Oncologie et naturopathie

***

Intervention de

Céline Gili

Naturopathe avec diplôme fédéral
en Médecine Traditionnelle Européenne (MTE)

à l'attention de la SSN

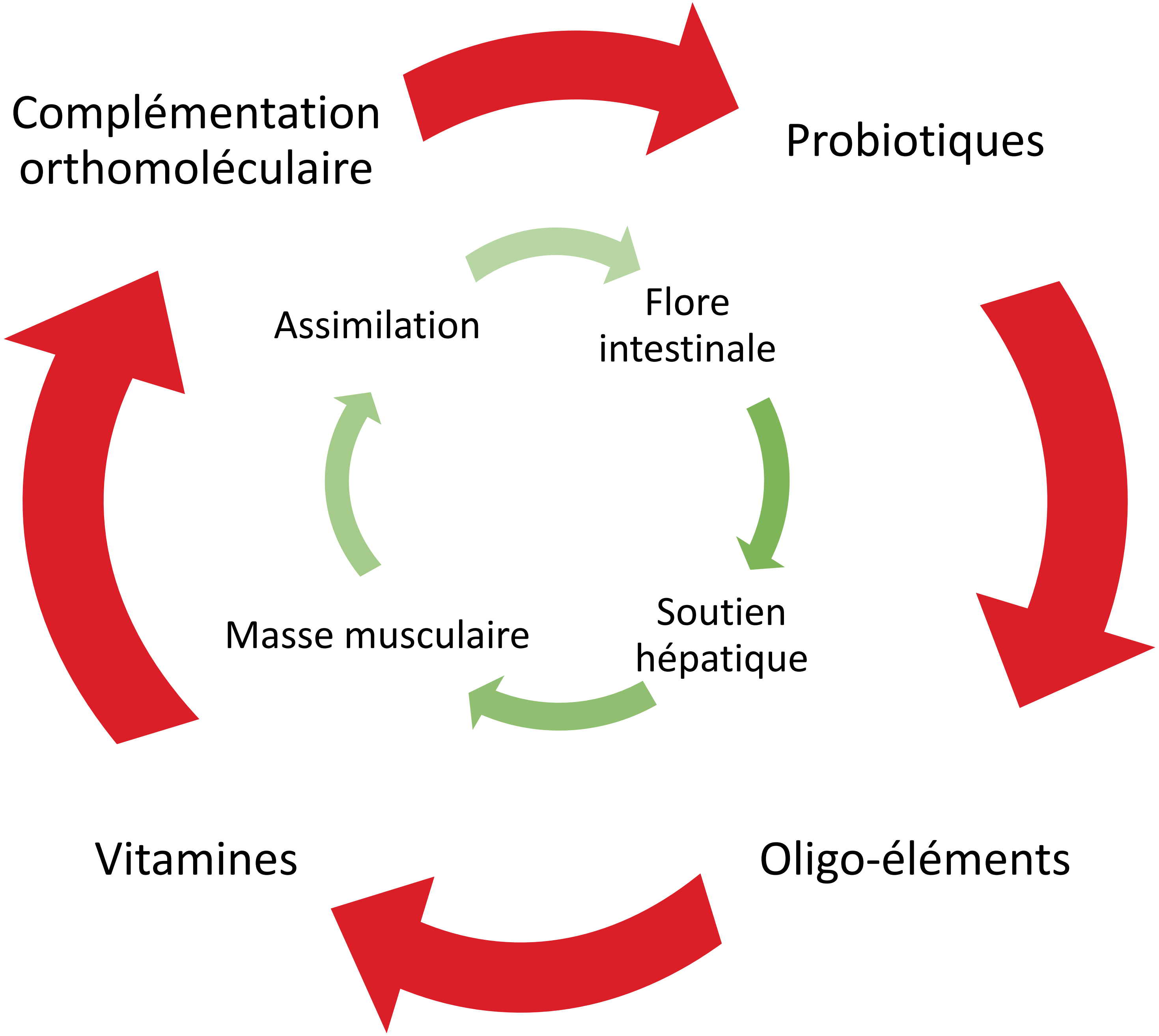
sge Schweizerische Gesellschaft für Ernährung
ssn Société Suisse de Nutrition
ssn Società Svizzera di Nutrizione

Prise en charge post-chimiothérapie et usage des compléments alimentaires.

