb 1;8(1):55-61. doi: 10.1016/j.eujim.2015.06.003
- Nemat-Shahi M, Asadi A, Nemat-Shahi M, Sorooshi D, Mozari S, Bahrami-Taghanaki H, et al. Comparison of saffron versus fluoxetine in treatment of women with premenstrual syndrome: a randomized clinical trial study. Ind J Forensic Med & Tox. 2020 Apr 1;14(2).
- Rajabi F, Rahimi M, Sharbatfahzadeh MR, Tarrabi MJ. Saffron for the management of premenstrual dysphoric disorder: a randomized controlled trial. Adv Biomed Res. 2020.Oct 30;9:60. doi: 10.4103/abr.abr_49_20. P

66

BCM-95® Turmeric and Saffron for Depression




Ingredients

- Curcuma longa (BCM-95® Turmeric)
- Crocus sativus (Saffron)

Clinical applications

- Depression
- Enhance antidepressant therapy



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What did Karen do?


Using a holistic approach, Karen's prescription:



- ♥ Foundational nutrients
- ♥ Provided neurotransmitter support
- ♥ Supported a healthy stress response
- ♥ Provided comprehensive dietary advice
- ♥ Encouraged connection with self

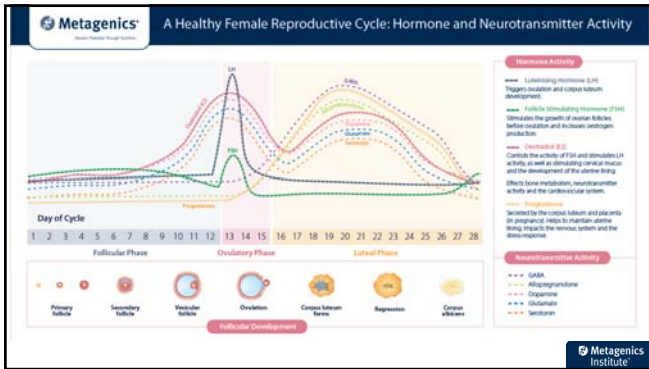


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Herb/Nutrient	Condition	Dose	Duration	Outcomes	Catch Phrase
 Saffron (Crocus sativus)	PMS/PMSD	11 mg bid	Two to three menstrual cycles	<ul style="list-style-type: none"> • Notable decrease in severity of overall PMS compared with placebo • An efficacious as fluoxetine in attenuating anxiety and depression in PMS¹ • Significant lowering in depressive scores in severe PMSD compared with fluoxetine and placebo² 	BCM-95® Turmeric and Saffron for Depression
 Turmeric (Curcuma longa)	PMS	100 mg/d (curcuminoid)	Three menstrual cycles	<ul style="list-style-type: none"> • Considerable reduction in total PMS symptoms and severity of mood symptoms³ 	
 St John's Wort (Hypericum perforatum)	PMS	200 - 1200 µg/d	Two menstrual cycles	<ul style="list-style-type: none"> • Greater decrease in anxiety, depression and crying spells compared with placebo and vitamin B₆^{4,5} 	Avoid Alcohol and Thyroid Support
 Traditional Bupleurum Combination	PMS/PMSD	2 g tid	10 menstrual cycles	<ul style="list-style-type: none"> • Marked improvements in depressive-like symptoms and general functioning in women with PMSD⁶ 	Bupleurum Complex for Anxiety, Stress and Irritability
 White Willow (White Willow Bark)	Moderate to severe PMS/PMSD	20 - 40 mg/d	Three menstrual cycles	<ul style="list-style-type: none"> • Intensity of mood swings, depression, anxiety, irritability, anger and crying spells decreased in PMS^{7,8,9,10} • Compatible with fluoxetine with improvements in symptom severity, frequency and low mood in PMSD¹¹ 	White Ginger and Ashwagandha to Increase Progesterone
 Calcium	PMS	100 mg/d elemental	Two menstrual cycles	<ul style="list-style-type: none"> • Great benefit in lessening affective symptoms compared with placebo • Combination of calcium and vitamin B₆ more efficacious than vitamin B₆ alone with alternating somatic and affective symptoms 	Hydrocortisone and Soy Isoflavones



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PMDD Protocol

	Considerations
RELIEVE	<p>If with low mood: BCM-95™, Turmeric and Saffron for Depression AND/OR Mood, Adrenal and Thyroid Support</p> <p>If with irritability: Vitex, Ginger and Withania to Increase Progesterone AND/OR Bupleurum Complex for Nervous Tension and Irritability</p> <p>If anxious and tense: Herbal Support for Hyper HPA and Stress</p> <p>If wired and tired: Rehmannia Complex for Nervous Exhaustion AND/OR California Poppy and Passion Flower for Sleep</p>
RESTORE	<p>Meta Mag® Magnesium, Taurine and Glutamine for Stress OR Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support AND/OR Vitamins B5, B6 and C for Stress and Adrenal Health Lpc-37™ and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response</p>
REBUILD	<p>Hydraxapatite Complex for Complete Bone Support AND/OR Vitamin D3 High Bioavailability Zinc with PSP</p>

71

Sleep Disruptions in PMDD

Insomnia

70% of women diagnosed with PMDD are found to suffer from sleep disturbances

Hypersomnia

Alterations observed in women with PMDD:

- Melatonin synthesis
- N2 sleep stage
- Slow wave sleep periods

72

Sleep Disruptions in PMDD

- Khazaie H, Ghadami MR, Khaledi-Paveh B, Chehri A, Nasouri M. Sleep quality in university students with premenstrual dysphoric disorder. *Shanghai Arch Psychiatry*. 2016 Jun 25;28(3):131-138. doi: 10.11919/j.issn.1002-0829.215118.
- Meers JM, Nowakowski S. Sleep, premenstrual mood disorder, and women's health. *Curr Opin Psychol*. 2020 Aug;34:43-49. doi: 10.1016/j.copsyc.2019.09.003. Epub 2019 Sep 23. PMID: 31610482.

