

Nutrition Menopause & Fertility

- Emer O'Driscoll
- Senior Dietitian
- INDI and CORU registered
- Interests include women's health, fertility, intuitive eating



Outline

- The menopause – what can nutrition do?
- Focusing on dietary recommendations which can improve heart health and bone health. This includes:
 - Adequate protein, starchy carbohydrates, unsaturated fats, fibre
- Adequate omega 3, calcium & vitamin D
- Guidelines on caffeine, alcohol and phytoestrogens

Menopause and Nutrition

- Symptoms vary and can include weight gain, hot flushes, night sweats, decreased libido, vaginal dryness, mood swings, lack of energy, joint pain, high blood pressure, high cholesterol levels and osteoporosis

What can nutrition do?

- Nutrition and lifestyle have an important role to play in the management of symptoms of the menopause and it is a key time for women to look after themselves and make healthier choices

Menopause and Muscle Mass

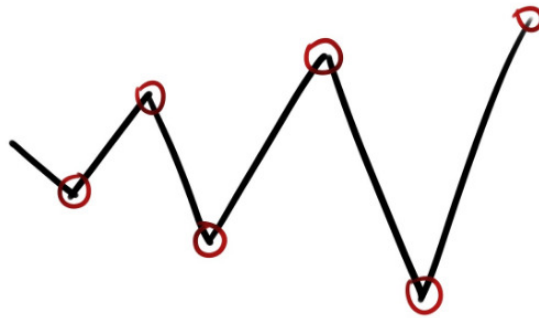
- With the hormonal changes from the menopause and the natural ageing process women will often lose muscle and gain fat
- We naturally lose muscle as we age
- Importance of protein
- Exercise for protecting muscle mass
- Looking at your portion sizes and slowing down the pace of eating

Protein

- Lean meats – beef, lamb, veal, pork
- Poultry – chicken, turkey, duck
- Fish and seafood – Fish, prawns, crab, lobster, mussels
- Eggs
- Dairy products – milk, yoghurt (especially Greek yoghurt), cheese
- Nuts and seeds – almonds, brazil nuts, pine nuts, walnuts, hazelnuts, cashews, pumpkin seeds, sesame seeds, sunflower seeds, chia seed, Flaxseed
- Nut butter
- Beans, peas, lentils
- Tofu and soya products



Protein at every meal and snack



- Protein will give you energy, keep your blood sugar levels stable and protect your lean muscle mass

Protein at every meal and snack

Meal	
Breakfast	Tea and toast
Snack	Coffee/tea and biscuit
Lunch	vegetable soup and bread roll
Dinner	Meat/Chicken/Fish, potatoes/rice/pasta and veg
Snack	Chocolate bar Crackers/Brown bread and jam

Protein at every meal and snack

Meal		Add Protein
Breakfast	Tea and toast	+ Egg or Nut Butter
Snack	Coffee/tea and biscuit	+Yoghurt or handful of nuts or glass of milk
Lunch	vegetable soup and bread roll	+Cheese or Chicken or Tin of Lentils/Kidney Beans
Dinner	Meat/Chicken/Fish, potatoes/rice/pasta and veg	+Cheese or Peas/Beans
Snack	Chocolate bar Crackers/Brown bread and jam	+Yoghurt and Nuts + Cheese or Nut Butter

Are you getting enough protein?

Every meal and snack you sit down to ask yourself where is my protein?



