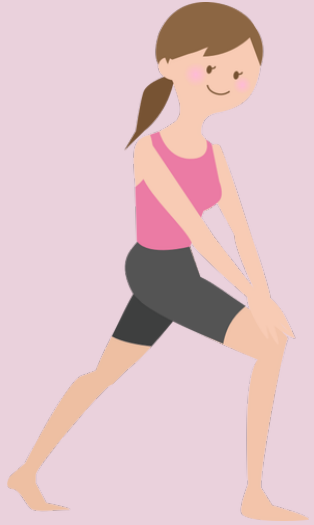


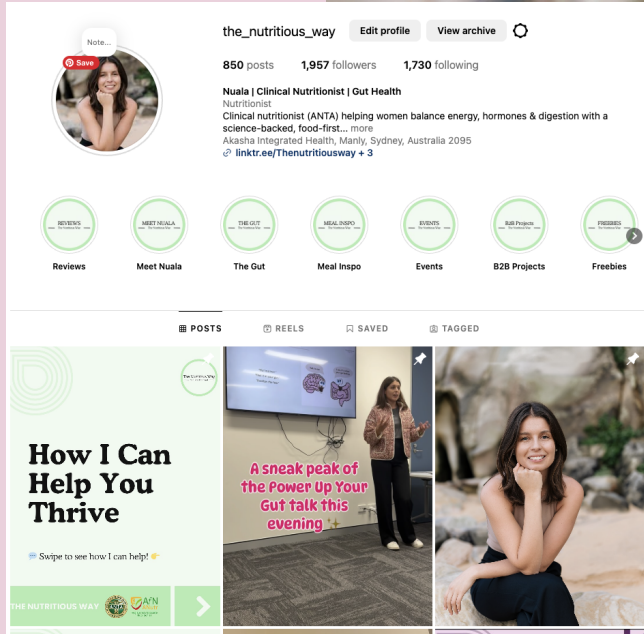
Thrive Through Menopause

**Nutrition & Movement
for Vitality**

With Your Hosts Nuala & Hannah



Meet Nuala, Clinical Nutritionist



Meet Hannah, Accredited Exercise Physiologist





This Session Will Cover ...

**Understanding
Menopause**

**How Exercise
& Nutrition
Work Together**

**Client Case
Study**



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The Japanese Approach to Menopause



🌸 A Natural Transition, Not a Medical Condition

In Japan, menopause is seen as a natural phase of life rather than a medical problem.

🇯🇵 Lower Reported Symptoms

Japanese women generally report fewer menopausal symptoms like hot flashes compared to Western women, this discrepancy is likely due to a combination of dietary, cultural, and reporting factors.

✨ Key Takeaway

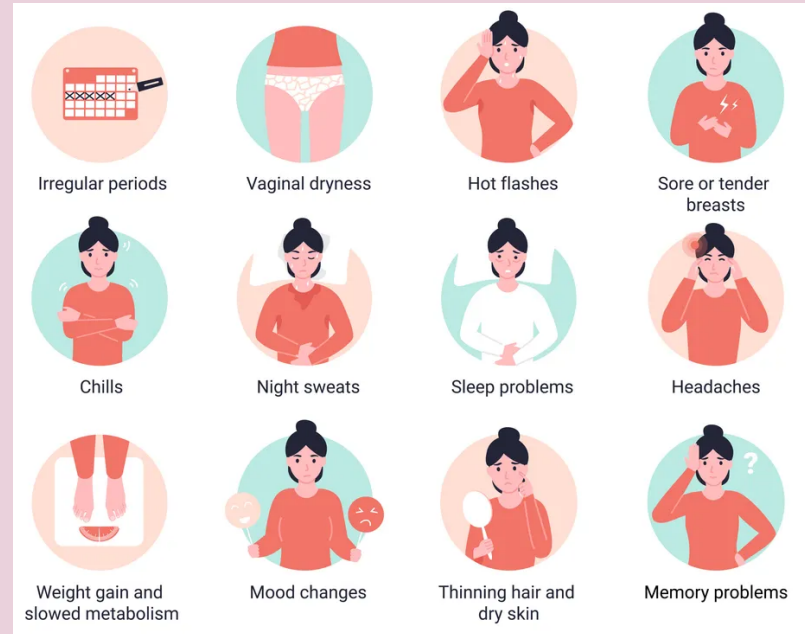
By embracing nutrient-dense foods, an active lifestyle, and a positive cultural mindset, Japanese women experience menopause as a smoother, more balanced transition.