73

Withania somnifera Improves Sleep Quality Associated with Stress

Treatment	Baseline	4 weeks	8 weeks
Ashwagandha 250	~5.5	~5.2	~5.5
Ashwagandha 600	~5.2	~4.5	~5.5
Placebo	~5.5	~4.5	~5.5

Withania also:

- Displays GABAergic actions
- Promotes non-REM sleep (triethylene glycol in leaf)

Salve J, et al. *Cureus*. 2019;11(12):e6466. doi: 10.7759/cureus.6466;
 Kaushik MK, et al. *PLoS One*. 2017;12(2):e0172508. doi: 10.1371/journal.pone.0172508;
 Kumar A, et al. *Indian J Pharm Sci*. 2008;70(6):806-810. doi: 10.4103/0250-474X.49130

74

Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support

Ingredients


- Magnesium (Meta Mag[®]-Magnesium bisglycinate)
- Ornithine
- Withania somnifera (Sensoril[™] Ashwagandha)
- Lutein
- Zeaxanthin

Clinical applications:

- Restoring healthy sleep quality
- Stress support
- Muscle relaxation


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The Relationship Between Premenstrual Disorders and Poor Lifestyle Patterns




PMS/PMDD increases in:

- Poor sleep quality
- Dependency on sleep medications
- Greater daytime dysfunction



During luteal phase:

- Hyperpalatable food cravings
- Uncontrolled eating
- Emotional eating



Menstrual barriers result in:

- Diminished exercise capacity
- Lower motivation
- Decreased adherence

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76

The Relationship Between Premenstrual Disorders and Poor Lifestyle Patterns

- Gada V. A study on relationship of prevalence of premenstrual dysphoric disorder (PMDD) with diet and lifestyle pattern of women in Mumbai city. *Online J Health Allied Sci.* 2020 Sep 20;19(2).
- Jehan S, Auguste E, Hussain M, Pandi-Perumal SR, Brzezinski A, Gupta R, et al. Sleep and premenstrual syndrome. *J Sleep Med Disord.* 2016 Aug 3;3(5):1061. PMID: 28239684.
- Khazaie H, Ghadami MR, Khaledi-Paveh B, Chehri A, Nasouri M. Sleep quality in university students with premenstrual dysphoric disorder. *Shanghai Arch Psychiatry.* 2016 Jun 25;28(3):131-138. doi: 10.11919/j.issn.1002-0829.215118.
- Meers JM, Nowakowski S. Sleep, premenstrual mood disorder, and women's health. *Curr Opin Psychol.* 2020 Aug;34:43-49. doi: 10.1016/j.copsyc.2019.09.003.

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The Relationship Between Premenstrual Disorders and Poor Lifestyle Patterns

- Prado RCR, Silveira R, Kilpatrick MW, Pires FO, Asano RY. Menstrual cycle, psychological responses, and adherence to physical exercise: viewpoint of a possible barrier. *Front Psychol.* 2021 Feb 18;12:525943. doi: 10.3389/fpsyg.2021.525943.
- Yen JY, Lin HC, Lin PC, Liu TL, Long CY, Ko CH. Leptin and ghrelin concentrations and eating behaviors during the early and late luteal phase in women with premenstrual dysphoric disorder. *Psychoneuroendocrinology.* 2020 Aug;118:104713. doi: 10.1016/j.psyneuen.2020.104713.
- Yen JY, Chang SJ, Ko CH, Yen CF, Chen CS, Yeh YC, et al. The high-sweet-fat food craving among women with premenstrual dysphoric disorder: emotional response, implicit attitude and rewards sensitivity. *Psychoneuroendocrinology.* 2010 Sep;35(8):1203-12. doi: 10.1016/j.psyneuen.2010.02.006.

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Overcoming a Barrier to Exercise



Factors which boost enjoyment and exercise adherence include:


- High social interaction
- Variety of types of physical activity
- Matching exercise intensity with current state of wellbeing

Prado RCR, et al. *Front Psychol.* 2021 Feb 18;12:525943. doi: 10.3389/fpsyg.2021.525943;
 Stevens CJ, et al. *Psychol Health.* 2016;31(2):239-57. doi: 10.1080/08870446.2015.1095917.




79

Example PMDD Prescription




	Considerations
RELIEVE	Low mood: BCM-95™ Turmeric and Saffron for Depression
RESTORE	Irritability: Vitex, Ginger and Withania to Increase Progesterone
REBUILD	Meta Mag® Magnesium, Taurine and Glutamine for Stress Hydroxyapatite Complex for Complete Bone Support




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Example PMDD Prescription




	Considerations
RELIEVE	Low mood: BCM-95™ Turmeric and Saffron for Depression AND Mood, Adrenal and Thyroid Support
RESTORE	Meta Mag® Magnesium, Taurine and Glutamine for Stress
REBUILD	Vitamin D3



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Example PMDD Prescription



	Considerations
RELIEVE	Low mood: <i>Mood, Adrenal and Thyroid Support</i>
RESTORE	Irritability: <i>Bupleurum Complex for Nervous Tension and Irritability</i>
REBUILD	<i>Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support</i> <i>High Bioavailability Zinc with P5P</i>

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Pharmaceutical Considerations

Psychotropic treatments

- Selective serotonin reuptake inhibitors (SSRIs)

Hormonal agonists and antagonists

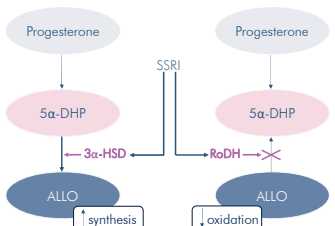
- Oral contraceptive pill
- Gonadotropin-releasing hormone agonist & add-back therapy

