# **Candida**

- Candida Greek word meaning "glowing white" (candida colony colour)
- Opportunist yeast fungi kingdom saccharomyces(41)
- Single celled microscopic commensal (friendly) fungi that quietly squats in most bodies digestive tract, mouth, vagina, skin
- 600 species, 25 considered pathogenic when they overgrow, 13 generally tested.
- Most common 5 types of candida; *Candida albicans* (most common), *C.glabrata, C. parapsilosis, C. tropicalis, C. krusei.*(1.4).

If immunodeficient, or friendly flora become imbalanced/low(dysbiosis), mould and fungus seize the environmental opportunity to successfully outgrow our defences.

Unformed candida is a yeast with "hyphae", individual filaments/roots, and can spread easily via body fluids. However, when provided with the right environment, hyphae grow longer, and candida turns from yeast to "mycelial" fungal form. If conditions allow, candida can colonise, grow out of control, and rob host cells of nutrients.

Mycelialised candida can strongly adhere to surfaces (gut wall/tissues) and by stealing minerals and protein, can generate a biofilm in which to grow and hide from the immune system, making detection harder. Previously harmless candida changes from friend to foe. This pathogenic state is called "Candidiasis".

Candida uses **glucose** (sugar) to morph from yeast to mycelial form. Cells have many hexose (sugar/monosaccharide) transporters, reflecting the varied terrains in which it thrives, likely offering many different sugars as carbon sources.

As it grows, candida may secrete harmful mycotoxins which can travel anywhere in the body and may compromise the weakest link. Small enough to cross the blood-brain barrier, mycotoxins can cause inflammation and altered plasticity. A healthy immune system should be able to fight candida or occasional candidiasis. Whilst generally localised, with severe immunodeficiency candidiasis may become systemic. C. dubliniensis is the only Candida species, other than C. albicans that is able to produce hyphae.

You might get a re-infection through your underwear if there is vaginal candida (thrush). So always wash your knickers/pants at 950C (or min. 600C) during the therapy. Synthetics must be put into a disinfectant solution (ask your chemist). Wash all your towels and flannels at 900C (or at least 600C).

If you discover anal itching, you can support this with Nystatin or Canesten cream as the fungus is also growing on the skin around your anus and will go back into your intestines if not eliminated. A balanced diet with reduced carbohydrates is essential for the success of fungal treatment.

After finishing your course of antifungals, you should make another appointment with your therapist to assess the success of the candida therapy and to discuss how to avoid relapses and the treatment of remaining complaints.

## Supporting candida overgrowth: -

- Understand your stress triggers and work on reducing. I will have given you various methods for doing this, especially if following a SIRPA programme (stress illness recovery programme).
- Gradually reduce and eliminate caffeine
- Gradually reduce refined simple carbohydrates, such as breads, pasta, sugar, fruit juices

   this will be hard at first as the yeast feeds of the sugar and there may be some withdrawal symptoms such as headaches, anxiety, and fatigue if elimination is done too quickly.
- You may be concerned that you will find it extremely hard to avoid sugars, but your need for sugars will go down rapidly once the Candida is eliminated.
- Increase dietary anti-fungal foods and herbs: oregano, garlic, onions, thyme, basil, coconut, cinnamon, rosemary, Pau D'Arco Tea (Rio Health). Two teaspoons of Olive oil, three times daily, has been found to be helpful. (3)
- In principle you can eat baking yeast, beer yeast (not beer) and other yeasts as they don't
  colonise in the gut. However, if you have an allergy or sensitivity to Candida, you could
  experience a cross-reaction against the related food yeasts. If this occurs, avoid a yeastcontaining foods which can be found in stock cubes, Marmite (also gluten) or other
  sandwich spreads. If you are not sure if you are sensitive to yeast, leave out yeast as a
  precaution.
- Note in the chart below that potatoes, brown rice pasta, buckwheat and Quinoa pasta are still carbohydrates that turn to sugars so only eat in small amounts.