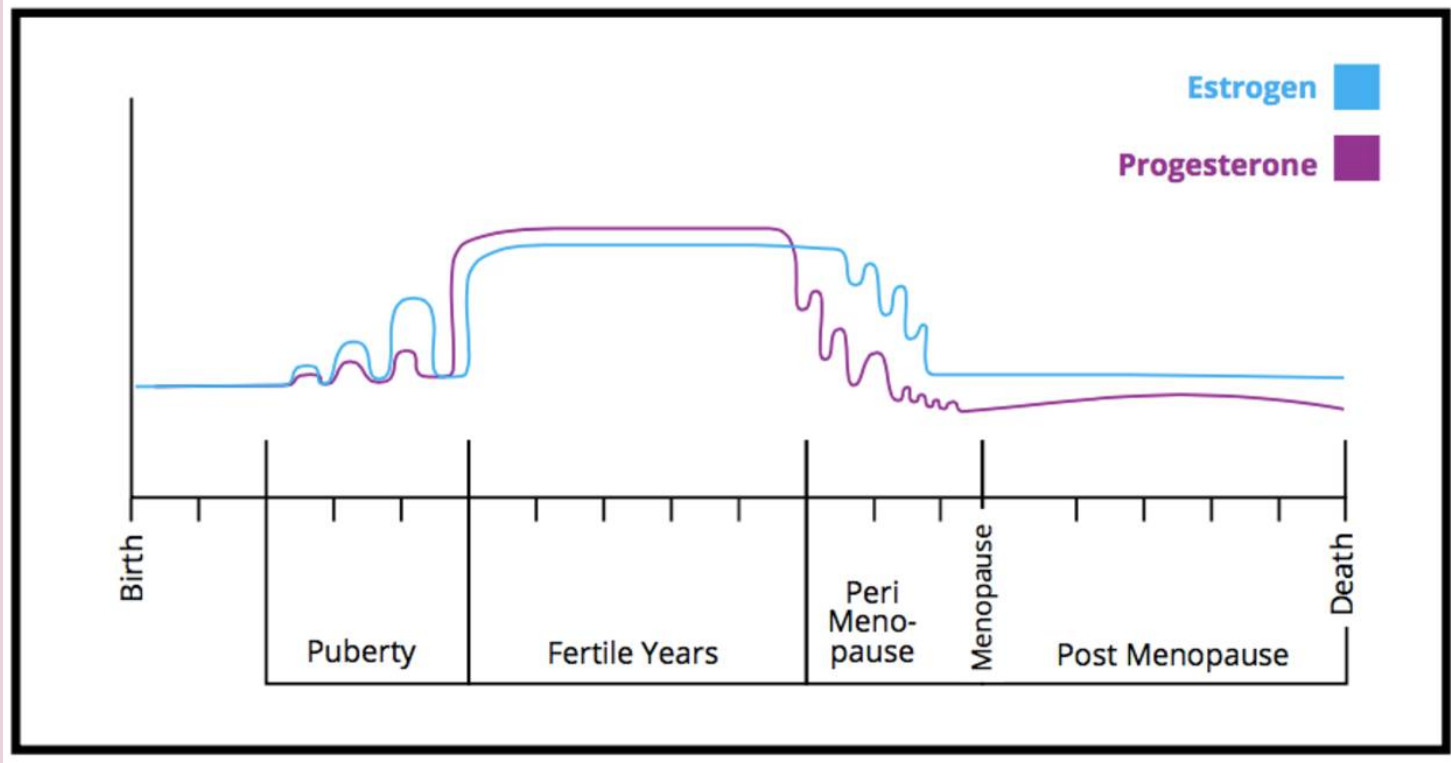


Menopause - the basics

- **Refers to end of menstruation** (no period for 12 months)
- Average age in Aus = **51-52 yrs**
- **Can occur prematurely**
 - Surgery & chemo / radiation
 - Ovaries stop producing estrogen
- **3 phases:**
 - Perimenopause
 - Menopause (final period)
 - Postmenopause



Hormones





Hormones

Majority of menopause symptoms can be attributed to the decline of:

Estrogen (causes most symptoms)	Progesterone
Reproductive function	Mood
Metabolism	Anxiety/irritability
Fat storage	
Thermoregulation	
Response/recovery to exercise	

Changes that happen to the body



System	Changes
Musculoskeletal: <i>bones, muscles, joints, tendons & ligaments</i>	More rapid reduction in: <ul style="list-style-type: none">- Bone mineral density- Tendon degeneration- Skeletal disc degeneration- Loss of muscle mass (incl. pelvic floor muscle tone)
Cardiovascular: <i>heart, blood & blood vessels</i>	<ul style="list-style-type: none">- Increased risk of cardiovascular disease due to:<ul style="list-style-type: none">● Changes in blood vessel elasticity (become stiffer)● Changes in cholesterol levels (increased LDL, reduced HDL)
Metabolic: <i>energy production, nutrient processing, hormone regulation</i>	<ul style="list-style-type: none">- Reduction in metabolic rate, contributing to weight gain (waist)- Increased insulin resistance (cells stop responding to insulin → build up in sugar in the blood)



Why Menopause Impacts Your Diet

MUSCLE MASS DECLINE

Muscle burns more calories than fat, even at rest.

After 30, muscle mass drops 3-8% per decade, accelerating post-menopause.

Less muscle = lower metabolism, making weight management harder.

INSULIN RESISTANCE

Estrogen plays a role in carb metabolism. With lower estrogen, cells become less responsive to insulin.

Higher insulin levels encourage fat storage, particularly around the abdomen.

Leads to blood sugar swings, cravings and crashes.



How Menopause Impacts Your Gut

1 Lower Stomach Acid 🍋

- Estrogen helps regulate **gastric acid production**, which is essential for breaking down proteins and absorbing key minerals.
- As estrogen declines, stomach acid levels drop, making it harder to absorb **calcium, iron, and B12**.
- This can lead to issues like **weaker bones, fatigue, and digestive discomfort**.

2 Reduced Enzyme Activity 🔬

- Digestive enzymes (produced by the stomach, pancreas, and intestines) help break down food.
- Hormonal shifts can lead to **fewer enzymes**, affecting absorption of **protein, fats, and carbohydrates**.
- This means the body may not efficiently **extract nutrients** from food, potentially leading to deficiencies.