Yonkers KA, et al. Am J Obstet Gynecol. 2018 Jan 1;218(1):68-74. doi: 10.1016/j.ajog.2017.05.045

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SSRIs Stabilise ALLO



5α-DHP - 5α-Dihydroprogesterone
 3α-HSD - 3α-Hydroxysteroid dehydrogenase
 RoDH - Retinol dehydrogenase
 ALLO - Allopregnanolone

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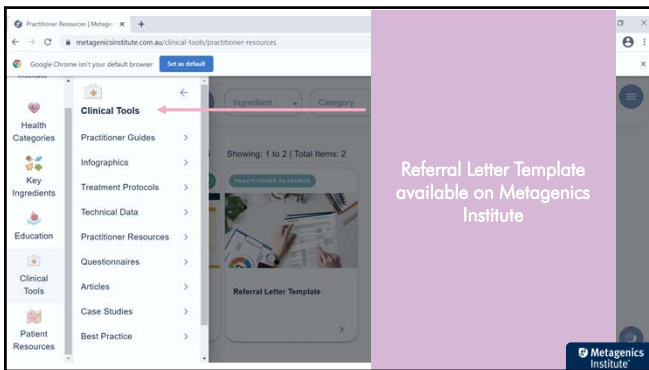
84

SSRIs Stabilise ALLO

- Fry JP, Li KY, Devall AJ, Cockcroft S, Honour JW, Lovick TA. Fluoxetine elevates allopregnanolone in female rat brain but inhibits a steroid microsomal dehydrogenase rather than activating an aldo-keto reductase. *Br J Pharmacol*. 2014 Dec;171(24):5870-80. doi: 10.1111/bph.12891.
- Hantsoo L, Epperson CN. Allopregnanolone in premenstrual dysphoric disorder (PMDD): evidence for dysregulated sensitivity to GABA-A receptor modulating neuroactive steroids across the menstrual cycle. *Neurobiol Stress*. 2020 Feb 4;12:100213. doi: 10.1016/j.ynstr.2020.100213.
- Liang JJ, Rasmuson AM. Overview of the molecular steps in steroidogenesis of the GABAergic neurosteroids allopregnanolone and pregnanolone. *Chronic Stress (Thousand Oaks)*. 2018 Dec 19;2:2470547018818555. doi: 10.1177/2470547018818555.



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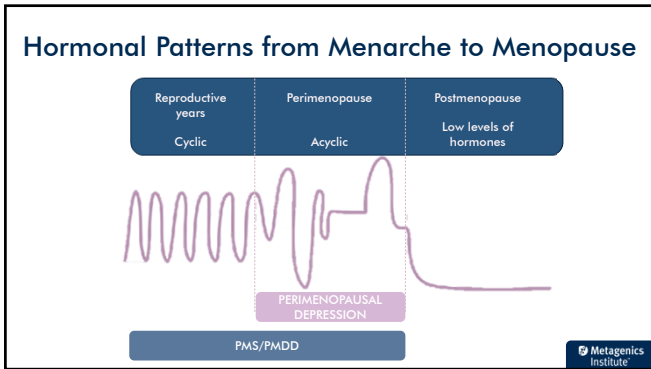
86

PMDD Co-Prescribing Safety

Catch-Phrase	SSRIs/SNRIs	Benzodiazepines	OCP
Herbal Support for Hyper HPA and Stress	N/A	Low level caution	Moderate level caution
Rehmannia Complex for Nervous Exhaustion	Low level caution	Low level caution	N/A
California Poppy and Passion Flower for Sleep	Low level caution	Moderate level caution	N/A
Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support	N/A	Low level caution	N/A
BCM-95™ Turmeric and Saffron for Depression	N/A	Low level caution	Low level caution
Mood, Adrenal and Thyroid Support	Contraindicated	Low level caution	Moderate level caution
Bupleurum Complex for Nervous Tension and Irritability	N/A	N/A	Moderate level caution
Vitex, Ginger and Withania to Increase Progesterone	N/A	Low level caution	Moderate level caution



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Case study

Kate, 45 Presentation & History

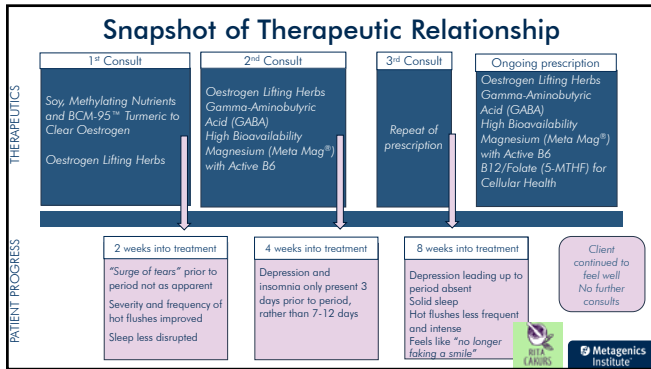
Presentation:
PMDD
Felt overwhelmed, exhausted, increased crying spells, depression was worst it has ever been
Having bouts of suicidal thoughts leading up to period
Period regular but had gotten heavier over past 3 years
Hot flushes

Other relevant information:
Long history of premenstrual fatigue, depression and insomnia
Gynecologist prescribed Mirena for heavy bleeding and insomnia however worsened mental health symptoms
Prior diagnosis of fibromyalgia