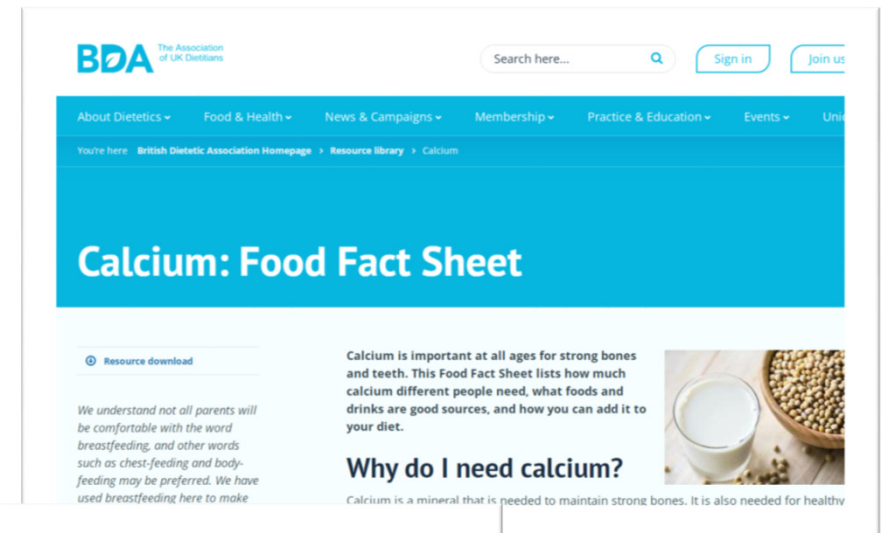
Menopause and Bone Health

- Loss of calcium is increased due to the loss of oestrogen
- Taking HRT helps to maintain oestrogen levels and protect bone health – but there are lots of nutrients that help also!
- Calcium rich foods are important to include at this time
- 3 portions of Dairy
 - 200ml milk, standard yogurt pot, matchbox of cheese
- Non Dairy Sources
 - Calcium-fortified plant-based alternatives to milk e.g. soya, oat, almond, coconut
 - Calcium-fortified cereals and breads
 - Sardines/Pilchards/tinned salmon (bones)
 - Kale, sesame seeds, tahini, dried figs



Calcium

- BDA (British Dietetic Association) Food Fact Sheet



- NHS Non Dairy Source of Calcium Food Fact Sheet



BLACKROCK
HEALTH

BLACKROCK CLINIC

Menopause and Vitamin D



- Vitamin D – the Sunshine Vitamin – extremely important for bone health
- We get vitamin D from sunlight
- In Ireland supplement between Halloween and St Patricks day

Dietary sources & supplements

- Dietary sources of vitamin D include:
 - Oily fish such as salmon and sardines
 - Egg yolks
 - Fortified cereals, margarine, yoghurt and milk
- Studies suggest that a higher daily intake of 1,000–4,000 IU (25–100 µg) is needed to maintain optimal blood levels
- Check blood levels checked – higher dose if deficient e.g. Altavita 25,000 weekly for 6 weeks then take a maintenance dose

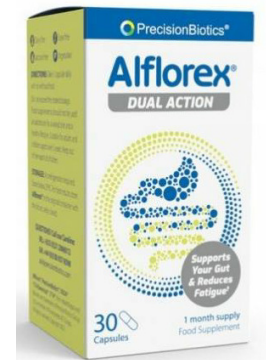


Bloating



These could help:

- Chew food well – each bite until smooth/puree like before swallowing
- **Peppermint tea**
- Avoid large meals – try 5-6 small instead of 3 large
- **Add linseeds/flaxseeds**
- Increase soluble fibre e.g. oats, sweet potatoes, oranges
- Probiotic



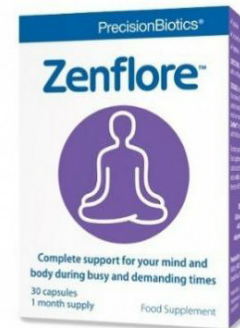
Constipation

- Drink at least 2 litres of fluid per day
- Warm fluids
- Chia seeds
- 2 kiwis
- A pear and a cup of warm water
- Prunes x 8 (start with 3 and work your way up)
- A source of fat at breakfast such as nut butter or handful of nuts
- Increase fruit and vegetable intake slowly to avoid excessive bloating
- Exercise
- Chew your food!
- Fermented foods – kefir, kimchi and live/bio yoghurts
- Probiotic