Etude de cas

- Femme 53 ans
- Rémission cancer hormono-dépendant
- + 3 mois après chimiothérapie et mastectomomie droite
- R : Tamoxifen - Calcimagon
- Ostéopénie
- Intolérances alimentaires récentes (gluten, lactose)
- Ballonnement - diarrhées
- Fatigue importante
- Ferritine basse (20 µg/L) et hémoglobine (125g/L)

Demandes de la patiente		Choix thérapeutiques
• Retrouver de l'énergie	→	Apports de vitamines, minéraux, oligos
• Améliorer la digestion	→	Traiter la dysbiose intestinale
• Prévenir l'ostéoporose	→	Soutenir la fonction hépatique
• Reprendre du poids	→	Reminéraliser et alcaliniser le terrain
	→	Alimentation hypo-allergisante ET calorique (masse musc.)



Evaluation du **statut biologique** en micronutrition (bilan sanguin).
Début et fin de R.

Vitamins and trace elements: practical aspects of supplementation.

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Abstract

The role of micronutrients in parenteral nutrition include the following: (1) Whenever artificial nutrition is indicated, micronutrients, i.e., vitamins and trace elements, should be given from the first day of artificial nutritional support. (2) Testing blood levels of vitamins and trace elements in acutely ill patients is of very limited value. By using sensible clinical judgment, it is possible to manage patients with only a small amount of laboratory testing. (3) Patients with major burns or major trauma and those with acute renal failure who are on continuous renal replacement therapy or dialysis quickly develop acute deficits in some micronutrients, and immediate supplementation is essential. (4) Other groups at risk are cancer patients, but also pregnant women with hyperemesis and people with anorexia nervosa or other malnutrition or malabsorption states. (5) Clinicians need to treat severe deficits before they become clinical deficiencies. If a patient develops a micronutrient deficiency state while in care, then there has been a severe failure of care. (6) In the early acute phase of recovery from critical illness, where artificial nutrition is generally not indicated, there may still be a need to deliver micronutrients to specific categories of very sick patients. (7) Ideally, trace element preparations should provide a low-manganese product for all and a manganese-free product for certain patients with liver disease. (8) High losses through excretion should be minimized by infusing micronutrients slowly, over as long a period as possible. To avoid interactions, it would be ideal to infuse trace elements and vitamins separately: the trace elements over an initial 12-h period and the vitamins over the next 12-h period. (9) Multivitamin and trace element preparations suitable for most patients requiring parenteral nutrition are widely available, but individual patients may require additional supplements or smaller amounts of certain micronutrients, depending on their clinical condition.

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[Indexed for MEDLINE]

(6) Dans la phase aiguë précoce du rétablissement après une maladie grave, où la nutrition artificielle n'est généralement pas indiquée, **il peut encore être nécessaire d'administrer des micronutriments** à des catégories spécifiques de patients très malades.

Vitamines, minéraux et oligoéléments à doses physiologiques

Vitamine C	→	Stress oxydatif - Cycle de Krebs Production L-dopamine Co-facteur du fer Min. 150 mg/jour
Orotate de Fer	→	150 mg/jour
Oligo-éléments	→	Eau de quinton en solution hypertonique Reminéralisation - 2 ampoules / jour

Oregon State University

Linus Pauling Institute » **Micronutrient Information Center**

Cancer

Overall, observational prospective cohort studies have reported no or modest inverse associations between vitamin C intake and the risk of developing a given type of cancer (37, 61-63). Additional detail is provided below for those cancer subtypes with substantial scientific information obtained from prospective cohort studies. Randomized, double-blind, placebo-controlled trials that have tested the effect of vitamin C supplementation (alone or in combination with other antioxidant nutrients) on cancer incidence or mortality have shown no effect (64).

Breast cancer

Two large prospective studies found dietary vitamin C intake to be inversely associated with breast cancer incidence in certain subgroups. In the Nurses' Health Study, premenopausal women with a family history of breast cancer who consumed an average of 205 mg/day of vitamin C from food had a 63% lower risk of breast cancer than those who consumed an average of 70 mg/day (65). In the Swedish Mammography Cohort, overweight women who consumed an average of 110 mg/day of vitamin C had a 39% lower risk of breast cancer compared to overweight women who consumed an average of 31 mg/day (66). More recent prospective cohort studies have reported no association between dietary and/or supplemental vitamin C intake and breast cancer (67-69).