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Oestrogen Lifting Herbs



Ingredients

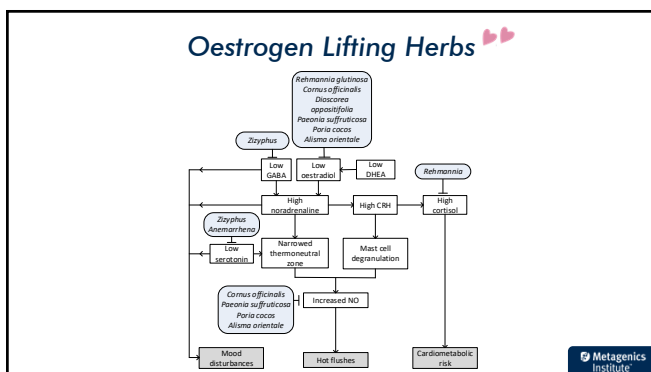
- Rehmannia glutinosa (Rehmannia)
- Cornus officinalis (Asiatic cornelian cherry)
- Dioscorea oppositifolia (Chinese yam)
- Ziziphus jujuba var. spinosa (Zizyphus)
- Paeonia suffruticosa (Tree peony)
- Poria cocos (Poria)
- Alisma orientale (Water plantain)
- Anemarrhena asphodeloides (Anemarrhena)

Clinical applications

- Menopausal symptoms

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What did Rita do?

Using a holistic approach, Rita's prescription:

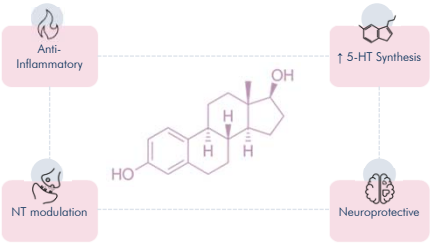



- ♥ Stabilised oestradiol fluctuations
- ♥ Increased sleep duration
- ♥ Provided neurotransmitter support
- ♥ Supported a healthy stress response
- ♥ Included comprehensive dietary advice



94

Oestrogen's Protective Powers






95


Oestrogen's Protective Powers

- Gordon JL, Girdler SS, Meltzer-Brody SE, Stika CS, Thurston RC, Clark CT, et al. Ovarian hormone fluctuation, neurosteroids, and HPA axis dysregulation in perimenopausal depression: A novel heuristic model. *Am J Psychiatry*. 2015 Mar 1;172(3):227-36. doi: 10.1176/appi.ajp.2014.14070918.
- Lokuge S, Frey BN, Foster JA, Soares CN, Steiner M. Depression in women: Windows of vulnerability and new insights into the link between estrogen and serotonin. *J Clin Psychiatry*. 2011;72(11):e1563-e69. doi: 10.4088/JCP.11com07089.
- McCarthy M, Raval AP. The peri-menopause in a woman's life: A systemic inflammatory phase that enables later neurodegenerative disease. *J Neuroinflammation*. 2020;17:317. doi: 10.1186/s12974-020-01998-9.
- Shanmugan S, Epperson CN. Estrogen and the prefrontal cortex: Towards a new understanding of estrogen's effects on executive functions in the menopause transition. *Hum Brain Mapp*. 2014;35(3):847-65. doi:10.1002/hbm.22218.



96

Perimenopausal Depression



45-68% of women
experience clinically elevated
depressive symptoms during
perimenopausal transition

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Perimenopausal Depression

- Kulkarni J, Gavrilidis E, Hudaib AR, Bleeker C, Worsley R, Gurvich C. Development and validation of a new rating scale for perimenopausal depression-the Meno-D. *Transl Psychiatry*. 2018 Jun 28;8(1):123. doi: 10.1038/s41398-018-0172-0.
- Maki PM, Kornstein SG, Joffe H, Bromberger JT, Freeman EW, Athappilly G, et al. Guidelines for the evaluation and treatment of perimenopausal depression: summary and recommendations. *Menopause*. 2018 Oct;25(10):1069-1085. doi: 10.1097/GME.0000000000001174.
- Schweizer-Schubert S, Gordon JL, Eisenlohr-Moul TA, Meltzer-Brody S, Schmalenberger KM, Slopien R, et al. Steroid hormone sensitivity in reproductive mood disorders: on the role of the GABAA receptor complex and stress during hormonal transitions. *Front Med (Lausanne)*. 2021 Jan 18;7:479646. doi: 10.3389/fmed.2020.479646.

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Perimenopausal Depression Versus MDD



Problems with memory and concentration
Irritability or hostility
Paranoid thinking


Low energy
Weight gain
Decreased sexual interest
Decreased self-esteem
Anxiety
Isolation
Somatic symptoms
Sleep disturbances

Kulkarni J, et al. *Transl Psychiatry*. 2018 Jun 28;8(1):123. doi: 10.1038/s41398-018-0172-0

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As a Clinician, it is Important to Bear In Mind:




- ♥ If a female patient reports marked depressive and anxiety symptoms for the first time in their mid-40s it may be related to perimenopause.
- ♥ A female patient with a history of MDD may experience a relapse of depression during perimenopause.

Kulkarni J. Aust Prescr. 2018 Dec;41(6):183-5 doi: 10.18773/austprescr.2018.060




100

Assessment for Perimenopausal Depression: MENO-D Questionnaire



Kulkarni J. MENO-D. 2018.
Available at: https://www.mapqc.org.au/sites/www.mapqc.org.au/files/MENO-D_0.pdf;
Kulkarni J. et al. Transl Psychiatry. 2018 Jun 28;8(1):123. doi: 10.1038/s41398-018-0172-0