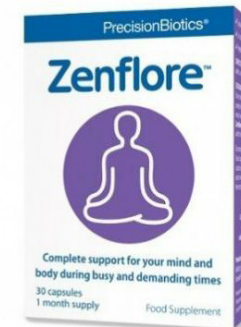
Stress Management - Fight or Flight

- Fight or Flight vs Rest and Digest
- Mindfulness and Meditation
- Apps and books such as Headspace, Calm
- Breath work and diaphragmatic breathing
- CBT
- Yoga
- Good sleep hygiene
- Probiotic – Zenflore/Dual Action



B Vitamins

- B vitamins are often referred to as our 'stress vitamins'
- B vitamins can support adrenal glands and stress management during menopause.
- B vitamins are found in a wide range of food
 - whole grains
 - Eggs
 - Pulses
 - Leafy greens





Heart Health



- Menopause can increase your risk of developing heart disease. Eating a heart healthy diet can help to lower your blood pressure and cholesterol levels
- Here is what heart healthy diet tips look like:
 - Include oily fish at least twice a week
 - Include meals based on fish, pulses beans or nuts at least once or twice a week
 - Switch from saturated fat to unsaturated fat by cutting down on fatty meats, switching to low saturate oils and spreads, grill rather than fry, low fat dairy

Heart Health

- Fruit and vegetables all types count frozen, pre chopped etc aim for 5+ per day
- Reduce intake of refined sugar sweets, soft drinks, cakes or at least have protein with them
- Reduce salt by adding herbs and spices to cooking/at table and reduce processed foods like soups, ready meals
- Swap to higher fibre foods - choose oats, whole grain breads and cereals, lentils, chickpeas kidney beans
- Sensible alcohol limits no more than 2-3 units per day, at least 3 alcohol free days per week



Omega 3



Dietary Sources

- Oily Fish
 - Salmon, mackerel, kippers, pilchards, trout, sardines, crab
- Plant sources
 - Nuts and seeds (e.g. flaxseeds, pecans, walnuts, pumpkin and chia seed)
 - Vegetable oils (e.g. rapeseed, linseed, canola)
 - Soya and soya products (e.g. beans, milk and tofu)
 - Omega 3 enriched products such as yoghurts/spreads/eggs/milk/orange juice
- Evening primrose oil is rich in omega 6 not omega 3
- Supplement recommendations – containing 500mg of each EPA and DHA

Soya & Phytoestrogens

- **Phytoestrogens** (or plant oestrogens) - similar structure to human oestrogen - impact in our body is much weaker
- Some evidence that consuming phytoestrogens may help to ease menopausal symptoms like hot flushes
- It can take 2-3 months before the benefits of phytoestrogens to be seen
- Work better for some women than others - this might be down to differences in gut bacteria
- Phytoestrogens occur natural in soybeans and Soya milk/yogurt, Chickpeas, Flaxseeds, Sesame seeds, Peanuts, Barley, Berries, Garlic, Tea

