CLL CANADA LLC CANADA

Living Well with CLL

CARING FOR YOURSELF

CLL Live 2026
Friday, May 22, 2026

Vancouver, BC, Canada

Amber Bourgeois (she/her), MSN-NP(F), PhD
Nurse Practitioner, Hematology
BC Cancer, Victoria Centre

Eleah Stringer (she/her), RD, MSc
Registered Dietician
BC Cancer, Victoria Centre

Disclosures

- Canadian Cancer Society (Amber Bourgeois, Eleah Stringer)
- Canadian Institutes for Health Research (Amber Bourgeois)
- Michael Smith Health Services Research (Eleah Stringer)
- BC Cancer Foundation (Eleah Stringer)
- Lotte & John Hecht Memorial Foundation (Eleah Stringer)

Wellness is the active, conscious pursuit of activities, choices and lifestyles that lead to a state of holistic health.

- Global Wellness Institute

Pillars of Living Well With CLL (The Agenda)

1. Preventing Infection- 9 min
2. Managing Fatigue- 3 min
3. Exercise- 3 min
4. Nutrition- 15 min - Eleah

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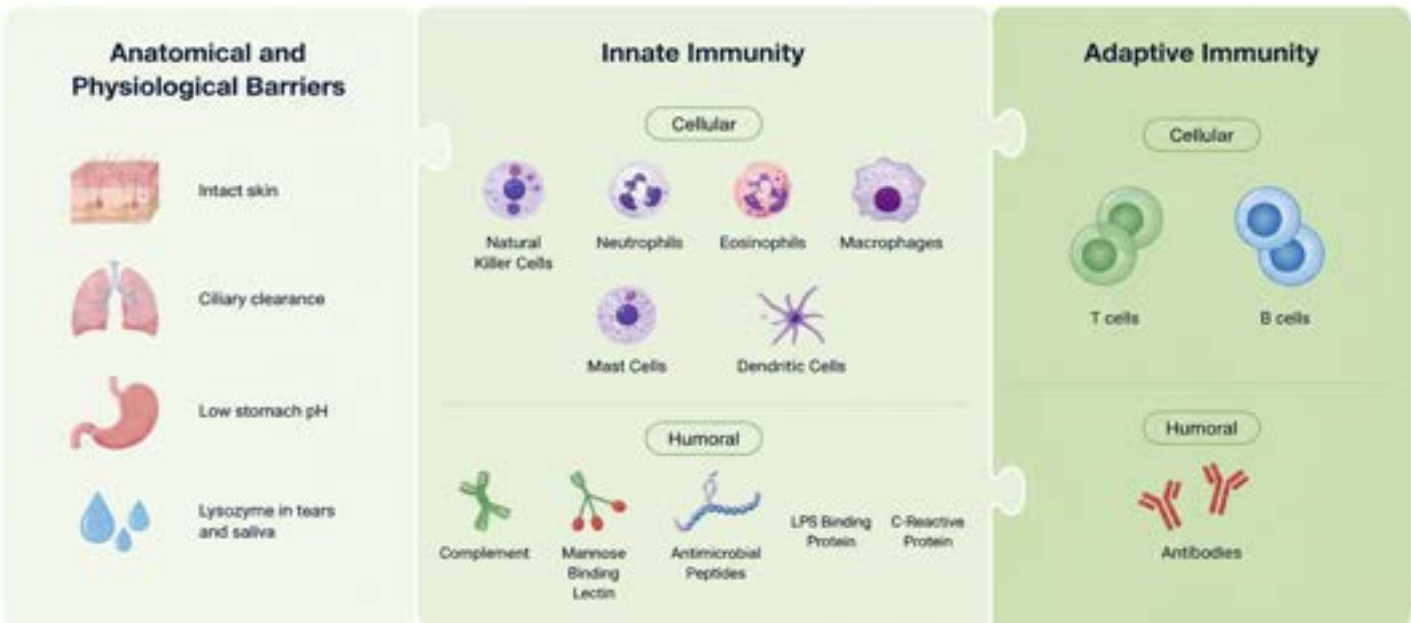
Preventing Infection