Other site-specific cancer types

The Physicians' Health Study II was a randomized, placebo-controlled trial that examined the effect of vitamin E (400 IU/day), vitamin C (500 mg/day), and a multivitamin supplement on the risk of cancer in 14,641 middle-aged male physicians over 10.3 years (7.6 years of active treatment plus 2.8 years post-treatment follow-up) (82). Supplementation with vitamin C had no effect on the overall risk of cancer or on the risk of prostate, bladder, or pancreatic cancer; there was a marginal reduction in colorectal cancer incidence with vitamin C compared to placebo (82).

Dans l'étude sur la santé des infirmières, les femmes pré-ménopausées ayant des antécédents familiaux de cancer du sein et ayant consommé en moyenne 205 mg/jour de vitamine C dans leur alimentation présentaient un risque de cancer du sein 63 % moins élevé que celles ayant consommé en moyenne 70 mg/jour (65).

L'Étude sur la santé des médecins était un essai randomisé, contrôlé par placebo portant sur l'effet de la vitamine E (400 UI/jour), de la vitamine C (500 mg/jour) et d'un supplément multivitaminique sur le risque de cancer chez 14 641 hommes d'âge moyen sur 10,3 ans (7,6 ans de traitement actif plus 2,8 ans de suivi post-traitement) (82). La supplémentation en vitamine C n'a eu aucun effet sur le risque global de cancer ni sur le risque de cancer de la prostate, de la vessie ou du pancréas