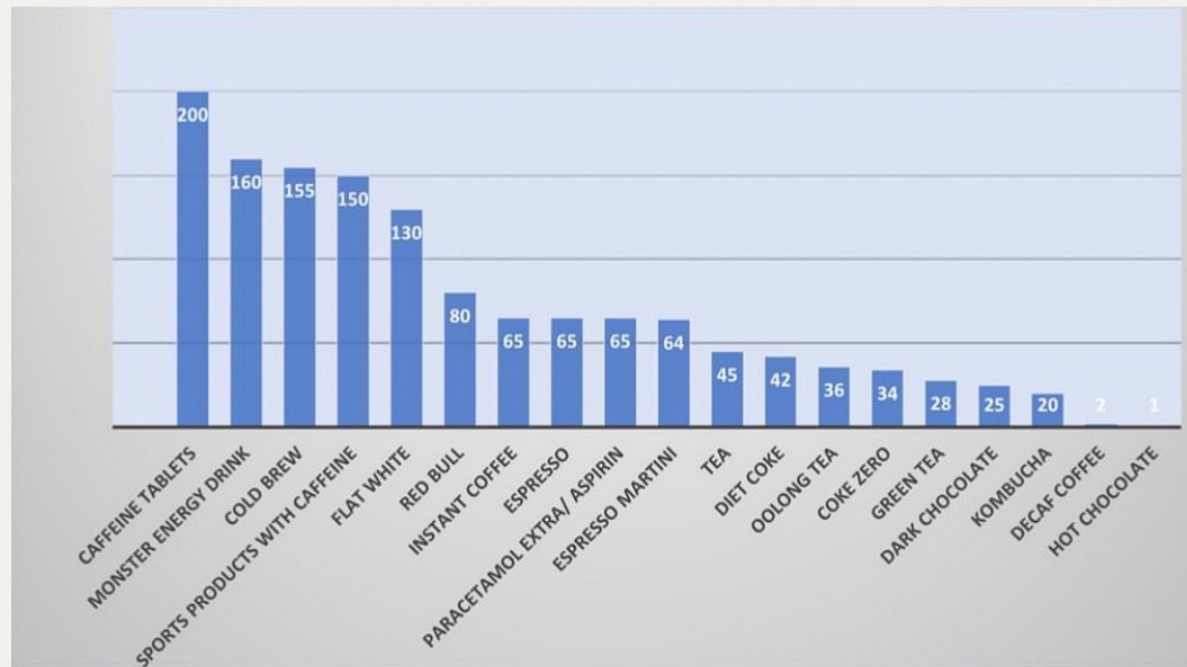


Caffeine

- Caffeine can make hot flushes worse
- Caffeine has a long half life
- Know your tolerance according to symptoms
- Wean slowly
- Caffeine is not just found in coffee



Caffeine Content (mg) of Common Drinks, Foods & Meds



BLACKROCK

Alcohol

- Both caffeine and alcohol can make hot flushes worse
- Women should consume no more than 2-3 units of alcohol per day, have a few alcohol-free days per week and consume no more than 14 units of alcohol per week
- 1 unit of alcohol is a single shot of spirits, half a 175ml glass of wine, half a pint of 4% beer)
- Avoid alcohol altogether if it makes symptoms worse

Mediterranean Diet

- Aim for 5+ fruit and veg
- Eat some fibre every day – oats, whole grain cereals & breads, beans, peas & pulses
- Choose lean cuts of meat, trim off excess fat, avoid processed meats
- More oily fish – 2 portions per week
- Cut down on salt
- Reduced fat dairy
- Lifestyle approach - sensible alcohol limits, moderate exercise, moderate intake of caffeine, effective ways of dealing with stress



Summary



- Nutrition can have an impact on management of symptoms
- Protein at every meal and snack
- Calcium rich/non dairy sources + Vitamin D for bone health
- Increase oily fish + fibre for heart health
- It can be helpful to include phytoestrogens in the diet during menopause
- Sensible alcohol limits
- Moderate intake of caffeine

Nutrition and Fertility



Outline

- The first 1000 days
- Pre conception nutrition
- The Menstrual Cycle
- Egg Quality and Egg Quantity
- Sperm Health
- Ovulation and Cycle Tracking
- IVF
- Miscarriage

What does a Fertility Dietitian Do?

- Individual tailoring
- Medical backgrounds, fertility journeys, food intolerances, family histories, biochemistry