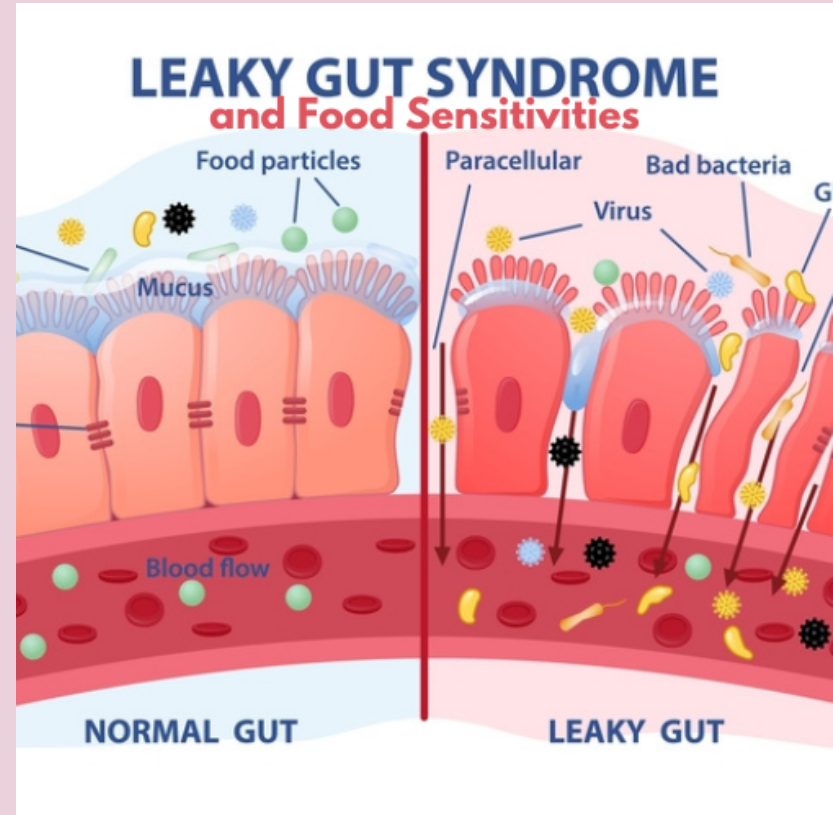
3 Slow Gut Motility 🌀

- Estrogen and progesterone influence gut motility (how food moves through the intestines).
- A **sluggish gut** can mean longer transit times, increasing the risk of **constipation and bloating** while also affecting nutrient uptake.



Gut Inflammation & Food Sensitivities

- Lower estrogen levels can increase gut permeability (aka 'leaky gut') due to the hormone's protective role in maintaining the gut barrier.
- This can lead to:
 - Increased inflammation
 - New food sensitivities (especially to gluten, dairy, or high-FODMAP foods)



The Gut-Estrogen Axis



- The gut actually helps regulate estrogen levels.
- Certain gut bacteria (called the **estrobolome**) influence how estrogen is metabolized & excreted.
- An imbalanced gut microbiome can lead to:
 - Estrogen dominance (excess estrogen being recirculated)
 - Worsened menopause symptoms (hot flashes, weight gain, mood swings)





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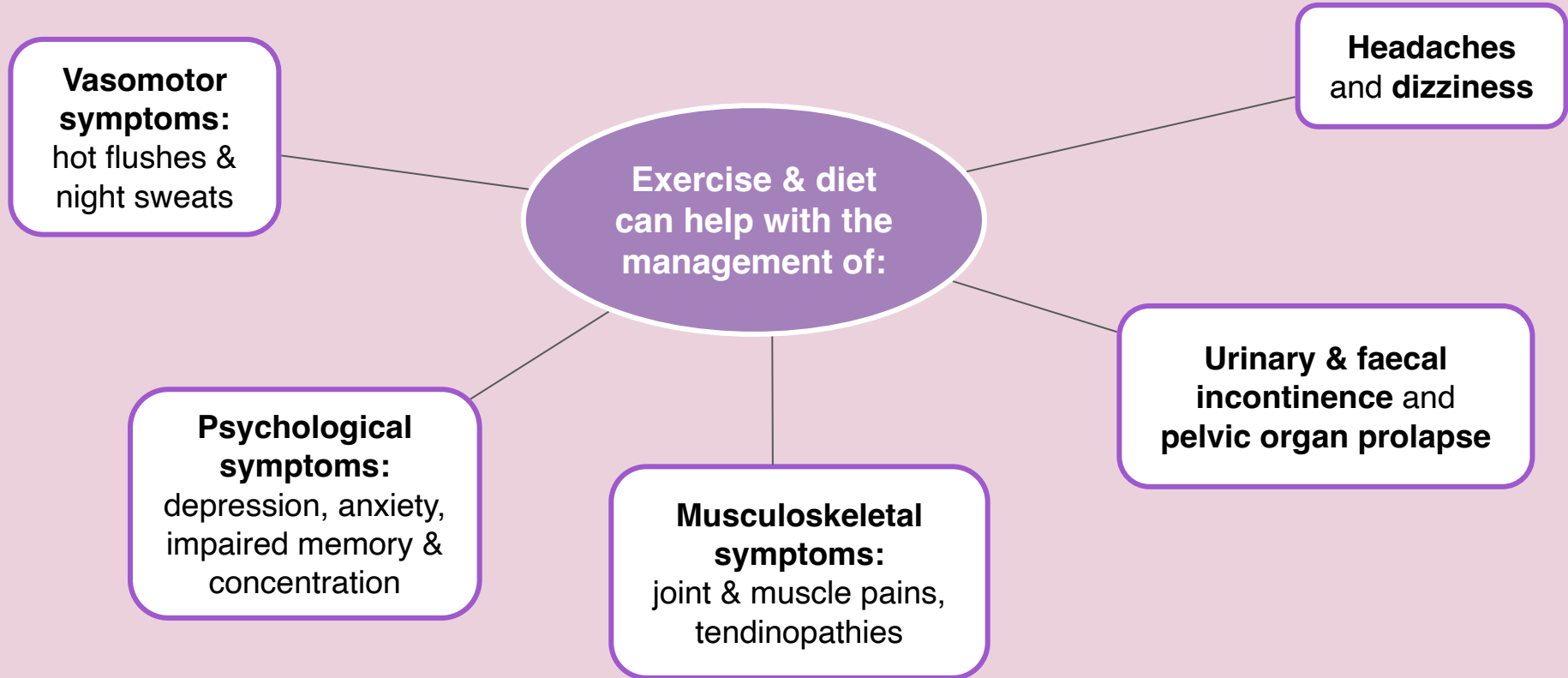
How are exercise & diet beneficial?