Your Immune System



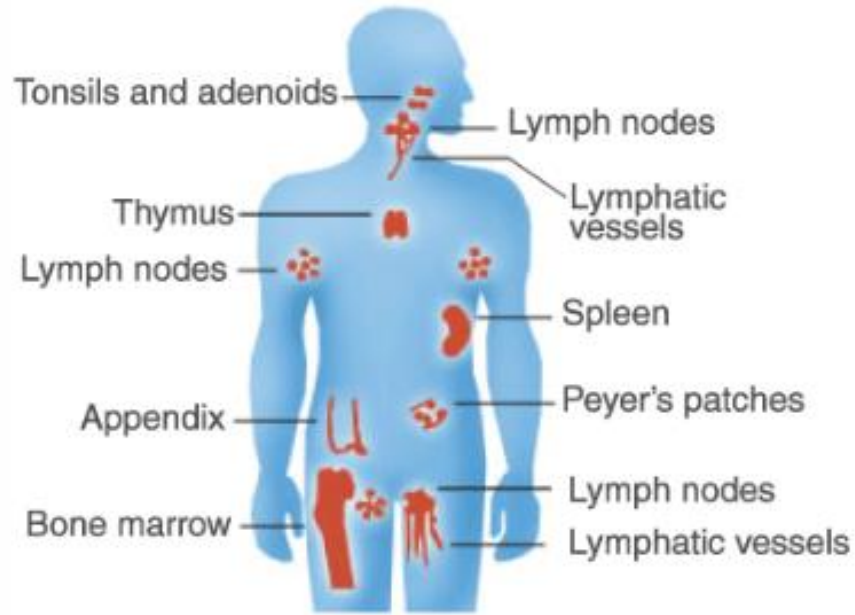
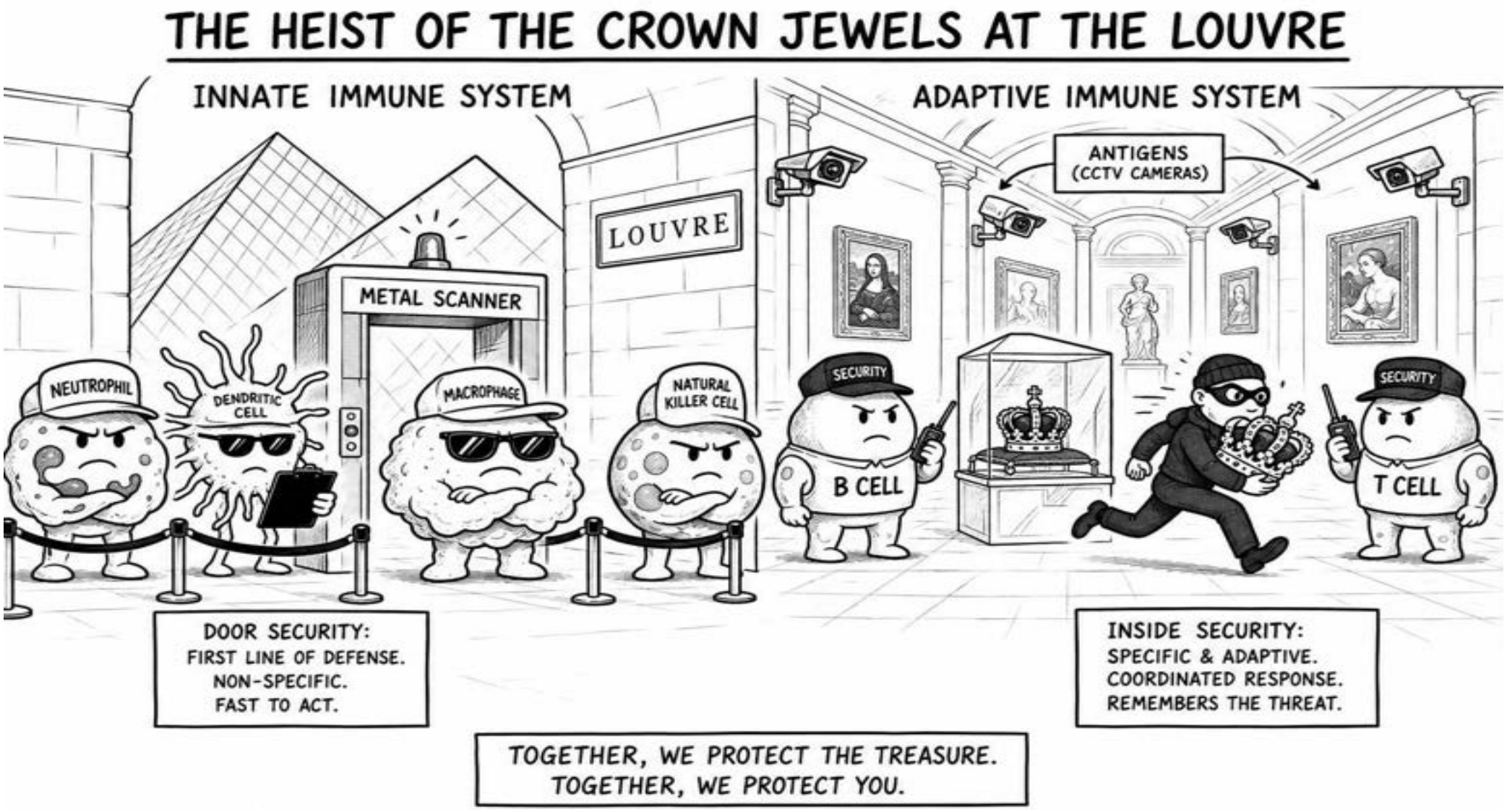
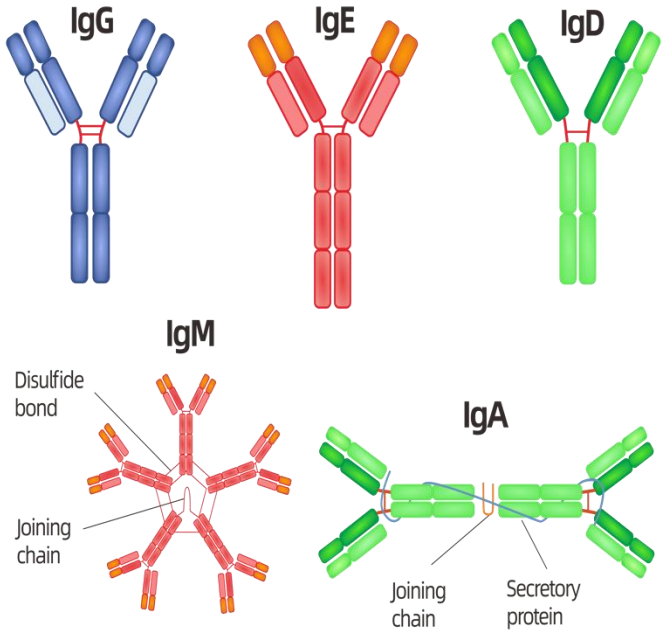