The 4 Stages of Support

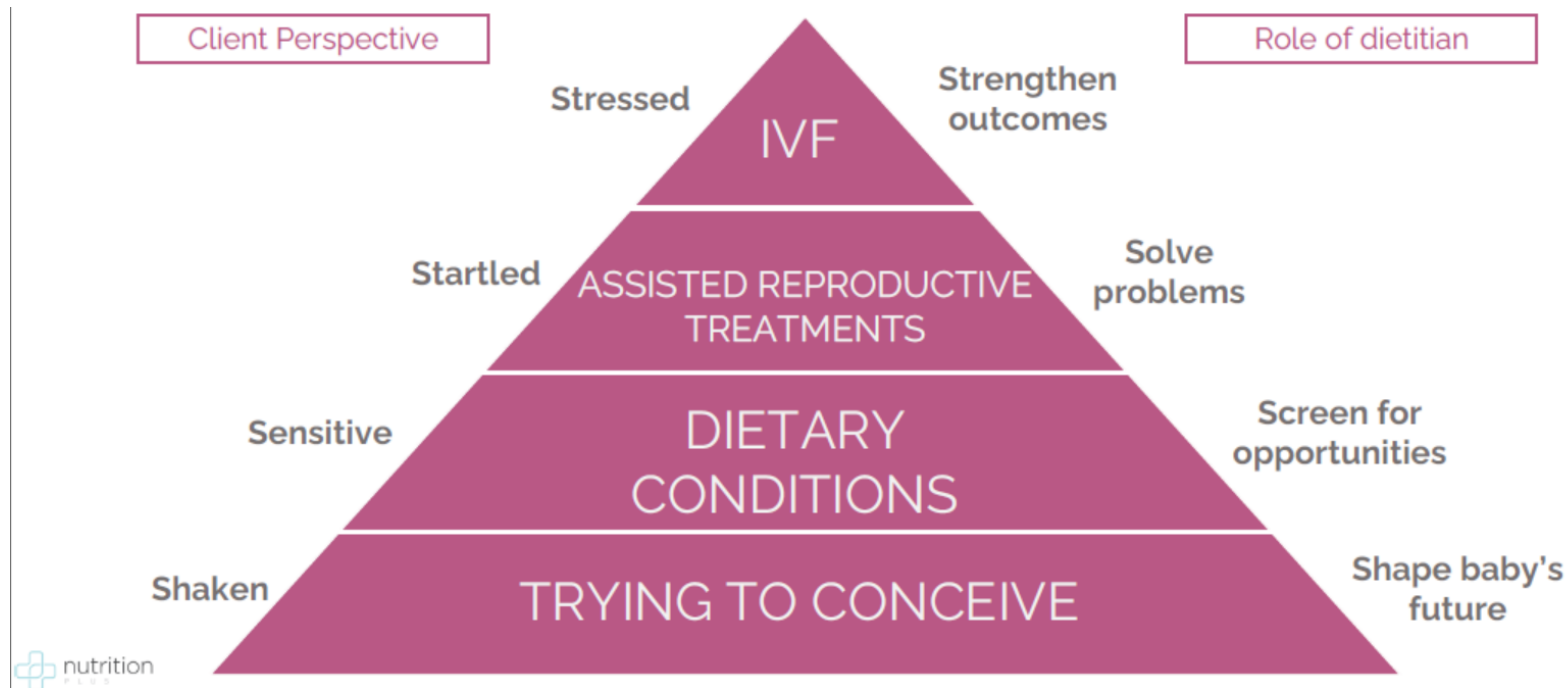
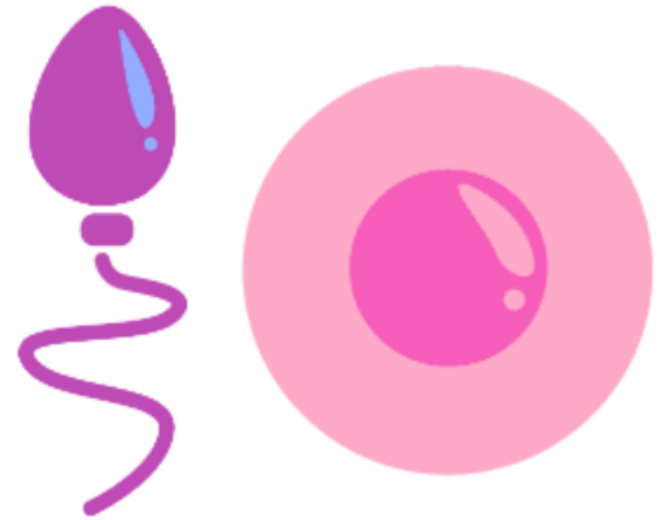


Image from Early Life Nutrition Alliance

What do we need for a healthy conception?