**Symptom
Management**

**Long-term
Health
Outcomes**

How is exercise & diet beneficial?





How are exercise & diet beneficial?

In post- & peri-menopausal women → can result in:

- Maintenance of bone mineral density
- Reduced risk of developing cardiovascular disease
- Improved endothelial function (controls blood flow)
- Improved insulin sensitivity
- Reduced risk of developing metabolic syndrome
- Improved quality of sleep
- Improved mental health, wellbeing & quality of life



Changes that happen to the body

System	Changes
Musculoskeletal	<p>More rapid reduction in:</p> <ul style="list-style-type: none">- Bone mineral density- Tendon degeneration- Skeletal disc degeneration- Loss of muscle mass (incl. pelvic floor muscle tone)
Cardiovascular	<ul style="list-style-type: none">- Increased risk of cardiovascular disease due to:<ul style="list-style-type: none">• Changes in blood vessel elasticity (blood vessels become stiffer)• Changes in cholesterol levels (increased LDL, reduced HDL)
Metabolic	<ul style="list-style-type: none">- Reduction in metabolic rate, contributing to weight gain (waist)- Increased insulin resistance (cells stop responding to insulin → build up in sugar in the blood)



Changes that happen to the body

System	Changes
Musculoskeletal	Resistance training (RT) & pelvic floor muscle training → load bones, muscles & tendons to maintain / reduce the risk of: <ul style="list-style-type: none">- osteopenia, osteoporosis & fractures- pelvic floor dysfunction (urinary incontinence, pelvic organ prolapse)- chronic joint pain (osteoarthritis)
Cardiovascular	Aerobic exercise (AT) → improve all cardiovascular health markers & reduce risk of atherosclerotic changes
Metabolic	Moderate intensity exercise (RT, AT or combination) → improve insulin sensitivity (cells respond better to insulin, helping sugar enter and lowering blood sugar).

How much exercise should I be doing?



Aerobic exercise:

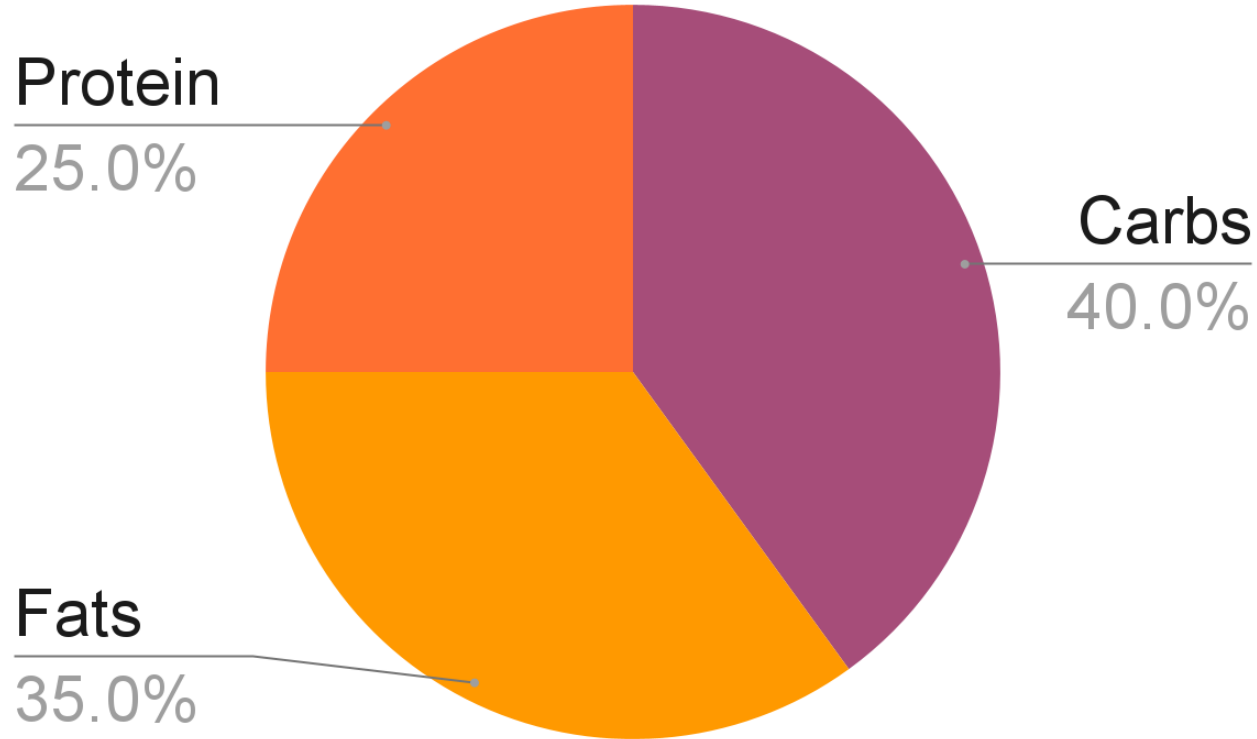
- 150-300 minutes (2.5-5 hrs) / week of **moderate** activity ***OR***
- 75-150 minutes (1.25-2.5 hrs) / week of **vigorous** exercise ***OR***
- A combination of both

