

## Treatment Plan for Nae Colwell

Date : 01.10.24



**Patient Health Priorities :** Reduce symptoms of period pain and heavy bleeding. Improve iron status. Support immune system function.

Reduce anxiety. Reduce inflammation.

### *Short term*

- Decrease menstrual symptoms by supporting liver function and increasing fibre intake to improve hormone metabolism
- Improve iron status through dietary intake and nutritional supplementation
- Reduce histamine symptoms by supporting immune system through herbal and dietary strategies
- Reduce inflammation through dietary strategies and nutritional supplementation
- Reduce anxiety and improve sleep by improving resilience to stress and supporting neurotransmitter production using herbal, nutritional and lifestyle strategies

### *Long Term*

- Reduce the occurrence of urinary tract infections through improvements in immune system and vaginal microbiome
- Improve hormonal metabolism to prevent increase in menstrual symptoms and to maintain fertility

## Nutrition Overview for Nae Colwell

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Include the following foods...		Target
<b>Fibre</b>	<b>Soluble fibre</b> – fruit and vegetables, barley, seed husks, flaxseed, psyllium, oat bran, legumes (lentils, peas, dried beans, soy) <b>Insoluble fibre</b> – wheat bran, corn, rive, skins and fruit and vegetables, dried teas, nuts, seeds, wholegrain foods <b>Resistant starch</b> – unripe banana, lentils, unprocessed cereals and grains, cooked and cooled potato and rice	30g/day
<b>Water</b>		2L/day
<b>Protein</b>	<b>Optimal sources</b> – poultry (chicken, turkey, duck), seafood, eggs, lean meats <b>Plant sources</b> – quinoa, chickpeas, lentils, nuts, seeds, peas, beans, tempeh, hemp seeds, hemp protein powder <b>Limit</b> – dairy, red meat, processed meats (bacon, sausages, deli meats)	30g/meal
<b>Healthy fats</b>	Fatty fish – salmon, mackerel, anchovies, sardines, herring; flaxseed/linseed, chia seeds, walnuts, olive oil, eggs,	
<b>Iron</b>	<b>Haem iron sources</b> : meat (beef, lamb, pork, kangaroo), poultry (chicken, turkey, eggs), seafood (salmon, sardines, tuna) and organ meats (liver, kidney, pate) <b>Non-haem sources</b> : legumes (mixed beans, lentils, chickpeas), dark green leafy vegetables (spinach, silver beet, broccoli), tofu, nuts, seeds, dried fruit, wholemeal pasta and bread	18mg/day
<b>Essential Fatty Acids</b>	Fatty fish – salmon, mackerel, anchovies, sardines, herring; flaxseed/linseed, chia seeds, walnuts	2–3 serves (150g) of fish per week
<b>Spearmint Tea</b>	Organic is best	1 cup, twice daily (days 1–14)

Eliminate or limit the following foods...	
<b>Saturated Fat</b>	fried foods, dairy products, coconut oil, butter, takeaway foods, bakery goods, commercial biscuits and crackers, fat on meat, ghee, lard, palm oil, sausages, cured meats, ice cream, milkshakes, chocolate
<b>Seed oil</b>	Eliminate – Canola oil, sunflower oil, corn oil, safflower oil, grape-seed oil, rice bran oil, cottonseed oil, sesame oil,
<b>Dairy</b>	Milk, cheese, yoghurt, cream, ice cream etc <i>Substitute with coconut yoghurt, sorbet, sheep and goat cheeses. Avoid soy milk. A2 milk can be used when necessary. A frozen banana blended in a thermomix or food processor is a great ice cream substitute.</i>
<b>Salt</b>	Less than 2g per day
<b>Licorice</b>	Tea, confectionary

*Track your intake using the Easy Diet Diary app (free download)*

## Prescription Overview for Nae Colwell

Date : 01.10.24

PRESCRIPTION	Breakfast	Lunch	Dinner	Bedtime
<b>Bioheme</b>		1 every second day (or MON WED FRI)		
<b>Raw Vitamin C</b>		1 teaspoon with iron		
<b>Nutrient Compound</b>	3.65g		3.65g	

*Herbal and nutrient prescriptions are individualised to your own health factors. They should only be taken by the person they are prescribed for. Please advise your naturopath if you commence a new pharmaceutical medication as this may change your herbal/nutrient prescription.*

### Other reminders:

- **Consider AIP Diet (Autoimmune Protocol)** : also called autoimmune paleo diet, eliminates inflammation triggering foods during the 1st phase (gluten, dairy, legumes, grains, nightshade vegetables (e.g. tomatoes, peppers, and potatoes), nuts, seeds, eggs, and seed-derived spices). In the next phase foods are reintroduced one at a time to monitor for symptoms.