- Healthy sperm
- Healthy egg
- Ovulation needs to occur
- The egg and sperm need to join to create an embryo
- The embryo needs to implant into the uterus



What is infertility?

- Not being able to get pregnant despite having frequent, unprotected sex for at least 12 months
- If >35 years a woman should seek fertility advice after 6 months of trying
- 30% attributed to male complications

What can nutrition do?

Some physical issues that no amount of nutrition will be able to fix

The first 1000 days

The first 1000 days refers to

- The first 3 months preconception
 - Pregnancy
 - The first 2 years of a child's life
-
- 3 months to conceive as it takes approximately 3 months to make a sperm

Epigenetics

Gene code from Mum and Dad will not change

BUT epigenetics is how the environment in utero and preconception impacts the gene function to impact the rest of the child's life

The first 1000 days

Critical time where a healthy environment particularly diet and lifestyle can influence life long health



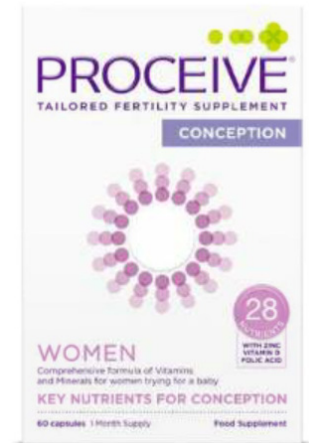
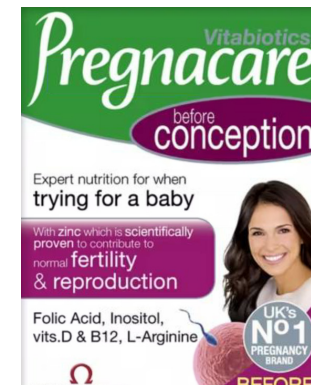
Pre Conception Nutrition

- Optimize carbs for energy and fibre
- Optimize fat intake – fish, olive oil, nut & seeds
- Optimize protein – fish, eggs, poultry, dairy, pulses
- Omega 3 – oily fish, nuts, supplements



Pre Conception Nutrition

- Adequate folate – leafy greens and supplements
- Take a conception specific multivitamin
- Limit alcohol
- Moderate caffeine intake – 2 cups per day