#### Candida Yeast feed on carbohydrate Foods to Avoid Allowed foods in the form of short chain White rice, white pasta, Any kind of sugars e.g. household white bread or white flour. Egg dishes Potatoes, short grain brown rice, brown sugars or fruit sugar. The with white flour rice pasta, buckwheat. Quinoa pasta. Yeast and all foods with yeast if you more sugars they have Low sugar fruits (apples, lemons, are sensitive to yeast (leave out if not available the better they grapefruits), fruit low on carbohydrates thrive. For this reason like strawberries or raspberries (= low GI short chain carbohydrates and GL). Sweet fruits (like grapes, sweet pears, like glucose, fructose, Meat and fish in all variations, except in a peaches, oranges, pineapple, bananas, household sugars, malt batter or breadcrumb coating. All kinds of dates, plums, mangoes). Yoghurts or sugar, all kinds of sweets, vegetables and salads Mushrooms similar with fruits. chocolate, sweet juices and Egg dishes with milk or milk products Glucose, household sugars, malt sugar, other sweet drinks, white honey, maple syrup, agave syrup, oven baked egg dishes flour products and jams fructose (!) must be avoided in your Milk and milk products without sugar, Any kinds of sweets, cakes, biscuits, natural yoghurt. daily nutrition during an custard. Sugar substitutes like sorbitol, anti-Candida treatment. Milk sugar (lactose). Nuts in moderation, mannitol, sweet drinks like lemonades, muesli without sugar Sugarfree chocolate cola, fruit juices, sweet wines, beer, In addition, avoid foods, with Maltitol Sweeteners such as xylitol, sweet liquors which you are sensitive to stevia. Drinks such as mineral water, dry also wines, dry champagne, dry spirits

It is important to have a bowel movement at least once daily when getting rid of candida to remove the dead matter from the body. Sometimes when actively killing candida it can give off mycotoxins, which the liver has to detoxify. It may therefore be necessary for us to support the liver when actively removing candida.

Candida loves copper and often candida will not go completely if there is a copper: zinc imbalance. A hair tissue mineral analysis is great for showing this imbalance. The copper: zinc ratio is known as the "mental ratio". Insulin, copper, oestrogen, histamine, candida and mercury tend to rise and fall together. Copper is under the control of the adrenals but also xenoestrogens (plastics, pesticides etc) will also raise copper. Therefore, simply following a candida "diet" is usually not enough on its own to reduce candida.

Along with candida / candidiasis there are likely other organism(s) overgrowth as well as candida, that may not respond to the same protocol. Or, they may proliferate as candida subsides, so re-testing is important. If triggers are re-introduced after successful reduction, candida is likely to overgrow again.

A strong chamomile tea may help reduce candida as well as a couple of teaspoons of olive oil daily. However, it is strongly linked to stress.

Conditions that fungal overgrowth may contribute to: -					
Leaky Gut – malabsorption IBS, Bloating, stomach cramps Gas / wind / burping Acid reflux, indigestion Weight gain, water retention, get full easily Recurring UTIs/cystitis	Brain fog, headaches, losing words, memory recall, crying spells, feeling spaced out, dizziness, insomnia, energy issues / fatigue (mitochondrial effects), mood swings *	Fungal infections (vaginal or oral thrush, Athlete's foot, nail infections, Itching skin or mucus membranes - tinea, genital, rectal itching, prostatitis			
Skin problems – dry skin, rosacea, hives, acne, cysts, Psoriasis, Eczema, Dermatitis, Cracked red patches of skin anywhere on the body, body, Cradle cap / dandruff, nappy rash, red ring around anus, body odour, longitudinal lines or spots on fingernails, yellow nails(1.5), rashes (stomach) prepost protocol	Sinusitis congestion, sinusitis Ear infections, tinnitus, persistent cough, recurrent flu-like symptoms, hay fever symptoms, asthma, frequent colds	Cravings for sugar, carbohydrates, alcohol.  Blood sugar imbalance – stress response (cortisol), pancreas, adrenal issues - liver issues, yeast may be residing in the liver/other organs  Alcohol or chocolate cravings *			
Anger, irritability, low mood, mood swings, anxiety, depression (particularly Winter), panic attacks, phobias, loss of confidence (low serotonin)	Hormone imbalances PMS Menstrual irregularities Night sweats Endometriosis	Thinning hair / hair loss - gut bacteria produce biotin, imbalance / overgrowth of fungus may reduce biotin produced			
Food or chemical intolerances / sensitivities Histamine intolerance (immune reaction – some may need to avoid high histamine foods including fermented foods)	Joint or knee pain, ankle pain Muscle aches / stiffness Chest pains, heart palpitations, pain behind sternum	Lack of drive, concentration, focus, attention (low dopamine), hyperactivity ADHD Autism			
Autoimmune conditions (including arthritis) – low immune system Thyroid conditions	Muscle wasting Weight loss Sensitivity to cold, cold hands Sensitivity to bright light, eye pain, itchy eyes, blurred vision, bags under the eyes	Mucus in stools Hemorrhoids Mucosal build up (crustiness/flakes) behind ears / under armpits Mucus in throat Vaginal discharge – white			
White tongue (oral candida) - creamy white bumps on tongue, cheeks, roof of mouth, burning mouth, dryness, soreness, tingling of mouth or tongue, bitter or metallic taste.	Burning when eating or swallowing, sore throat, persistent cough – potential damage to the oesophegas	Erosion of tooth enamel Receding or bleeding gums Bad breath Swollen lower lip			
Vegetarian diets are high in copper, may cause problem utilising zinc. Excess copper associated with candida and excess oestrogen.	Mycotoxins can cause kidney, liver, circulation damage, cancer. Liver works harder to remove toxins)				