Resistance exercise:

- 2 non-consecutive days / week



Nourishing With Macros





Nourishing With Macros



Protein: Preserve Muscle & Metabolism

- **Why it matters:** Supports muscle, bone health, and metabolism as muscle mass declines with age.
- **Daily target:** 1.2-1.6g/kg body weight
- **Best sources:** Lean meats, fish, eggs, legumes, tofu



Carbohydrates: Energy & Gut Health

- **Best choices:** **Complex carbs** (whole grains, legumes, vegetables)
- **Why they matter:** Provide steady energy, support gut health, and help regulate hormones.
- **Tip:** Always pair with **protein & fats** to stabilize blood sugar



Fats: Hormone Support

- **Why they matter:** Building blocks for estrogen, progesterone.
- **Healthy sources:** Olive oil, nuts, seeds, avocados
- **Bonus tip:** Be mindful to consume enough **essential fatty acids (EFAs)**





Nourishing With Micronutrients

HEALTHY FATS (Essential Fatty Acids - EFAs)

- **Why?** Supports skin hydration, joint health, hormone production, and cholesterol balance.
- **Sources:** Fatty fish (salmon, sardines), nuts (walnuts, almonds), seeds (chia, flaxseed), and olive oil.

MAGNESIUM

- **Why?** Helps with bone strength, mood stability, sleep, and muscle function.
- **Sources:** Leafy greens (spinach, kale), nuts (almonds, cashews), seeds (pumpkin, sunflower), and dark chocolate.



Nourishing With Micronutrients

VITAMIN C

- **Why?** Supports collagen production for skin elasticity and bone health.
- **Sources:** Citrus fruits (oranges, lemons), bell peppers, berries (strawberries, blueberries)..



B VITAMINS

- **Why?** Known as “stress vitamins,” they support energy metabolism and adrenal health, which helps regulate post-menopause estrogen levels.
- **Sources:** Whole grains (quinoa, oats), eggs, and leafy greens (spinach, Swiss chard).

CALCIUM & VITAMIN D - Spotlight on these later in our bone health section.



Phytoestrogens & Menopause Relief

-  **Phytoestrogens**, plant compounds, may help ease hot flushes & night sweats—the most common menopausal symptoms.
-  **Isoflavones**, a type of phytoestrogen found in soy-based foods & soybeans, are the main focus of research.
 - A 2021 review concluded that isoflavones are chemically different to estrogen, so soy isoflavones are safe to eat as part of healthy diet without increased risk of breast cancer.

Foods high in phytoestrogens
can help manage
menopause symptoms



SOY



LENTILS



FLAXSEED



RED CLOVER



BEAN SPROUTS



SUNFLOWER
SEEDS



CEREAL GRAIN
SEEDS



Soy & Symptom Differences



Hot flushes reported:

- 10-20% of Asian women
- Majority of perimenopausal & menopausal women in the U.S. report hot flushes (where soy intake is lower)



Research findings:

- Mixed results, but a 2021 review across 400+ countries found 50mg of isoflavones daily linked to fewer & less severe hot flushes
- 50mg = 2 servings of soy-based foods/drinks in a balanced diet





Considerations & Best Choices

🧪 Scientists aren't sure how isoflavones work but believe they create a weak estrogen-like effect without changing actual estrogen levels.

✅ **Best soy sources:** Tofu, tempeh, soybeans

- ⚠️ Watch out for: Soy-based cheeses & meats (higher in fat & salt)
- ⚠️ Caffeine & alcohol may worsen symptoms