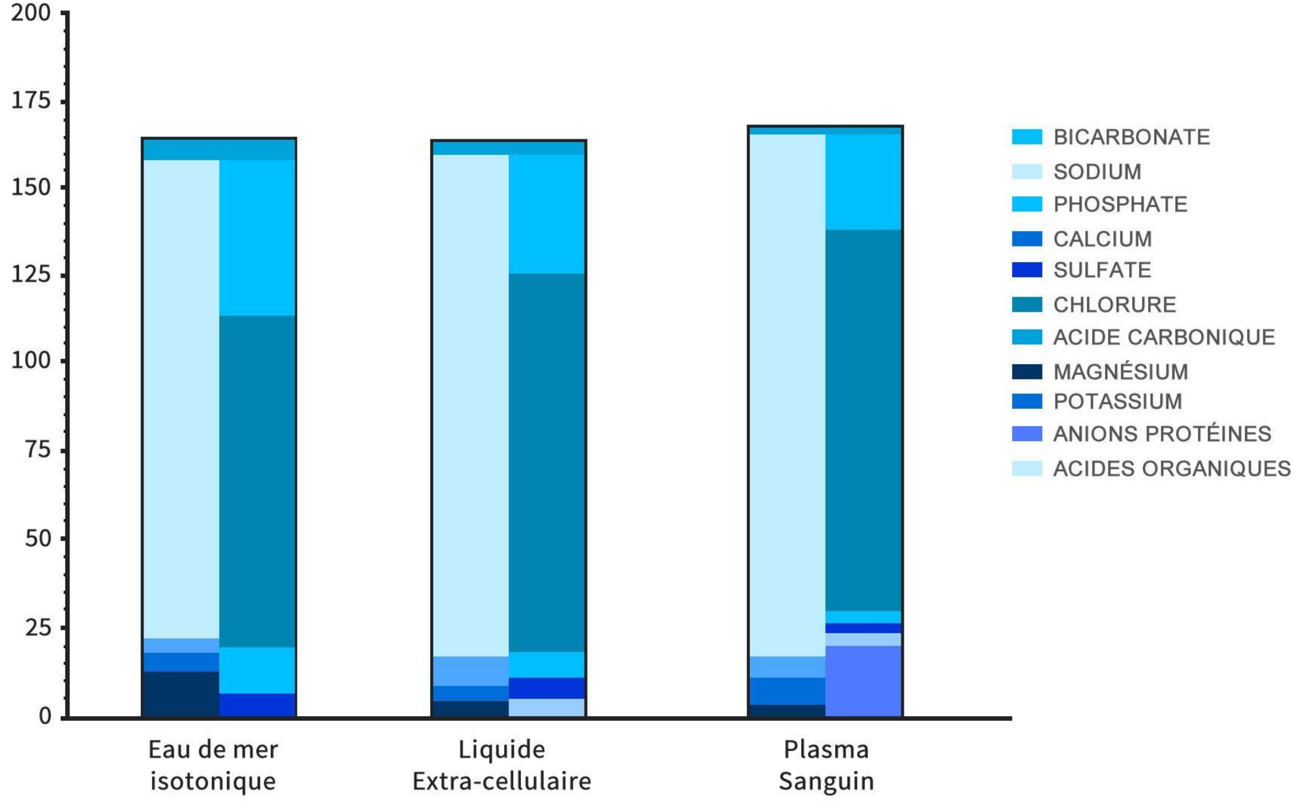
Eau de Quinton en Hypertonique

Eau de mer naturelle filtrée à froid à 0,22 micron.

Riche en minéraux et oligoéléments (92 éléments).

Concentration en oligoéléments proche de celle du liquide extra-cellulaire.

C.I en cas de régime sans sel.