Figure adapted from: Turvey S, Briode D. *Innate Immunity*. Journal of Allergy and Clinical Immunology. 2009;125(2 Suppl 2):S24–S32.

CLL- Innate and Adaptive Immunity



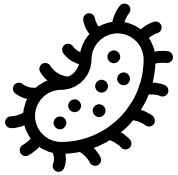
CLL and Low Immunoglobulins



- B Cells- antibody production
- CLL associated immune dysfunction results in reduction of IgG and IgA antibodies
- IgG is low in approximately 60% of people living with CLL
- Hallmark: Recurrent infections (bacterial, viral)
  - Respiratory
  - Sinus
  - Skin
- IVIG- IgG immunoglobulin replacement therapy

CLL and Infection

Bacterial

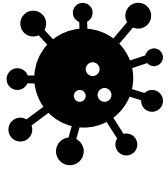


Streptococcus pnemoniae

Haemophilus inflenzae

Pneumonia and sinus infections

Viral



Herpes zoster

Respiratory Viruses

- Influenza
- RSV
- COVID-19
- Common Colds

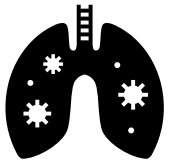
Fungal

Candida-#1

Aspergillus - prolonged neutropenia and BTK inhibitors

Pnemocystis jirovecii – BTKi and corticosteroids

Opportunistic



Pneumocystis pneumonia

Pseudomonas

Aspergillosis

Estimating Personal Infection Risk

Disease Burden

- High lymphocyte count
- Number of platelets in the blood is low
- Number of RBCs / HgB is low
- Lymph nodes, spleen or liver may be enlarged

Personal Factors

- Age / comorbidities
- IgG antibody levels
- Personal infection history
- Past / current treatments

NO TWO PATIENTS ARE ALIKE

Managing Risk of Infection

Prevention

Infection Precautions

- Avoid sick contacts
- Hand hygiene / masks
- Avoiding crowds

Vaccination

- Influenza — annual
- COVID-19 (extra spring or fall booster)
- RSV (RSVPreF3 or RSVpreF — 1 dose)
- Pneumonia (Prevanar20 — 1 dose)
- Shingles (Shingrix — 2 doses)
- Tdap booster (tetanus, diphtheria, pertussis)
- Avoid live vaccines / talk to your HCP
- **Vaccinate close contacts**

IVIG — for recurrent or serious infections

Early Intervention

Notify Your Care Team

- Fever or symptoms not improving after 5–10 days
- Progressive or worsening symptoms
- Recurrent infections — monitor IgG levels*

Identifying / Starting Antivirals

- COVID
- Shingles

CLL and Secondary Cancers

2X **RISK**

of secondary cancers

Common Secondary Cancers

- Skin cancer & melanoma
- Colon cancer
- Lung cancer
- Kaposi sarcoma
- Soft tissue sarcoma
- Prostate cancer
- Breast cancer
- Bladder cancer