### Testing Recommendations

- **Vaginal microbiome testing** (\$159 + \$26 postage) : due to history of urinary tract infection and symptoms of endometriosis. PCR analysis of vaginal beneficial bacteria, opportunistic/commensal bacteria, yeasts, STI's and pH
- **Complete microbiome mapping** (\$389 + \$26 postage) : due to gut connection with immunity, inflammation and neurotransmitter synthesis. PCR (quantitative): Parasites/Worms, Opportunistic Bacteria, Fungi/Yeast, Bacterial Pathogens, Viral Pathogens, Beneficial Bacteria; plus GIT markers inc. Faecal Occult Blood, Calprotectin, Pancreatic Elastase, sIgA, Zonulin, -glucoronidase, Short Chain Fatty Acids
- **DUTCH Complete** (\$399) : Includes metabolites of Oestrogens, Androgens, Progesterone, Cortisol, Melatonin, Adrenaline, Noradrenaline and 8-OHdG as well as organic acid markers for neurotransmitters and nutrient metabolism, along with diurnal pattern of free cortisol and cortisone and metabolites.

## Detailed goals and rationale for Nae Colwell

Date : 01.10.24

HEALTH GOAL	RATIONALE & INFO	DOSE
<b>Increase fibre to 30g per day to improve hormone metabolism and excretion</b>	<ul style="list-style-type: none"> <li>• Balance gut microbiome to support immunity, support neurotransmitter production and reduce inflammation</li> <li>• Improve bowel function and hormone metabolism – excess hormones are bound to fibre and excreted during bowel movements</li> <li>• improves satiety which help with weight loss, also bind fats and lowers absorption of glucose through delaying gastric emptying</li> <li>• Soluble fibre reduces cholesterol reabsorption, improves hormone elimination and improves satiety, improves faeces bulk</li> <li>• Insoluble fibre bulks faeces, improves constipation and speeds up digestion</li> <li>• Resistant starch improves microbiome health to produce short chain fatty acids, which may protect against colon cancer and lower cholesterol levels</li> </ul> <p>Research – <a href="https://www.mdpi.com/2072-6643/12/3/859/htm">https://www.mdpi.com/2072-6643/12/3/859/htm</a></p> <p><b>Optimise dietary fibre</b></p> <ul style="list-style-type: none"> <li>• Soluble fibre – fruit and vegetables, barley, seed husks, flaxseed, psyllium, oat bran, legumes (lentils, peas, dried beans, soy)</li> <li>• Insoluble fibre – wheat bran, corn, rive, skins and fruit and vegetables, dried teas, nuts, seeds, wholegrain foods</li> <li>• Resistant starch – unripe banana, lentils, unprocessed cereals and grains, cooked and cooled potato and rice</li> </ul> <p><a href="https://www.eatforhealth.gov.au/nutrient-reference-values/nutrients/dietary-fibre">https://www.eatforhealth.gov.au/nutrient-reference-values/nutrients/dietary-fibre</a></p>	<p><b>Aim for 30g per day from a variety of sources of fruit, vegetables legumes, seeds and wholegrain.</b></p> <p><i>Increase fibre intake gradually to avoid gastrointestinal side effects.</i></p> <p><i>Track your intake using the Easy Diet Diary app (free download).</i></p>

<p><b>Increase water intake to 2L per day to support elimination</b></p>	<p><b>This is particularly important when increasing fibre in the diet. Fibre increases without adequate water intake may lead to constipation</b></p>	<p><b>2L per day</b></p>
<p><b>Decrease dietary saturated fats to reduce inflammation and improve gastrointestinal microbiome</b></p>	<p>Excess saturated fats stimulate NF-κB signalling to increase inflammatory cytokines Saturated fats negatively alter microbiome by decreasing diversity, gram-negative species and short chain fatty acid production, while increasing pathogenic species</p> <p>Reduction of saturated fats:</p> <ul style="list-style-type: none"> <li>• reduces LDL cholesterol, total cholesterol and lowers with risk of cardiovascular events</li> <li>• Improves gastrointestinal microbiome diversity and short chain fatty acid production, leading to a reduction in inflammation</li> <li>• May lead to a small reduction of body weight</li> </ul> <p>Saturated fats are found in fried foods, dairy products, coconut oil, butter, takeaway foods, bakery goods, commercial biscuits and crackers, fat on meat, ghee, lard, palm oil, sausages, cured meats, ice cream, milkshakes, chocolate</p> <p>Research: <a href="https://doi.org/10.1093/advances/nmz125">https://doi.org/10.1093/advances/nmz125</a> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7388853/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7388853/</a></p>	