101

Oestradiol Fluctuation Implicated in Aetiology of Perimenopausal Depression

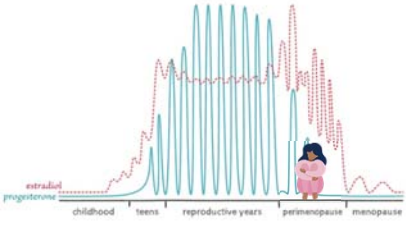

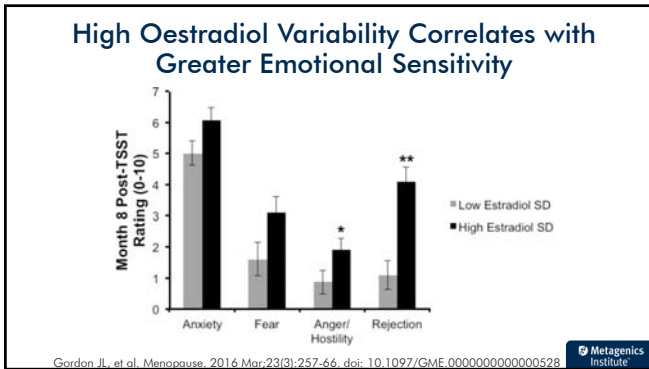


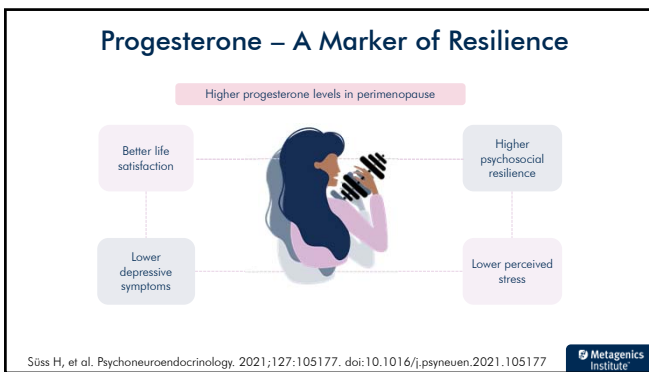
Image: Adapted from Briden L. Adapted from Prior JC. J Reprod Infant Psychol. 2006 Nov 1;24(4):323-35 doi: 10.1080/02646830600974071



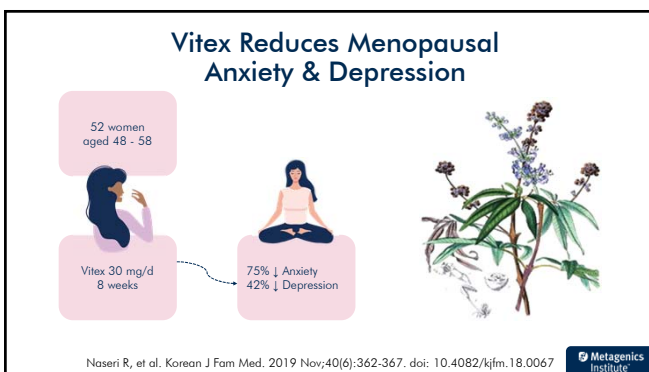
102



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105

ACEs Increase Risk for Perimenopausal Depression

Childhood adversity → increased lifetime risk → Depressive symptoms in perimenopause

Bromberger JT, et al. *Obstet Gynecol Clin North Am.* 2018 Dec;45(4):663-678. doi: 10.1016/j.ogc.2018.07.007;
Epperson CN, et al. 2017 Mar;78(3):e298-e307. doi: 10.4088/JCP16m10662

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The Psychosocial and Hormonal Environments Confer to Increase Vulnerability

Psychosocial Environment + Hormonal Environment = Vulnerability to perimenopausal depression

Schweizer-Schubert S, et al. *Front Med (Lausanne).* 2021 Jan 18;7:479646. doi: 10.3389/fmed.2020.479646

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Perimenopause: A Neuro-Inflammatory Phase?

Final menstrual period: Regular menstruation (Late), Early, Late, Post-menopause - remaining of life

Reproductive phase: Regular menstruation (Late), Early, Late, Post-menopause - remaining of life

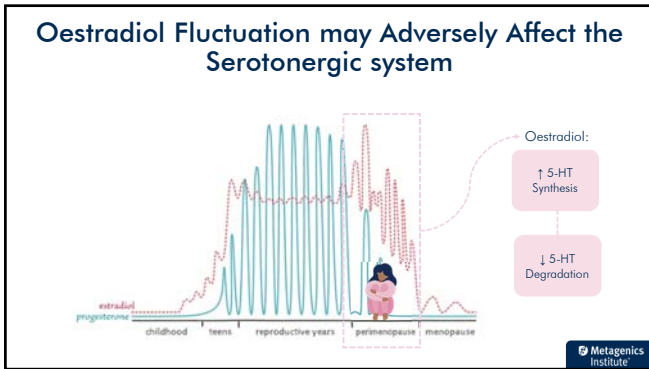
Perimenopause: Ovary (↓ Folicle count, ↓ Estrogens, ↑ LH, ↓ Inhibin B), Reproductive organs, Blood vessel (Pro-inflammatory: ↑ IL-1β, ↑ IL-2, ↑ CD4CD8 T cell, ↓ IL-2, ↓ TNF, ↓ Nitric Oxidation), Brain (Blood-Brain barrier compromise, Activation: Pro-inflammatory factors), Neurodegenerative diseases like ischemia or AD

Extracellular vesicles: Accumulation

McCarthy M, Raval AP. *J Neuroinflammation.* 2020;17:317. doi: 10.1186/s12974-020-01998-9

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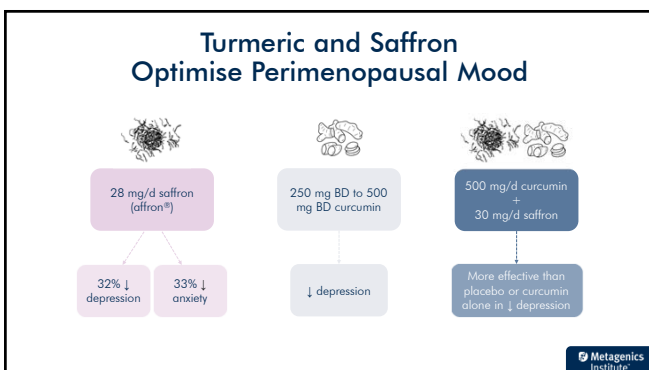
109