Prevention & Monitoring

- Routine age and risk factor cancer screenings
- Regular skin checks
- Sun protection — broad spectrum (UVA/UVB) SPF 30+, hats, sunglasses, clothing
- Smoking cessation and lifestyle changes
- Report new or changing symptoms early

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Managing Fatigue

CLL- Related Fatigue

Key Differences

CLL/ Cancer related Fatigue and Tiredness

- Does not improve with sleep and rest
- Intense feeling of weakness/ lack of energy to perform normal activities
- Overall feeling of heaviness- arms, legs

Underreported and impacts quality of life

Non- Cancer Fatigue and Tiredness

- Improves with sleep and rest

Possible Causes of CLL-Related Fatigue

CLL itself (especially with higher disease burden or when progressing)

- Inflammation and cytokines
- Anemia- autoimmune hemolytic anemia
- Greater infection risk

Cancer treatments

- Fatigue may linger even after the medication is no longer being taken.

Emotional factors (depression, stress, and anxiety)

Other chronic diseases including diabetes, heart disease, and conditions affecting the thyroid, kidney, and liver

- Including drugs used to treat symptoms and other medical conditions
- Chronic pain
- Insomnia or sleep apnea

Vitamin and mineral deficiencies (iron, vitamin D, and vitamin B12)

Poor nutrition or not eating enough calories/ dehydration

Non-Medical Strategies

Working Within Your Energy Envelope

- Fatigue log- identify the times of day where you have the most energy
- Pace yourself- short rest breaks throughout the day
- Prioritize most important activities and set small goals to complete them

Hydration

- At least 64 oz water (8 cups)/ day
- Limit caffeine

Sleep Hygiene Habits

- Go to bed/ wake up at same time of day
- Aim for 7-8 hours of uninterrupted sleep
- Avoid electronics 60 min prior to bed, cool/dark room, avoid noise distractions, promote relaxation
- Limit naps to 20 min

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Exercise

Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

- **Prevention of 7 common cancers***
  Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise
- **Survival of 3 common cancers****
  Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

**bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers*
***breast, colon and prostate cancers*

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
Strong Evidence	Dose	Dose	Dose
Cancer-related fatigue	**3x**/week for **30** min per session of moderate intensity	**2x**/week of **2** sets of **12-15** reps for major muscle groups at moderate intensity	**3x**/week for **30** min per session of moderate aerobic exercise, plus **2x**/week of resistance training **2** sets of **12-15** reps for major muscle groups at moderate intensity
Health-related quality of life	**2-3x**/week for **30-60** min per session of moderate to vigorous	**2x**/week of **2** sets of **8-15** reps for major muscle groups at a moderate to vigorous intensity	**2-3x**/week for **20-30** min per session of moderate aerobic exercise plus **2x**/week of resistance training **2** sets of **8-15** reps for major muscle groups at moderate to vigorous intensity
Physical Function	**3x**/week for **30-60** min per session of moderate to vigorous	**2-3x**/week of **2** sets of **8-12** reps for major muscle groups at moderate to vigorous intensity	**3x**/week for **20-40** min per session of moderate to vigorous aerobic exercise, plus **2-3x**/week of resistance training **2** sets of **8-12** reps for major muscle group at moderate to vigorous intensity
Anxiety	**3x**/week for **30-60** min per session of moderate to vigorous	Insufficient evidence	**2-3x**/week for **20-40** min of moderate to vigorous aerobic exercise plus **2x**/week of resistance training of **2** sets, **8-12** reps for major muscle groups at moderate to vigorous intensity
Depression	**3x**/week for **30-60** min per session of moderate to vigorous	Insufficient evidence	**2-3x**/week for **20-40** min of moderate to vigorous aerobic exercise plus **2x**/week of resistance training of **2** sets, **8-12** reps for major muscle groups at moderate to vigorous intensity
Lymphedema	Insufficient evidence	**2-3x**/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence

Practical Strategies

Exercise as much as you can tolerate

- All at once (30 minutes continuously)OR break up into smaller chunks (10-minute walk, three times per day)
- Make it manageable
- Other chronic illness or mobility considerations

Choose exercises that you find enjoyable

- Chair yoga
- Walking
- Cycling
- Resistance bands
- Weights
- Dancing
- Hiking
- High intensity interval training