Pelvic Floor (PF) Considerations

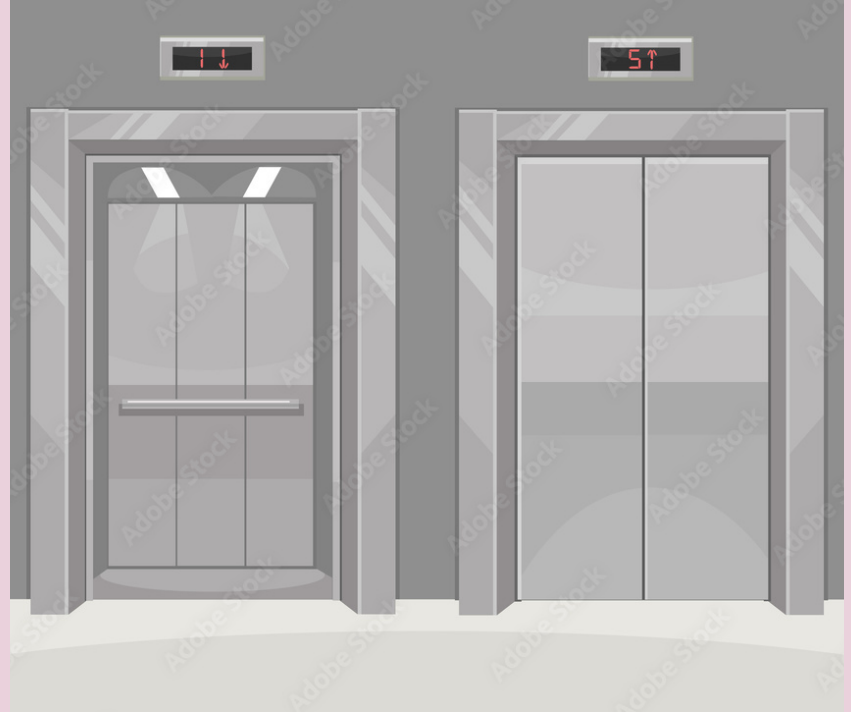
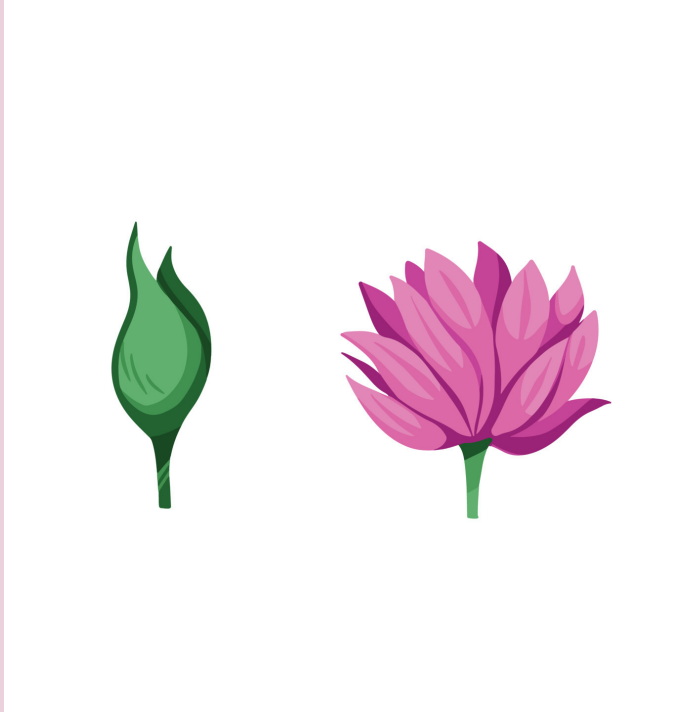
- PF strength assessment before starting an exercise program
- If dysfunction is present → exercise should aim to:
 - **Minimise large increases in intra-abdominal pressure & avoid excessive strain being placed on the PF organs / muscles** to reduce the risk of SUI and POP
 - E.g. regress high-impact activities, e.g. running / jumping
- See an EP who can **prescribe appropriate exercises** & provide **education on exercise modifications**



PF Exercise - Diaphragmatic Breathing

- Inhale, relax PF down (start stream of urine), tummy expands
- Exhale, squeeze & lift PF (hold urine), tummy deflates
- Hold for 3-5 secs, before a definite 'let go' as muscles relax
- Keep thighs & butt cheeks relaxed throughout
- Perform **3 x 10 daily** / until **fatigue** - rest for few secs between squeezes
- Change positions each set - sitting, lying, standing, kneeling

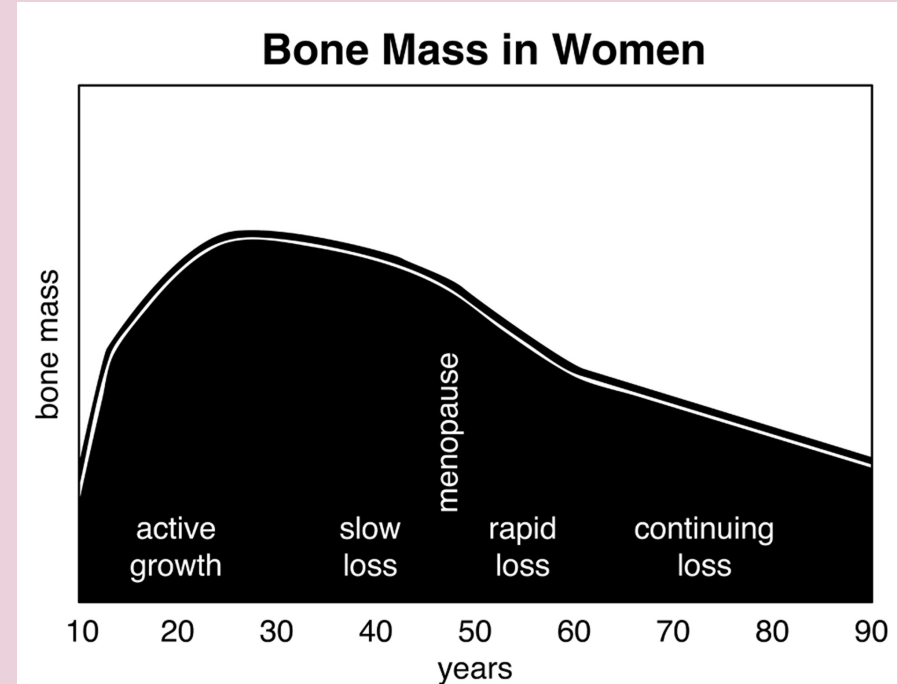
Diaphragmatic Breathing - Analogies



Bone Growth



- Bones are living tissues
- Constantly broken down & replaced with new bone tissue (ongoing cycle)
- Maximum size and strength (peak bone mass) = between 25-30
- The higher your peak bone mass, the better protected you are against bone loss, fractures & osteoporosis later in life