Oestradiol Fluctuation May Adversely Affect Serotonergic System

- Briden L. Adapted from Prof Jerilynn Prior's "Perimenopause lost—reframing the end of menstruation." [Image on Internet]. 2021 [updated 2021 Jan 8; cited 2021 Jun 18]. Available from: <https://1.wp.com/www.larabriden.com/wp-content/uploads/perimenopause-progesterone.jpg?w=825&ssl=1>
- Gordon JL, Girdler SS, Meltzer-Brody SE, Stika CS, Thurston RC, Clark CT, et al. Ovarian hormone fluctuation, neurosteroids, and HPA axis dysregulation in perimenopausal depression: A novel heuristic model. *Am J Psychiatry*. 2015 Mar 1;172(3):227-36. doi: 10.1176/appi.ajp.2014.14070918

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111

Turmeric and Saffron Optimise Perimenopausal Mood

- Lopresti AL, Drummond PD. Efficacy of curcumin, and a saffron/curcumin combination for the treatment of major depression: A randomised, double-blind, placebo-controlled study. *J Affect Disord.* 2017 Jan 1;207:188-196. doi: 10.1016/j.jad.2016.09.047.
- Lopresti AL, Smith SJ. The effects of a saffron extract (affron®) on menopausal symptoms in women during perimenopause: a randomised, double-blind, placebo-controlled study. *J Menopausal Med.* 2021;27:e8. <https://doi.org/10.6118/jmm.21002>.



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BCM-95® Turmeric and Saffron for Depression



Ingredients

Curcuma longa (BCM-95® Turmeric)

Crocus sativus (Saffron)

Clinical applications

- Neuro-inflammation
- Depression
- Enhance antidepressant therapy



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The Importance of Diet



Perimenopausal women report lower intake of protein, tryptophan omega-3, & vitamin B12

Anti-inflammatory diet associated with 20% ↓ risk of depression in middle-aged women

Dietary total antioxidant capacity inversely correlated with depression & anxiety in menopausal women



114

The Importance of Diet

- Abshirini M, Siassi F, Koohdani F, Qorbani M, Mozaffari H, Aslani Z, Soleymani M, Entezarian M, Sotoudeh G. Dietary total antioxidant capacity is inversely associated with depression, anxiety and some oxidative stress biomarkers in postmenopausal women: A cross-sectional study. *Ann Gen Psychiatry*. 2019 Mar 19;18:3. doi: 10.1186/s12991-019-0225-7.
- Oldra CM, Benvegnú DM, Silva DRP, Wendt GW, Vieira AP. Relationships between depression and food intake in climacteric women. *Climacteric*. 2020 Oct;23(5):474-481. doi: 10.1080/13697137.2020.1736025.
- Shivappa N, Schoenaker DA, Hebert JR, Mishra GD. Association between inflammatory potential of diet and risk of depression in middle-aged women: The Australian Longitudinal Study on Women's Health. *Br J Nutr*. 2016 Sep;116(6):1077-86. doi: 10.1017/S0007114516002853.



115

Omega-3 Supports Perimenopausal Mood

Highest quartile of omega-3 intake associated with 47% less risk of psychological symptoms



Abshirini M, et al. *Climacteric*. 2019 Apr;22(2):195-201. doi: 10.1080/13697137.2018.1547700



116

Maddie*, 53

Case study

Presenting with perimenopausal depression



* Name changed for confidentiality purposes



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Case study

Maddie, 53 Presentation & History

Presentation:
Depressed
Apathetic
Reflux

Other relevant information:
States her mind is overactive, needs to read to fall asleep
Waking up to 14 times during the night - struggled with night sweats for past 2.5 years
Meal timing irregular due to feeling unmotivated

Prac gave DASS-21 after first consult:
D - 17 (severe)
A - 9
S - 17 (severe)

Smith & Co Metagenics Institute

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Snapshot of Therapeutic Relationship

	1 st Consult	2 nd Consult	3 rd Consult	Ongoing prescription
THERAPEUTICS	Rehmannia Complex for Nervous Exhaustion Saffron and St John's wort combination Magnesium formulation B vitamin supplement Herbal remedy for menopausal symptoms	Slippery elm and marshmallow added to existing prescription for pre-existing reflux	Rehmannia Complex for Nervous Exhaustion Saffron and St John's wort combination Magnesium formulation Added tonic - holy basil, licorice, codonopsis, schisandra and rhodiola	Rehmannia Complex for Nervous Exhaustion Magnesium formulation
PATIENT PROGRESS	4 weeks into treatment Headspace is 100% better Sleep has improved, waking 4 times with temperature changes	8 weeks into treatment "If I'm flat or down its due to circumstances and I feel I can differentiate" Still eating irregularly	15 weeks into treatment Mood is better, hadn't experienced a day where she felt numb/flatless Motivation improved	20 weeks into treatment Patient's mood continues to improve

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St John's Wort Enhances Perimenopausal Mood

Population	Study type	Intervention	Result
14 women	RCT	5.4 g SJW + 1 g vitex vs placebo	↓ total PMS-like Sx and depression Sx
70 women	RCT	SJW	↓ depression and hot flushes
649 women	Meta-analysis of 6 RCTs	SJW or SJW + vitex/black cohosh vs placebo	↓ total menopausal Sx

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St John's Wort Enhances Perimenopausal Mood