Any movement is the right movement

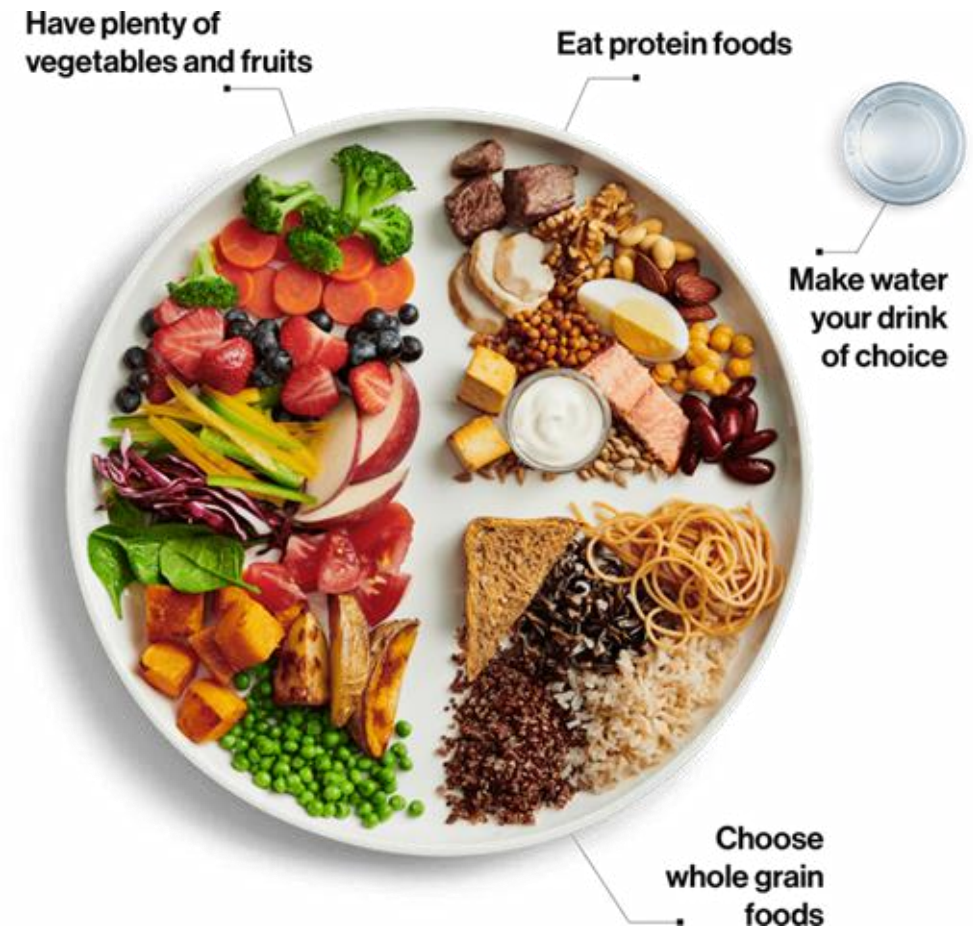
Plan Ahead

- Work within your energy envelop – plan for best time of day
- Incorporate more movement into your daily life
- Set goals and a schedule
- Make it social- exercise buddy

4

Nutrition

Healthy Eating: The Basics



Goal for most meals:

½ vegetables + fruits

¼ protein foods

¼ grain foods

Government of Canada, 2026.
https://www.canada.ca/en/health-canada/services/food-guide.html

Healthy Eating: With and Beyond Cancer

- **Colourful fruits and vegetables**: phytonutrients (e.g., antioxidants)
- **Fibre**: women 25g/day, men 38g/day
- **Omega-3 oils**: fish, chia seeds, hemp hearts
- **Lean proteins**: poultry, eggs, dairy, shellfish
- **Plant proteins**: legumes, soy, lentils/peas, nuts and seeds

- Limit red and processed meat: beef, pork, lamb, hotdogs, deli meat
- Limit ultra-processed foods: TV dinners, canned meals, chips
- Limit or abstain from alcohol

Summary of Recommendations

LOT OF PLANTS

ENOUGH PROTEIN

Goal: 1.0 gram of protein per kg of body weight

LIMIT ULTRA-PROCESSED FOODS

Nutrition for Symptoms & Side Effects

Fatigue: healthy eating + exercise

Anemia:

- Iron: beef, lamb, liver, spinach, soybeans, lentils
- Vitamin B12: clams, liver, trout, salmon, fortified breakfast cereals