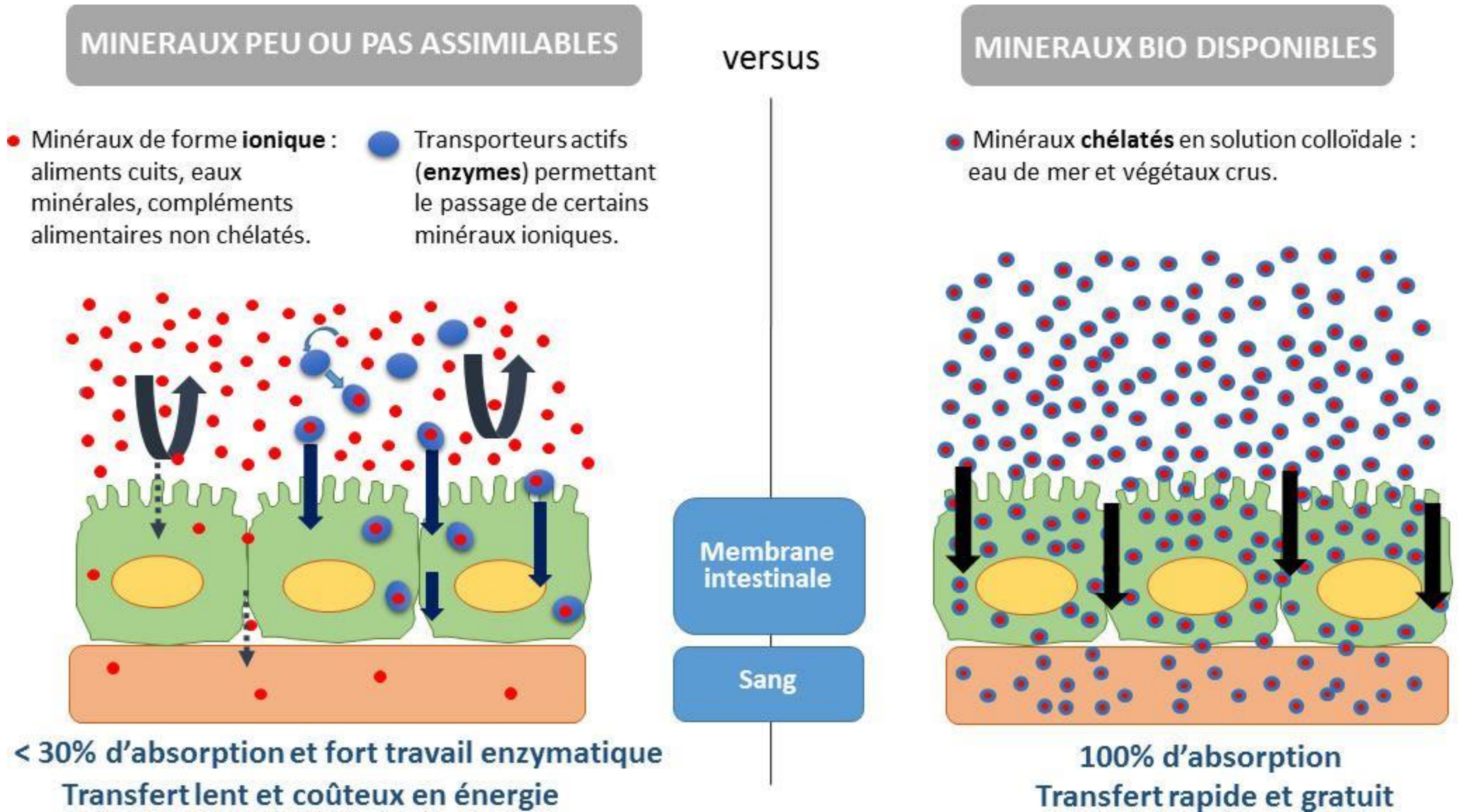
<u>Indications</u>

Fatigue

Convalescence

Déminéralisation

Biodisponibilité eau de Quinton



Traiter la dysbiose intestinale

Probiotiques → Mix 4 souches: B. longum LA101, L. helveticus LA102, L. lactis LA103, S. thermophilus LA 104...

1 gel./jour à jeûn

Glutamine → Jonctions serrées - 500mg /jour

Alimentation → ↓ Hydrates de carbone

↓ FODMAPS

Antidiarrheal and Antinociceptive Effects of a Probiotic Mixture in Rats

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Abstract

Probiotics have been shown to have preventive and therapeutic effects on diarrhea. Because effects tend to be strain specific, benefit of a strain or mixture has to be substantiated by experimental evidence. The aim of this study was to investigate the antidiarrheal and antinociceptive effects of a probiotic mixture (Lactibiane Imedia®, PiLeJe). Castor oil-induced diarrhea test was performed in Wistar rats following oral administration of probiotics (20×10^9, 30×10^9 or 40×10^9 CFU/kg), loperamide (5 mg/kg) or vehicle (water; 10 mL/kg). Time to initial evacuation, number of feces and diarrheal feces, fresh weight and water content of the feces and body weight loss were monitored. Behavioral parameters (eye closing, abnormal posture, activity, fur aspect) were used as pain indices. Probable mechanisms of action were evaluated by using the castor oil-induced enteropooling and charcoal meal transit tests. Probiotics significantly and dose-dependently delayed onset time to first feces and had a beneficial effect on all other parameters ($p<0.05$ versus vehicle). This effect was lower than loperamide on most of parameters evaluated. Loperamide totally stopped diarrhea (100%) but also blocked defecation (by 98.5%) whereas probiotics strongly inhibited diarrhea (>90%) at the two highest doses tested (30×10^9 or 40×10^9 CFU/kg) without completely blocking defecation (65.7% at 30×10^9 CFU/kg). Behavioral parameters were improved with probiotics compared to vehicle, improvement that was not observed with loperamide. Probiotics significantly and dose-dependently decreased the volume of intestinal fluid ($p<0.05$ versus vehicle) in the enteropooling test and transit time of charcoal meal. These results indicate that the probiotic mixture tested is strongly antidiarrheic through the combination of antimotility and antisecretory properties. Observations are also in favor of an antinociceptive effect. Agents that can decrease both intestinal hypersecretion and motility are very useful in the management of diarrhea therefore, our probiotic mixture could be an effective alternative to standard drugs.

Le lopéramide a totalement stoppé la diarrhée (100%) mais a également bloqué la défécation (de 98,5%) alors que les probiotiques inhibaient fortement la diarrhée (>90%) aux deux doses les plus élevées (30 × 109 ou 40 × 109 UFC/kg) sans bloquer complètement la défécation (65,7% à 30 × 109 UFC/kg). Les paramètres comportementaux ont été améliorés avec les probiotiques par rapport au véhicule, amélioration qui n'a pas été observée avec le lopéramide.

Choisir un probiotique approprié pour votre patient :
Un guide pratique fondé sur des données probantes

Jason C. Sniffen, Lynne V. McFarland, Charlesnika T. Evans, Ellie J. C. Goldstein PLoS One. 2018; 13(12): e0209205. Published online 2018 Dec 26. doi: 10.1371/journal.pone.0209205