- Eatemadnia A, Ansari S, Abedi P, Najari S. The effect of *Hypericum perforatum* on postmenopausal symptoms and depression: A randomized controlled trial. *Complement Ther Med.* 2019 Aug;45:109-113. doi: 10.1016/j.ctim.2019.05.028.
- Liu YR, Jiang YL, Huang RQ, Yang JY, Xiao BK, Dong JK. *Hypericum perforatum* L. preparations for menopause: a meta-analysis of efficacy and safety. *Climacteric.* 2014 Aug;17(4):325-35. doi: 10.3109/13697137.2013.861814.
- van Die MD, Bone KM, Burger HG, Reece JE, Teede HJ. Effects of a combination of *Hypericum perforatum* and *Vitex agnus-castus* on PMS-like symptoms in late-perimenopausal women: findings from a subpopulation analysis. *J Altern Complement Med.* 2009 Sep;15(9):1045-8. doi: 10.1089/acm.2008.0539.



121

What did Sam do?

Using a holistic approach, Sam's prescription:



- ▶ Supported a healthy stress response
- ▶ Provided neurotransmitter support
- ▶ Increased sleep duration
- ▶ Addressed perimenopausal somatic symptoms
- ▶ Attenuated inflammation
- ▶ Provided education regarding the effects of stress



122

Prioritise Stress Management



Oral therapeutics



Meditation and mindfulness



Psychological support



Self love and compassion



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Mood and Stress Protocol

I am stressed and I feel...	Anxious and Tense	Flat and Exhausted	Wired and Tired	Low Mood and Lethargic
RELIEVE the frequency, intensity and duration of symptoms	Herbal Support for Hyper HPA and Stress	Herbal and Nutritional Support for Adrenal Health	Rahmanic Complex for Nervous Exhaustion and/or California Poppy and Passion Flower for Sleep	BCM-95™ Turmeric and Saffron for Depression and/or Mood, Adrenal and Thyroid Support
RESTORE appropriate stress response	Mega Mag® Magnesium, Taurine and Glutamine for Stress	Herbal and Physical Energy Powder	Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support	Herbal and Physical Energy Powder
Vitamins B5, B6 and C for Stress and Adrenal Health				
Lpc-37™ and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response				
REBUILD resilience by addressing drivers and modifying lifestyle	Emotional Support • Social support • Meaning and purpose • Therapy		Lifestyle Changes • Movement • Mindfulness • Sleep hygiene • Nutrition	

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Traditional Bupleurum Combination Supports Depressed Women

TCM Bupleurum and Peony formula

As effective as antidepressants, less side effects

More effective than HRT, fewer side effects

Antidepressant
Blood tonic
Modulates HPA

Hao W, et al. J Biosci Med. 2019 Apr 17;7:60-72. doi: 10.4236/jbm.2019.74007.
Zhang Y, et al. Evid Based Complement Alternat Med. 2012;2012:931636. doi: 10.1155/2012/931636

125

Bupleurum Complex for Nervous Tension and Irritability

Ingredients

- Bupleurum falcatum (Bupleurum)
- Paeonia lactiflora (Chinese peony)
- Atractylodes macrocephala (Atractylodes)
- Cyperus rotundus (Nutgrass)
- Angelica polymorpha (Dong quai)
- Poria cocos (Hoelen)
- Paeonia suffruticosa (Tree peony)
- and more...

Clinical applications

- Menopausal depression
- Premenstrual dysphoric disorder
- Anxiety and tension

126

Lactobacillus paracasei Lpc-37™ and Lactobacillus plantarum 299v Support Mental Resilience

Lpc-37™ normalises cortisol in low grade chronic stress

299v prevents stress-induced rise in cortisol

Lpc-37™ prevents stress-induced anxiety & depression

Supports emotional wellbeing

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Lactobacillus paracasei Lpc-37™ & Lactobacillus plantarum 299v Supports Mental Resilience

- Andersson H, Tullberg C, Ahm  S, Hamberg K, Lazou Ahr n J, Molin G, et al. Oral administration of *Lactobacillus plantarum* 299v reduces cortisol levels in human saliva during examination induced stress: A randomized, double-blind controlled trial. *Int J Microbiol.* 2016;2016:8469018. doi: 10.1155/2016/8469018.
- Patterson E, Griffin SM, Ibarra A, Ellsiepen E, Hellhammer J. *Lactobacillus paracasei* Lpc-37® improves psychological and physiological markers of stress and anxiety in healthy adults: A randomized, double-blind, placebo-controlled and parallel clinical trial (the Sisu study). *Neurobiol Stress.* 2020;13:100277. doi: 10.1016/j.ynstr.2020.100277.
- Ryzki L, Ostrowska L, Pawlak D, Malus A, Pawlak K, Waszkiewicz N, et al. Probiotic *Lactobacillus plantarum* 299v decreases kynurenine concentration and improves cognitive functions in patients with major depression: A double-blind, randomized, placebo controlled study. *Psychoneuroendocrinology.* 2019 Feb;100:213-222. doi: 10.1016/j.psyneuen.2018.10.010.