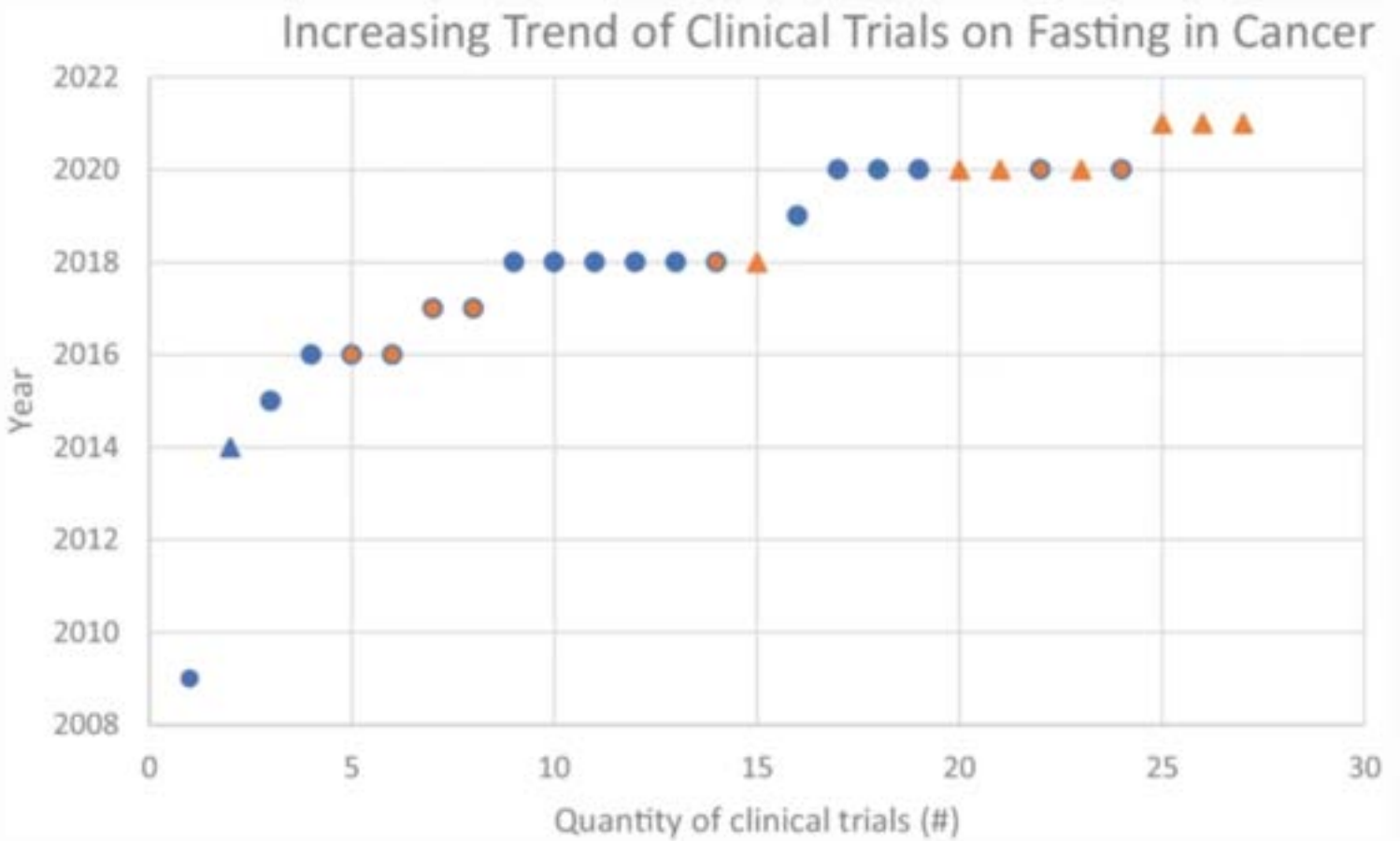
Others:

- unintentional weight loss
- lack of appetite
- GI symptoms

→ Ask for a referral to a dietitian!

Intermittent Fasting (IF) in CLL

Fig. 1



Increasing trend of clinical trials on fasting in cancer. Triangles indicate trials on time-restricted feeding (TRF); circles indicate fasting regimes other than TRF; blue markers indicate a completed status; orange markers indicated an active status. Data compiled from search of clinicaltrials.gov on Feb 22, 2022

(Stringer et al, *Curr Nutr Rep.*, 2022)

> Nutr Rev. 2024 Aug 30:nuae105. doi: 10.1093/nutrit/nuae105. Online ahead of print.

The Clinical Impact of Time-restricted Eating on Cancer: A Systematic Review

Eleah J Stringer [1 2 3], Rob W G Cloke [1 4], Lindsay Van der Meer [1 2 3], Rachel A Murphy [5 6], Nicol A Macpherson [7 8], Julian J Lum [9 10]

Affiliations + expand

PMID: 39212676 DOI: 10.1093/nutrit/nuae105

Mean adherence:
70-100%[8,9,17-19,,23,29,]

Reduction in:[23,29,18]
- waist circumference
- visceral adipose tissue

Improvement in:[19,22,23]
- fatigue,
- chemotherapy side effects,
- physical/functional well-being,
- sleep.