<sup>\*</sup> Yeast + sugar = alcohol (ethanol), broken down to acetaldehyde, which produces the neurotoxin salsolinol (SAL), speculated to contribute to pathophysiology of Parkinson's disease and chronic alcoholism (5,28). In the brain salsolinol can kill dopamine-producing cells in the substantia nigra.(1.5). Acetaldehyde is likely responsible for hangover-type symptoms – headache, dizziness, fatigue, nausea (7).

Potential contributing factors/triggers				
STRESS (particularly at young age) Adrenal fatigue	Diet of high simple refined sugars/carbohydrates, caffeine, alcohol Blood sugar imbalance	Antibiotics – when, how often, how many pre/post-natal (or when Mum breastfeeding)	Leaky Gut (may also be caused by candida)	
Low stomach hydrochloric acid levels (hypochloridria)	Gut Dysbiosis	PPIs (lower HCI)	Preservatives Artificial sweeteners	
Poor diet Nutrient status Being sedentary Lack of sleep Age	Genetics (those with the MTHFR gene variant may have more difficulty detoxifying(19).  Damp constitution Blood Type O	C-section Birth Mother's flora Inappropriate bottle feeding	Endocrine conditions Autoimmunity triggered by altered oestrogen levels	
Geographical location (electricity towers, pollution, phone tower)	Smoking/vapourisers	Pesticides GMO Foods Cleaning materials	Lack of personal hygiene Sterile homes (hygiene hypothesis)	
Heavy metals, environmental toxins (mercury –fillings, Mother's dental work during pregnancy), pollution, car/petrol fumes, pesticides, cleaning chemicals, cooking pans, furniture, fabrics, aluminium in deodorant.	Artificial fragrance/perfume— scented candles, reed diffusers, plug-ins, air fresheners, personal care/beauty products, washing powder, paint, hair spray, dry-cleaning, clothing	Damp, moist, flooded, mouldy environment (home, work, body) Symptoms worse in damp/humid conditions	Chemical exposure/air conditioning at work	
Medication; steroids – inhalers, oral, topical creams NSAIDs Cancer treatments Vaccination history Recreational drugs	Oral/injectable contraception/coil Pregnancy (mid- trimester) HRT (hormones protect gut wall, blood brain barrier (1.4) Unfiltered water	Breast implants (contain heavy metals) (8)(9) Dentures(40) Intravenous catheter(40)	Seasons Moon phase Menstrual cycle (spores are cyclical)	
Low nutrients: Essential fatty acids Magnesium Vitamin B12 Low Vitamin A (cell / gut wall renewal) Iron	Low protein (amino acids) – when conditions are favourable, fungus digests protein	Low Vitamin B6 (serotonin to melatonin), needed for production of digestive enzymes, HCI and magnesium	Foreign travel – exposure to other parasites	

### What is Metaphysics?

When illness or dis-ease is indicated, the body is communicating that our way of thinking (although unconscious) is out of harmony with what is beneficial to our being. Illness indicates the need for change in our belief system and tells us that we have reached our physical and psychological limits.

The physical body can do nothing by itself. What maintains its life is our soul, our inner self. Illness is a direct result of the imbalance of the inner realm that is manifested in the physical body. Therefore, a sick body seeks only to find its way back to the natural state of vibrant health.

Candida may result from a feeling of having been humiliated by someone. You may have often felt very controlled and dominated in the past by influential people. You may be frustrated as you try to resolve a situation and approach a person that is causing you a great deal of irritation. You may feel resentful toward people who do not need you anymore. You take pride in supporting people: being responsible and supporting others rewarded you with validation, love, and acceptance. You may feel that demanding circumstances or abusive influential people might challenge your importance as a female or mae figure. You may have felt deprived of love during childhood, causing you to feel undeserving of having needs met. There is a great need for love in your life. There is an uncertainty in regard to how you should ask for your needs to be met, in a way that does not make you feel guilty, ashamed or abused. This results in a pattern where you feel resentful left out, or devalued.

Candida feeds off negative emotions such as resentment or anger, it is like an energetic sponge, absorbing emotions.

### Vaginal candidiasis (thrush)

The presence of a vaginal infection indicates regret (regarding past sexual behaviour) and a desire to express innocence and purity. Note that infection always represents anger.