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Lpc-37™ and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response

Ingredients

- Lactobacillus paracasei Lpc-37™
- Lactobacillus plantarum 299v

Clinical applications:

- Stress, anxiety and mood
- Cognitive function

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CBT Ameliorates Perimenopausal Depression

49 women aged 40 - 65 → CBT-Meno 2 hours/week 12 weeks → 33% ↓ depression

Green SM, et al. *Menopause*. 2019 Sep;26(9):972-980. doi: 10.1097/GME.0000000000001363 Metagenics Institute

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Mindfulness-Based Stress Reduction

95 perimenopausal women → MBSR (Body Scan, Meditation, Mindful Yoga) 8 weeks → ↓ depression (p < 0.001)

Gordon JL, et al. *Psychoneuroendocrinology*. 2021 May 19;130:105277. doi: 10.1016/j.psyneuen.2021.105277 Metagenics Institute

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Exercise Improves Depressive Symptoms

Pilates 2 x 1 hour/week 12 weeks

110 menopausal women

↓ depression
↓ anxiety
↑ sleep quality

Aibar-Almazán A, et al. *Maturitas*. 2019 Jun;124:62-67. doi: 10.1016/j.maturitas.2019.03.019 Metagenics Institute

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Perimenopausal Depression Protocol

	Considerations
RELIEVE	If with low mood: BCM-95™, Turmeric and Saffron for Depression AND/OR Mood, Adrenal and Thyroid Support OR If with irritability: Bupleurum Complex for Nervous Tension and Irritability AND/OR Vitex, Ginger and Withania to Increase Progesterone If anxious and tense: Herbal Support for Hyper HPA and Stress If wired and tired: Rehmannia Complex for Nervous Exhaustion AND/OR California Poppy and Passion Flower for Sleep
RESTORE	Hormonal support: Oestrogen Lifting Herbs OR Meta Mag® Magnesium, Taurine and Glutamine for Stress OR Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support AND/OR Vitamins B5, B6 and C for Stress and Adrenal Health
REBUILD	Lpc-37™ and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response A wellness diet, regular exercise and if relevant, psychotherapy

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Example Perimenopausal Depression Prescription




	Considerations
RELIEVE	Low mood: BCM-95™, Turmeric and Saffron for Depression Hormonal support: Oestrogen Lifting Herbs
RESTORE	Meta Mag® Magnesium, Taurine and Glutamine for Stress
REBUILD	Engage in group-based physical activity

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Example Perimenopausal Depression Prescription




	Considerations
RELIEVE	Low mood: Mood, Adrenal and Thyroid Support Irritability: Bupleurum Complex for Nervous Tension and Irritability
RESTORE	Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support AND Vitamins B5, B6 and C for Stress and Adrenal Health
REBUILD	Wellness diet, regular exercise

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Example Perimenopausal Depression Prescription



	Considerations
RELIEVE	Low mood: Mood, Adrenal and Thyroid Support
RESTORE	Hormonal support: Oestrogen Lifting Herbs
REBUILD	Meta Mag [®] Magnesium, Taurine and Glutamine for Stress AND Lpc-37 [™] and 299v for Gut-Brain Axis Support, Emotional Wellbeing and Stress Response
	Regular psychotherapy

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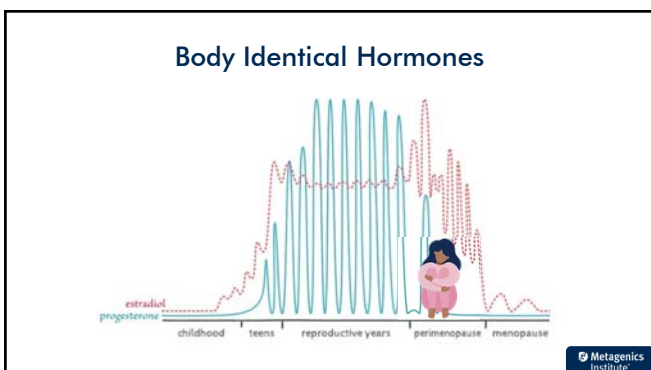
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Perimenopausal Depression Co-Prescribing Safety

Catch-Phrase	SSRIs/SNRIs	Benzodiazepines	HRT
Herbal Support for Hyper HPA and Stress	N/A	Low level caution	Moderate level caution
Rehmannia Complex for Nervous Exhaustion	Low level caution	Low level caution	N/A
California Poppy and Passion Flower for Sleep	Low level caution	Moderate level caution	N/A
Magnesium with Lutein and Zeaxanthin for Sleep Pattern Support	N/A	Low level caution	N/A
BCM-95 [™] Turmeric and Saffron for Depression	N/A	Low level caution	Low level caution
Mood, Adrenal and Thyroid Support	Contraindicated	Low level caution	Moderate level caution
Vitex, Ginger and Withania to Increase Progesterone	N/A	Low level caution	Moderate level caution
Hydroxyapatite Complex for Complete Bone Support	N/A	N/A	Moderate level caution

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Body Identical Hormones

- Image: Briden L. Adapted from Prof Jerilynn Prior's "Perimenopause lost—reframing the end of menstruation." [Image on Internet]. 2021 [updated 2021 Jun 8; cited 2021 Jun 18]. Available from: <https://i1.wp.com/www.larabriden.com/wp-content/uploads/perimenopause-progesterone.jpg?w=825&ssl=1>
- Women's Health & Research Institute of Australia (WHRIA). Body identical HRT [Internet]. 2014 [updated 2014, cited 2021 Jun 18]. Available from: <https://www.whria.com.au/for-patients/hormones/menopause-2/>



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PODCAST

Managing Perimenopause
with Lara Briden



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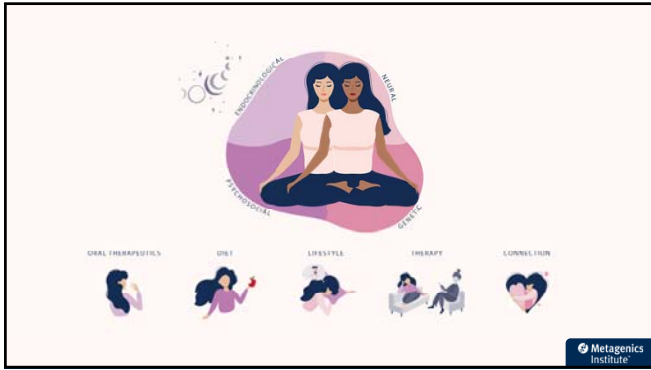
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