The Menstrual Cycle

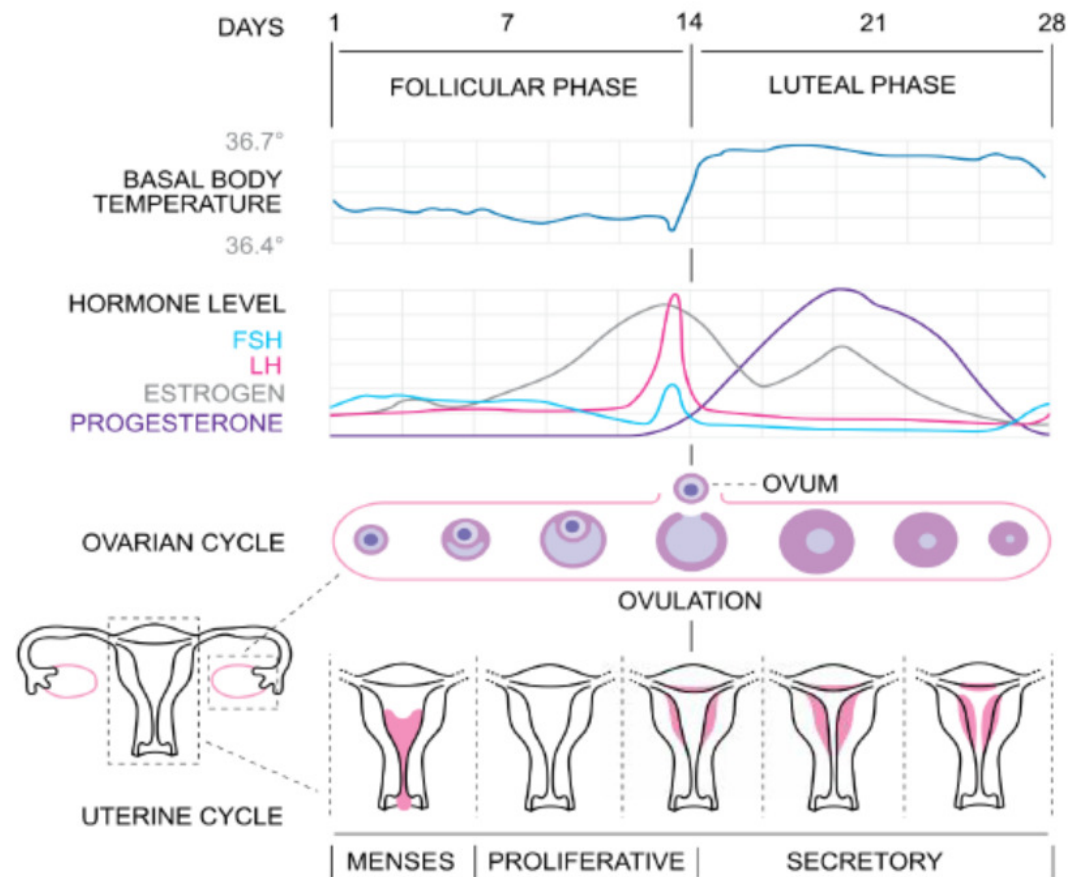


Image from Early Life Nutrition Alliance

How does diet affect the Menstrual Cycle

- Folate/Folic acid
- Low glycaemic index (GI) carbs
- Higher consumption of monounsaturated fats
- Substituting animal based proteins with plant based proteins



How does diet affect the Menstrual Cycle

ENDOCRINE DISRUPTORS

- Pesticides – often found on fresh fruit and veggies. Wash and scrub. Think dirty dozen and clean fifteen
- Mercury – predatory fish shark/marlin
- BPA – plastic products. Opt for glass lunch boxes, reusable water bottles, foil instead of cling film



How does diet affect the Menstrual Cycle

SEED CYCLING

– not much evidence but can do no harm!

- 1 tbsp. each of ground flax and pumpkin seeds in first half cycle
- 1 tbsp. each of ground sunflower and sesame seeds in the second half cycle



Boosting Egg Quality

- Unlike men, women have a finite number of eggs
- Nutrition may be the thing that makes the difference



Boosting Egg Quality

- Ideally we want to optimise egg health at least 3 months prior to ovulation
- Environmental factors that impact egg health
 - Oxidative stress – pollution, smoking, alcohol, psychological stress
 - Age – older eggs are more likely to accumulate errors in their DNA
 - Inflammation – in the fluid surrounding the eggs e.g. high fat diet

Boosting Egg Quality

- Our eggs are cells and we must look after our nutrition to keep our cells healthy
- A diet with excess fat and/or excess sugar can impact cell health
- Micronutrient deficiencies (e.g. low iron) can impact our cells
- Have you had your bloods checked?



6 Simple ways to improve your egg quality

- **Healthy Fats** – omega 3 – oily fish, nuts (walnuts) and seeds
- **Antioxidants** – eat a wide range of fruits and vegetables
- **Co Enzyme Q10** – reduces DNA damage, preserving egg quality
- **Zinc** – Oysters, nuts, legumes
- **Micronutrients** – ensure you are not missing out on core food groups.
Get your bloods checked
- **Reduce AGEs** – Foods that are cooked at high heat such as barbecuing

Boosting Egg Quantity

- FSH and AMH in blood tests
- FSH measures how hard a woman's body has to work to produce an egg
- AMH indicates ovarian reserve

What can nutrition do?