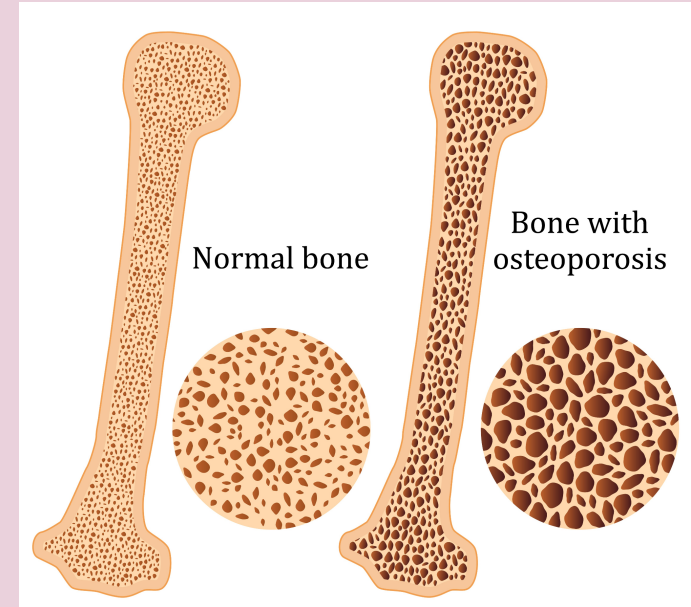
Bone Checks

- **Bone Health Check: assessment of risk factors for OP**
 - Family history, calcium & vitamin D intake
 - Done every year after menopause & after fracture
- **Risk factors → GP referral for bone density scan (DXA scan)**
 - X-ray that measures bone mineral density
 - Can confirm a diagnosis of osteoporosis
 - Can check how much bone loss has happened
 - Can check if any treatment for osteoporosis is working
- **Blood tests may also be used to check:**
 - Calcium & vitamin D levels & thyroid function (thyroid problems → osteoporosis)



Bone Health & Osteoporosis (OP)

- Bones lose density & become **thin, weak and fragile** → increased risk of fracture
- Often **no signs / symptoms** until a fracture occurs
- **Any bone can be affected**, but most common sites:
 - hip
 - spine
 - wrist
 - pelvis
 - ribs
 - upper arm
- ↑ age = ↑ risk of OP
- **23% of women** in Australia > 50 have OP





Other Osteoporosis Risk Factors

- Family history
- Low calcium intake
- Low vitamin D levels
- Low levels of activity
- Smoking
- High alcohol intake
- Premature menopause
- Medications - Warfarin, thyroid hormone
- Medical conditions - coeliac disease, IBS, diabetes, thyroid conditions, rheumatoid arthritis, anorexia
- Fracture > 50 yrs

Bone Health & Menopause



Calcium is important as menopause can accelerate age related decline in bone mineral density.

You should get a **sufficient amount through a healthy** diet, from sources like leafy greens, calcium fortified foods, dairy products and fish eaten with bones.

It's also crucial to get enough **vitamin D** alongside calcium and supplements may be required if suffering from osteopenia and osteoporosis.





Daily Calcium Guidelines

Age	Calcium per day (mg)
1-3 yrs	500
4-8 yrs	700
9-11 yrs	1,000
12-18 yrs	1,300
19-50 yrs	1,000
50+ yrs	1,300



Sources Of Calcium

	Milk 300 mg per 1 cup		Figs 135 mg per 5 figs
	Salmon (with bones) 241 mg per 4 ounces		Turnip greens, cooked 104 mg per 1/2 cup
	Sardines (with bones) 213 mg per 2 ounces		Almonds 93 mg per 1/2 cup
	Bok choy, cooked 190 mg per 1/2 cup		Orange 52 mg per medium orange
	Collard greens, cooked 179 mg per 1/2 cup		Sesame seeds 51 mg per 1 tablespoon
	Spinach, cooked 145 mg per 1/2 cup		Arugula, raw 32 mg per 1 cup
	Kale, raw 137 mg per 1 cup		Mushrooms 18 mg per 2 ounces



3 exercise types that help maintain / build bone strength & reduce bone loss:

Weight-bearing / impact exercise

- Bearing your own weight and landing firmly - jumping, jogging, skipping, stair climbing
- Min of 150 mins/week of fast walking can help prevent bone loss in premenopausal women

Resistance (strength) training

- Moving your body against some type of resistance, e.g. dumbbells, resistance bands
- Strengthens muscles around bones that are more at risk of fracture (hips, wrists & spine)
- Can build bone density in certain parts of your body

Balance training

- Falls = major cause of bone fracture in older women
- Improves balance / mobility & reduces the risk of falls