Prevention of antibiotic-associated diarrhea (AAD) As an example, we first examine the evidence for different probiotics for the prevention of antibiotic-associated diarrhea. AAD is defined as diarrhea (typically ≥3 loose/watery stools/day for at least two days) that occurs during the admission of oral or intravenous antibiotics (immediate onset AAD) or ≤4–8 weeks post-antibiotic discontinuation (delayed onset AAD). AAD may occur commonly in 5–50% of patients after use of almost any type of antibiotic, which disrupts the protective normal microbiome of the host. The consequences of AAD may include prolonged hospitalization stays for inpatients, increased healthcare costs, higher risk of acquiring other nosocomial infections and poor compliance (especially for outpatients), leading to inadequate cure rates due to shortened antibiotic treatment [33]. Of the 59 trials (61 study arms) testing probiotics for the prevention of AAD, there were eight different types of probiotics tested with ≥ 2 RCTs. Determining which probiotic is best for AAD is challenging due to differences in probiotic strains, doses and types of study populations. However, as shown in Table 2, of the eight different types of probiotics, three probiotic types [*S. boulardii* CNCM I-745, a mixture of three Lactobacilli strains (*L. acidophilus* CL1285 +*L. casei* Lbc80r + *L. rhamnosus* CLR2) and another single strain probiotic (*L. casei* DN114001) had strong evidence for the prevention of AAD, while one showed only moderate evidence (*E. faecalis* SF68). Effective probiotics were typically started 1–2 days of antibiotic admission with daily doses ranging from 10^7–10^{10} per day.and continued for 1–4 weeks after antibiotics were discontinued. Four other probiotics had more studies with non-significant findings compared to significant studies and thus should not be considered as effective therapies for the prevention of AAD until further confirmatory trials show significant efficacy. These trials are described in detail in supporting information (S1 Dataset).

Table 2

Graded recommendations for probiotic formulations for the prevention or treatment of 19 different types of diseases.

Type of disease	No. of study arms	Strong evidence* (no. + RCTs/no. negative RCTs)	Moderate evidence* (no. + RCTs/no. negative RCTs)	Weak to not effective* (no. + RCTs/no. negative RCTs)
Prevention				
Allergy	3	None	None	*L. rhamnosus* GG (1+/2-)
Antibiotic-Associated Diarrhea (AAD)	61	*S boulardii* I-745 (18+/9-) LaLcLr mix (3+/1-) *L casei* DN114001 (2+/0-)	*E. faecalis* SF38 (2+/1-)	LhLr mix (3+/3-) *L. rhamnosus* GG (4+/6-) *C. butyricum* 588 (1+/2-) *L. acidophilus* La5 + *B. lactis* Bb12 (1+/5-)
Prevention *C. difficile* infections (CDI)	23	None	None	*S. boulardii* (1+/11-) LaLcLr mix (2+/2-) *L. rhamnosus* GG (1+/4-) *L casei* 114001 (1+/1-)
H. pylori (side effects of therapy)	16	*S. boulardii* I-745 (7+/2-) LhLr mix (2+/0-)	*L. rhamnosus* GG (3+/2-)	None
Enteral feed associated diarrhea	3	*S. boulardii* I-745 (3+/0-)	None	None
Necrotizing Enterocolitis (NEC)	17	*L. rhamnosus* GG + lactoferrin (2+/0-) *B. infantis*+ *B. lactis*+ *Strept. thermophilus* (2+/0-)	None	*L. rhamnosus* GG (0+/2-) *S. boulardii* (0+/3-) *L. reuteri* 17938 (1+/3-) *B. lactis* Bb12 (0+/2-) *L. acidophilus*+ *B. bifidum* (1+/1-)

Plusieurs types de probiotiques présentaient des **preuves solides de la prévention de la diarrhée associée aux antibiotiques [Saccharomyces boulardii I-745, un mélange à trois souches (Lactobacillus acidophilus CL1285, L. casei Lbc80r, L. rhamnosus CLR2 et L. casei DN114001).** Des preuves solides ont également été trouvées pour quatre types de probiotiques pour la prévention d'une variété d'autres maladies/conditions (diarrhée associée à l'alimentation entérale, diarrhée des voyageurs, entéro-colites nécrosantes et effets secondaires associés aux traitements par H. Pylori).

Glutamine: restauration jonction serrées entérocytes par complémentation en glutamine chez patient souffrant de diarrhées suite côlon irritable

JPEN J Parenter Enteral Nutr. 2016 Nov;40(8):1170-1176. Epub 2015 May 13.

Glutamine Restores Tight Junction Protein Claudin-1 Expression in Colonic Mucosa of Patients With Diarrhea-Predominant Irritable Bowel Syndrome.