<p><b>Optimise intake of intake of healthy fats to provide energy, reduce inflammation, protect heart health and brain health</b></p>	<p>Include these sources of essential fatty acids in your diet on a regular basis:</p> <ul style="list-style-type: none"> <li>• flaxseed/linseed</li> <li>• chia seeds</li> <li>• walnuts</li> <li>• Hemp seeds, hemp seed oil</li> <li>• Olive oil</li> <li>• Fatty fish – salmon, mackerel, anchovies, sardines, herring</li> </ul> <p>Increase Omega-3 intake by inclusion of fatty fish of 2-3 serves per week, with a serve being 150g. Select fish high in Omega-3, including mullet, salmon (Atlantic or Australian), mackerel, sardine, rainbow trout, bream or silver perch.</p> <p>Research: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7875671/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7875671/</a>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6117694/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6117694/</a> <a href="https://doi.org/10.1111/j.1753-4887.2010.00287.x">https://doi.org/10.1111/j.1753-4887.2010.00287.x</a></p>	<p>Aim for 2-3 serves (150g) of fish per week</p>
<p><b>Reduce sugar intake to reduce inflammation</b></p>	<p>Reduce sugar – the high-dose fructose you get from desserts, honey, fruit juice, and dried fruit. There is no need to reduce fruit, as the fructose in fruit is lower dose and whole fruit contains fibre to slow the spike in blood sugar from fruit.</p>	

<p><b>30g of protein with each meal to help support hormone production and regulate neurotransmitter synthesis</b></p>	<p>Protein supports hormone and neurotransmitter synthesis, and the growth of new tissue. It is crucial to maintain muscle mass. It can mitigate muscle mass losses and muscle function losses associated with sarcopenia.</p> <p>Optimal protein intake may help to improve energy balance due to its slow energy release, which can help to regulate blood glucose levels.</p> <p><b>Optimise dietary sources of protein</b>  <i>Complete protein sources</i> : lean meat, fish, seafood, eggs, dairy products, soy, quinoa, amaranth seeds  <i>Plant sources</i> : seeds, nuts, legumes (lentils, beans, chickpeas, split peas), whole grain, tofu</p> <p><b>Minimum Target:</b>  FEMALE: Include 0.75g of protein per kilo of body weight per day</p> <p><b>Optimal intake:</b>  1.3 – 1.8g of protein per kilo of body weight per day  FEMALE : 88-120g per day</p> <p>Evidence : <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6566799/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6566799/</a> <a href="https://doi.org/10.1093/ajcn/78.4.734">https://doi.org/10.1093/ajcn/78.4.734</a></p>	<p>Aim for 30g per meal</p> <p>Hemp Foods Organic Hemp Gold Protein</p> <p>Add to smoothies or use to make chia seed puddings.</p> <p>Available from Osborne Health Supplies</p> <p>Track intake using the Easy Diet Diary app.</p>
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<p><b>Improve iron status through iron supplementation</b></p>	<p>Improve production of healthy red blood cells, in the formation of haemoglobin, and in oxygen transport within the body by correcting iron deficiency</p> <p>Improve immune function through increasing iron availability for macrophage activity and T lymphocyte proliferation</p> <p>Improve energy levels by supporting ATP production</p> <p>Improve thyroid hormone synthesis</p> <p>Research : <a href="http://www.Ncbi.nlm.nih.gov/pmc/articles/PMC9219084/">www.Ncbi.nlm.nih.gov/pmc/articles/PMC9219084/</a>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7193469/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7193469/</a></p> <p>Take iron either upon waking or before bed, at the same time every second day, with a vitamin C supplement. Take 6 hours away from heavy exercise. Avoid supplements containing zinc, selenium or calcium at the same time. Avoid tea, coffee, dairy and soy protein at time of taking iron.</p>	<p><b>Prescribed</b> : BioMedica Bioheme 30 capsules</p> <p>Take 1 capsule every second day</p> <p>*** Place a calendar on your fridge and mark it each time you take a capsule OR take your iron on Monday Wednesday Friday if it's easier to remember ***</p>
<p><b>Improve iron status through dietary strategies</b></p>	<p>Optimise iron rich foods to improve iron status</p> <p>Haem iron sources : meat (beef, lamb, pork, kangaroo), poultry (chicken, turkey, eggs), seafood (salmon, sardines, tuna) and organ meats (liver, kidney, pate)</p> <p>Non-haem sources : ;legumes (mixed beans, lentils, chickpeas), dark green leafy vegetables (spinach, silver beet, broccoli), tofu, nuts, seeds, dried fruit, wholemeal pasta and bread</p> <p>Recommended Daily Intakes</p> <p>Female 19-50 years : 18mg/day</p> <p>Female 51 years and older : 8mg/day</p> <p><a href="https://www.nrv.gov.au/resources/nrv-summary-tables">https://www.nrv.gov.au/resources/nrv-summary-tables</a></p>	