Not a lot to improve egg quantity. Nutrition primarily focuses on egg quality. However there has been a little bit of research on dietary interventions for low ovarian reserve

- Vitamin D
- Green and yellow vegetables
- Soy foods
- Fish

Sperm Health

- It takes 2 to tango!
- If going for a dietary fertility consultation it is just as important for the man to attend
- A lot of emphasis (and often pressure) is often put on the female



6 Simple ways to improve your sperm health

- **Reduce/limit alcohol**
- **Omega 3** rich foods such as oily fish (salmon) and walnuts
- If struggle with oily fish consider an omega 3 supplement or **Coenzyme Q10** supplement
- **Exercise** regularly
- **Mediterranean style diet**
- **Reduce processed meat** (but not unprocessed meat)

How do I know if I am ovulating

- We need ovulation to make a baby so how do you know if you are ovulating?
- Cycle tracking
- Egg is released on just one day but sperm can survive for up to 5 days
- Fertile window = 2-5 days prior to and of ovulation
- Know how lifestyle is affecting your cycle



Cycle Tracking

CALENDAR

- Old school pen and paper
- Or use an app such as Clue or Flo
- This can be unrealistic as not everyone has a 28 day cycle
- For typical 28 day cycle ovulation occurs on day 14
- If using an app it can get to know your cycle variations



CERVICAL MUCUS

- In the lead up to ovulation cervical mucus is increased and is watery, slippery, stretchy – like egg white
- A day or 2 after ovulation mucus becomes more creamy/dry

Diet and IVF

- IVF – In vitro fertilization
- The process of fertilization where an egg is combined with sperm outside of the body in vitro (e.g. test tube)

An IVF cycle

- Ovarian stimulation
- Trigger injection
- Egg retrieval and semen collection
- Fertilisation and embryo development
- Embryo transfer
- Two week wait (luteal phase)
- Pregnancy test



Diet and IVF

- Prepare your diet as you would for any pregnancy
- Coenzyme Q10 supplements
- Omega 3 fatty acids – oily fish, nuts and seeds (flaxseeds, walnuts)
- Zinc – red meat, legumes
- Antioxidants/Vitamin C – variety of fruits and vegetables
- Vitamin B6 supplements
- Vitamin D
- Tailored advice from a dietitian

IVF and the Two Week Wait

- The TWW refers to the time between ovulation and when an embryo implants

Dietary considerations

- Limit caffeine
- Stop supplements that wouldn't be recommended during pregnancy
- Eat the rainbow
- Include a variety of wholegrains such as oats, rice, quinoa
- Avoid foods which have a high listeria risk such as soft cheeses, sushi, deli meats
- Ensure adequate dairy

Miscarriage



- Affecting 15-20% of all who successfully conceive
- The risk of miscarriage increases with age
- Miscarriage can be classified into three sub-types:
 - Biochemical or chemical loss – Loss before 6 weeks gestation
 - Early pregnancy loss miscarriage - <12 weeks gestation
 - Late pregnancy loss miscarriage - >12 weeks and <21 weeks

Trying again after a miscarriage

Dietary Considerations

- Niacin (vitamin B3) may significantly reduce miscarriage risk
- Particularly important for women who follow a vegan diet, have severe morning sickness or a gastrointestinal condition (e.g. coeliac disease)
- Reduce high intake of saturated fat
- Increase green vegetables, fruit, milk, cheese, eggs and fish

Trying again after a miscarriage

FOLATE

- Low folate status in women has been shown to be a risk factor for miscarriage
- Recommended all women planning to conceive take 400-500ug folic acid for 1-3 months prior to conception and for the first 3 months of pregnancy
- Some women require higher doses
 - Diabetes
 - Obese
 - Previous pregnancies with NTDs
 - Malabsorption disorders (Coeliac disease, IBD, bariatric surgery)
 - Smokers
- Moderate risk at least 1mg per day
- High risk up to 5mg per day

Trying again after a miscarriage

FOLATE

- Folate is the naturally occurring form of vitamin B9 found in food (leafy greens)
- Folic acid is the synthetic folate found in supplements and fortified foods
- Folinic acid is the active metabolite of folic acid
- Methylfolate is the 'active' form of folate. Folate is converted to 5MTHF in the digestive system. Bypassing those first few steps that folic acid or folinic acid would have to go through



Thank You for Listening

- emer.odriscoll@blackrock-clinic.com
- @succeed_dietitian