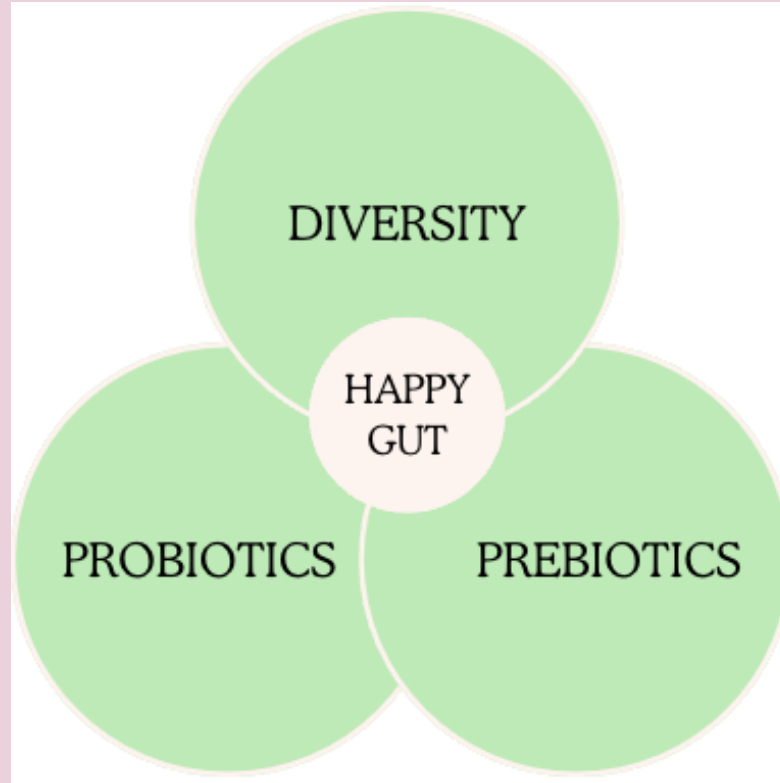


- When you become active or increase your activity levels, the **bones modify their shape and/or size to withstand the new loads**
- Once a bone has adapted to an activity, it **ceases to change**
- **THEREFORE**: increasing exercise intensity and/or changing activities is necessary to continue to stimulate positive bone adaptation.



Supporting Gut Health With TNW's 3 Pillars

PROBIOTICS:
live
microorganisms
that are intended
to have health
benefits when
consumed or
applied to the
body.



PREBIOTICS: a
non-digestible
food ingredient
that promotes the
growth of
beneficial
microorganisms
in the intestines.



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Meet Jenny!

- 52 year old female
- 12 months since last period - postmenopausal
- **Symptoms:**
 - Joint & muscle pain
 - Hot flushes
 - Diarrhea
- **Current exercise:** walk with a friend 2x/week & Pilates 2x/week
- **Current diet:** couple coffees, vegetarian, loss of appetite, often skips meals as not hungry / busy
- ***Recommended by GP to seek advice about exercise***





Initial Exercise Physiology Consult:

- **Symptoms** - joint & muscle pain, hot flushes, diarrhea
- **Medical history / injuries & medication** - OP, HRT
- **Current exercise & exercise history** - walking & Pilates
- **Aggravating exercises** - lower back & knee pain
- **Goals** - improve BMD, reduce knee / back pain & improve confidence in group exercise setting (diarrhea)
- **Assessment** - squat, hinge, pull, push, rotation, lunge/step up
- **Education** - incorporating 2x/week heavy strength training & increase walking frequency, exercising in cool environment, loose clothing, staying hydrated



Initial Exercise Physiology Consult:

Follow-up session options:

- 45min exercise session - 1:1
- 60min Women's Bone Health Group Class
- Combination

Client option = 1:1 session due to diarrhea concerns

Referral to Nutritionist Nuala - FREE Discovery Call to discuss managing gut health (diarrhea symptoms) & diet for osteoporosis



Follow-up sessions

- 2x/week with EP Hannah **OR** 1x/week EP & 1x/week independent
- **Chose 2x/week 1:1** - low motivation & equipment availability

5 sets of 5-6 repetitions - weighted:

- *Prioritised muscle groups attached to / crossing spine & major joints of the extremities.*
- *Squats, lunges, deadlifts, back extension, lat pulldown, bent over row, push-up, triceps dips, chest press, abdominal/core exercises*

5 sets of 10 impact exercise:

- *Heel drops (lower impact option) - due to knee pain*

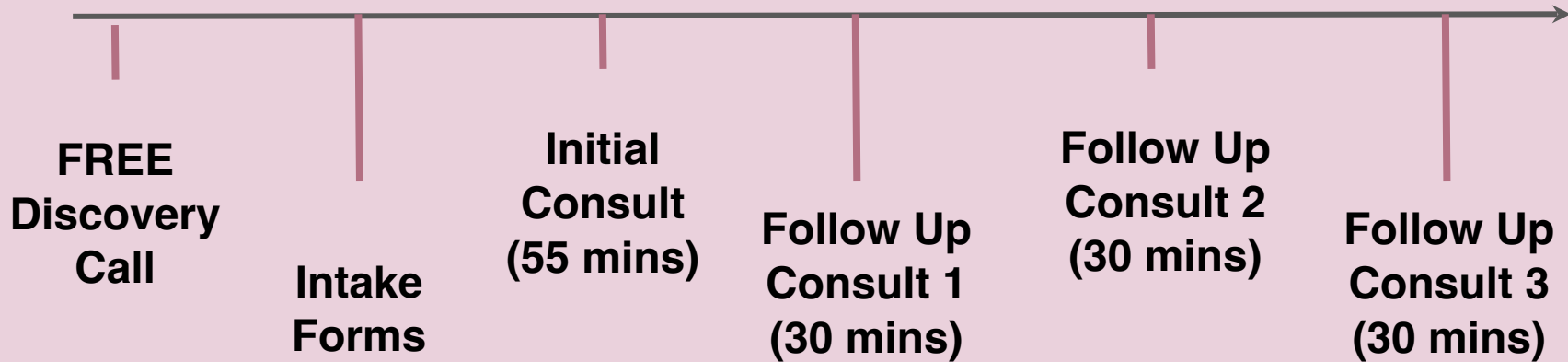
Balance training:

- *Static balance w/ dual tasking - single leg balance + ball throw & catch*
- *Dynamic balance - tandem walk*
- *Functional balance - arabesque (lean & reach)*



Complimenting with a nutritionist

Recommended Bronze Package





2 months later....

- Diarrhea symptoms have subsided, with elevated gut health
- Feeling more confident - in performing exercises + symptoms
- Has joined Women's Bone Health group class
- Monthly check-ins with Nutritionist Nuala



Q&A