<b>Optimise Iron Absorption through nutritional supplementation of vitamin C</b>	<p>Supports healthy immune system function</p> <p>Improves iron absorption by enhancing the bioavailability of iron</p> <p>Supports collagen synthesis</p> <p>High plasma levels can help decrease the risk of heart disease. Prevention of LDL oxidation by vitamin C may prevent atherosclerosis, thereby mediating a potential role in CVD risk reduction</p>	<p>Prescribed : Amazonia Raw Wholefood Extracts Organic Vitamin C+ 120g</p> <p>Add 2 teaspoons to a glass of water and take with iron supplement (can be taken daily too).</p> <p>Available from Osborne Health Supplies.</p>
<b>Spearment Tea to reduce androgens</b>	<p>Spearment tea has been shown to decrease free testosterone.</p> <p>Research: <a href="https://pubmed.ncbi.nlm.nih.gov/19585478/">https://pubmed.ncbi.nlm.nih.gov/19585478/</a></p>	<p>1 cup twice per day during follicular phase (days 1-14)</p>
<b>Reduce inflammation and hormone (androgen) precursors by eliminating dairy</b>	<p>Dairy contains insulin-like growth factor 1 (IGF-1) which increases sebum production leading to increased severity of acne.</p> <p>Eliminate all dairy, including milk, cheese, yoghurt, cream, ice cream etc</p> <p>Substitutes:</p> <p>coconut yoghurt (CocoBella have some delicious flavours)</p> <p>frozen banana blended in a thermomix or food processor is a great ice cream substitute.</p> <p>sheep and goat cheeses are ok</p> <p>Try almond milk (I recommend Pure Harvest Organic Almond Unsweetened)</p> <p>Avoid soy milk.</p> <p>A2 milk can be used when if absolutely necessary</p> <p>Research: <a href="https://pubmed.ncbi.nlm.nih.gov/15781674/">https://pubmed.ncbi.nlm.nih.gov/15781674/</a></p>	<p>Eliminate to 0 serves per day for the next 12 weeks then reassess</p>

<b>Reduce salt intake</b>	<p>Excess sodium is linked to adverse health outcomes, including increased blood pressure. A reduction in salt intake can have a favorable effect on the cardiovascular system, inducing a reduction in BP values in hypertensive patients, but also with possible benefits in the vascular function and in the viscoelastic properties of the large arteries.</p> <p>Sodium is found in high amounts in processed foods such as breads, processed meat and snack foods, as well as in condiments (e.g., soy and fish sauce). Consider reducing sausages, salami, salted olives, salty cheese, soy sauce, gravy mix, stock powder, crackers, potato chips, corn chips,</p> <p>Try adding flavour to foods through the use of dried herbs and spices instead of salt.</p> <p>Check the nutrition panel on foods for low salt options (aim for less than 120mg salt per 100g quantity of food)</p> <p>Research : <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6770596/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6770596/</a> <a href="https://www.who.int/news-room/fact-sheets/detail/salt-reduction">https://www.who.int/news-room/fact-sheets/detail/salt-reduction</a></p>	<p>Less than 2g (2000mg) per day</p>
<b>Avoid consuming liquorice</b>	<p>Licorice contains glycyrrhizic acid which affects the fluid balance in the body through an enzyme in the kidney, this can lead to increases in blood pressure.</p> <p>Sources of glycyrrhizic acid may include herbal medicine, herbal tea and confectionary/lollies.</p>	<p>Avoid consuming liquorice</p>
<b>Nutrient Compound</b>	<p>Support immune function, Reduce anxiety, Support neurotransmitter signalling, Support hormone signalling, Improve insulin sensitivity</p> <p>Myo-inositol, l-theanine, zinc picolinate</p>	<p>Take 3.65g twice daily in a glass of water. Separate from iron dose.</p>