16:8 IF

Also know as “time-restricted eating”

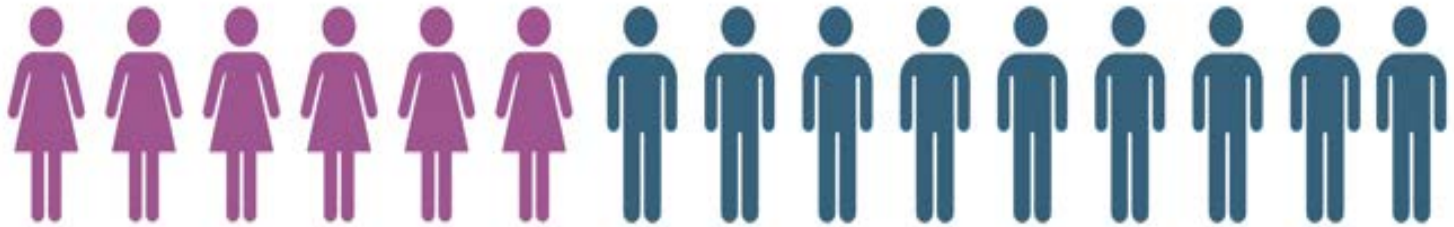
Eat for 8 hours, fast for 16 hours
6 day per week

Examples

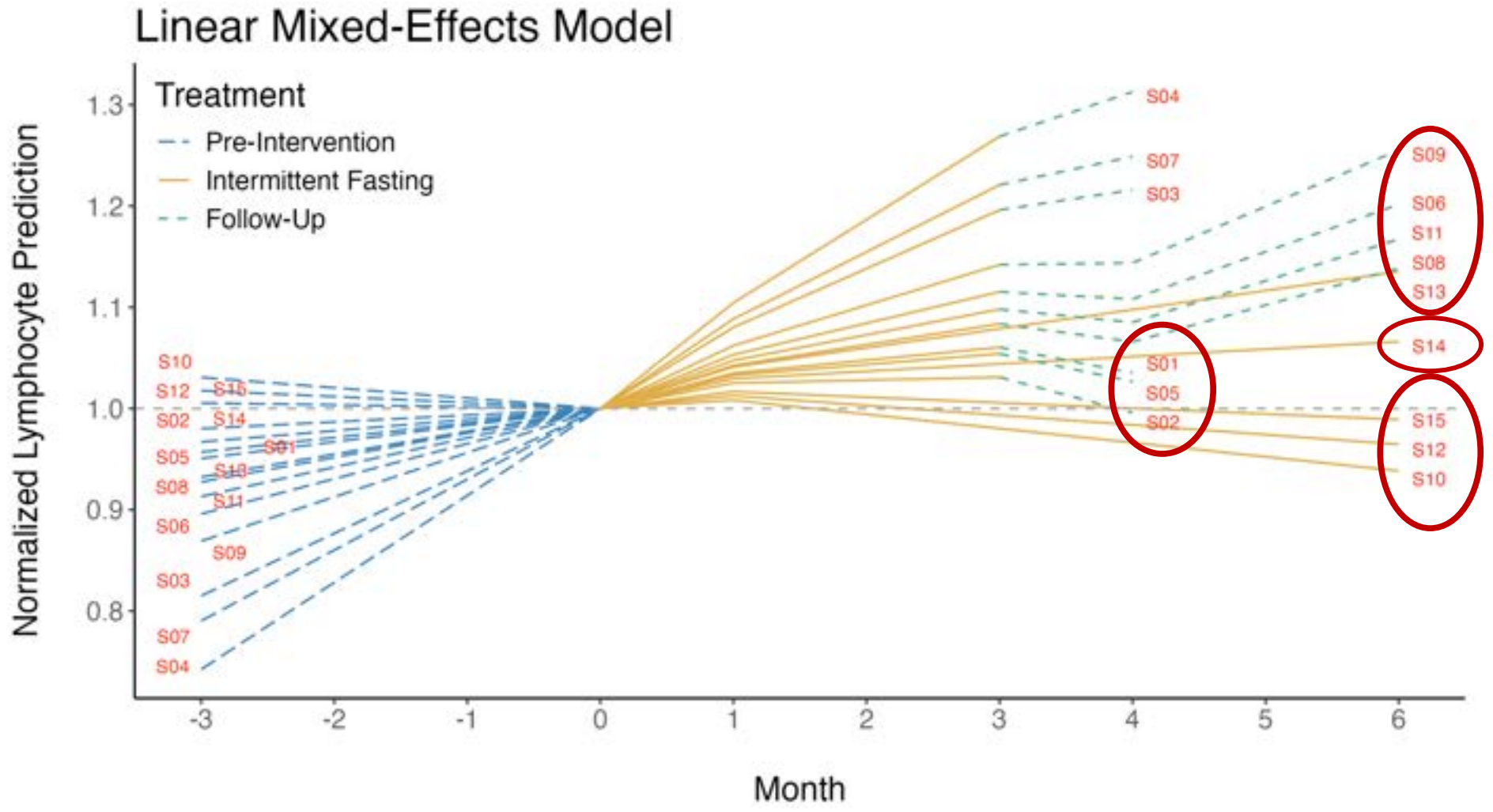
Eat:

- 9am-5pm
- 10:30am- 6:30pm
- Noon- 8pm

Participants



Clinical Results: Lymphocyte Growth Rates

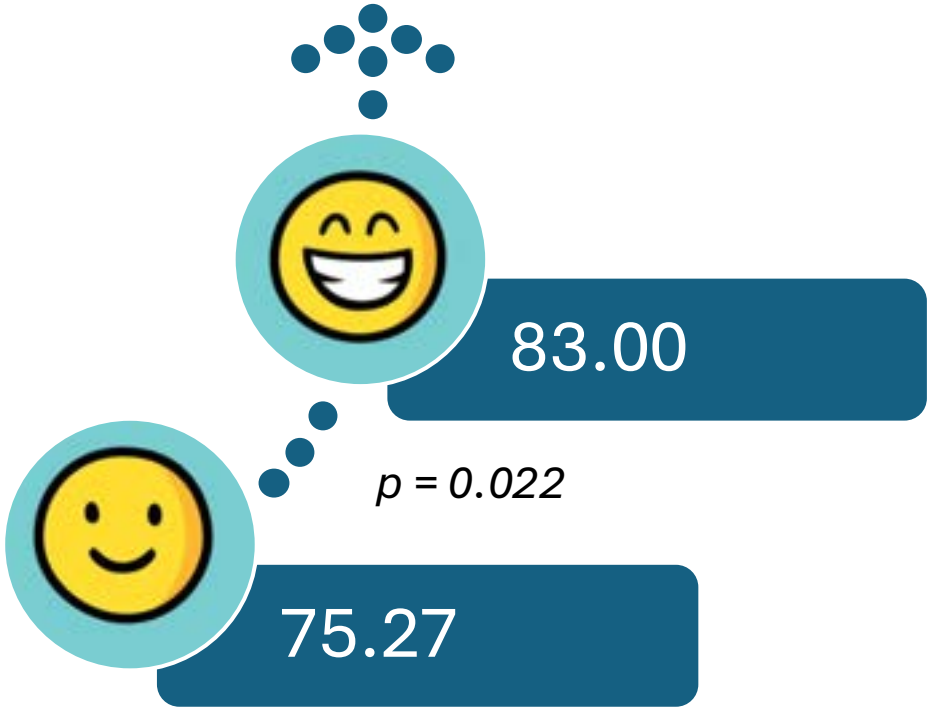


(Stringer et al, *Nutr Cancer*, 2026- under review)

Quality of Life

Questionnaire: EORTC- QLQ-30

1. Overall quality of life over past week?
2. Overall health over past week?



(Stringer et al, *Nutr Cancer*, 2026- under review)

COMPLETED

A Case Crossover Study of Intermittent Fasting in CLL/SLL

ClinicalTrials.gov ID NCT05708326

Sponsor British Columbia Cancer Agency

Information provided by Eleah Stringer, British Columbia Cancer Agency (Responsible Party)

Last Update Posted 2024-03-08

Participant feedback

I just felt myself sleeping a bit better, thinking more clearly.

Over the last 7 years, [my lymphocyte count] was going up, up, up, up pretty quickly. But as soon as I started doing the intermittent fasting it took a dip. It didn't keep going down, but it kind of evened out or whatever, but it definitely stopped going up, up, up, and up.

One of the motivating factors to be involved in this is the fact that, you know, I knew **it would put me in touch with good information on diet and CLL** and things like that... And just the fact that I've got an opportunity to talk to people that are kind of experts or they know a lot about this. Like **that's kind of the single most important thing to me.**

When I started doing it, it seems to give me more energy.

I had a sense that, psychologically, I felt like every day I'm doing something to help.

(Stringer et al, *JAND Global*, 2025- under review)

Recruitment opportunity!

CONTACT:
Eleah Stringer, dietitian

eleah.stringer@bccancer.bc.ca
250-519-5523
LinkedIn @EleahStringer

BC CANCER
Provincial Health Services Authority