Bertrand J[1,2], Ghouzali I[1,2], Guérin C[1,2], Bôle-Feysot C[1,2], Gouteux M[1,2], Déchelotte P[1,2,3], Ducrotté P[1,4], Coëffier M[5,2,3].

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Abstract

BACKGROUND: Recent studies showed that patients with diarrhea-predominant irritable bowel syndrome (IBS-D) had an increased intestinal permeability as well as a decreased expression of tight junctions. Glutamine, the major substrate of rapidly dividing cells, is able to modulate intestinal permeability and tight junction expression in other diseases. We aimed to evaluate, ex vivo, glutamine effects on tight junction proteins, claudin-1 and occludin, in the colonic mucosa of patients with IBS-D.

MATERIALS AND METHODS: Twelve patients with IBS-D, diagnosed with the Rome III criteria, were included (8 women/4 men, aged 40.7 ± 6.9 years). Colonic biopsy specimens were collected and immediately incubated for 18 hours in culture media with increasing concentrations of glutamine from 0.6-10 mmol/L. Claudin-1 and occludin expression was then measured by immunoblot, and concentrations of cytokines were assessed by multiplex technology. Claudin-1 expression was affected by glutamine ($P < .05$, analysis of variance). In particularly, 10 mmol/L glutamine increased claudin-1 expression compared with 0.6 mmol/L glutamine (0.47 ± 0.04 vs 0.33 ± 0.03, $P < .05$). In contrast, occludin expression was not significantly modified by glutamine. Interestingly, glutamine effect was negatively correlated to claudin-1 (Pearson $r = -0.83$, $P < .001$) or occludin basal expression (Pearson $r = -0.84$, $P < .001$), suggesting that glutamine had more marked effects when tight junction protein expression was altered. Cytokine concentrations in culture media were not modified by glutamine treatment.

CONCLUSION: Glutamine increased claudin-1 expression in the colonic mucosa of patients with IBS-D. In addition, glutamine effect seems to be dependent on basal expression of tight junction proteins.

Conclusion: La glutamine a augmenté l'expression de la claudine-1 dans la muqueuse du côlon des patients atteints du SII-D. De plus, l'effet de la glutamine semble dépendre de l'expression basale des protéines à jonction serrée.

Soutenir la fonction hépatique

Acides Aminés Soufrés	→	L-cystéine 150 mg/jour L-méthionine 150 mg/jour L-taurine 150 mg/jour
Vitamines B	→	Vit.B3 16mg/jour Vit. B2 1,4 mg/jour Vit. B6 1,4 mg/jour Vit. B9 mg/jour
Alimentation Hypotoxique	→	Limiter les apports de café, alcool, fritures, viande rouge (1-2xsem.)

L-carnitine et vitamines B en complexes pour traitement hépatoxicité

J Oncol Pharm Pract. 2018 Jul;24(5):393-397. doi: 10.1177/1078155217710714. Epub 2017 May 19.

Levocarnitine and vitamin B complex for the treatment of pegaspargase-induced hepatotoxicity: A case report and review of the literature.

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Abstract

Asparaginase is a chemotherapeutic agent that is commonly used in combination with other medications for the treatment of acute lymphoblastic leukemia. An adverse effect of asparaginase includes hepatotoxicity, which can lead to severe liver failure and death. Several reports have documented successful treatment of asparaginase-induced hepatotoxicity using levocarnitine (l-carnitine) and vitamin B complex. Herein, we report a patient with acute lymphoblastic leukemia that experienced acute liver injury following pegaspargase administration. Our patient was successfully treated with l-carnitine and vitamin B complex for 8 days and achieved recovery of hepatic function. Furthermore, we review the current literature and provide a recommendation on a regimen that can be used as an option for the treatment of asparaginase-induced hepatic injury.

L'asparaginase est un agent chimiothérapeutique qui a un effet néfaste sur l'hépatotoxicité, qui peut entraîner une insuffisance hépatique grave et la mort.

Plusieurs rapports ont documenté le succès du traitement de l'hépatotoxicité induite par l'asparaginase par la lévocarnitine (l-carnitine) et le complexe de vitamine B.

Dans le présent rapport, nous signalons un patient atteint de leucémie lymphoblastique aiguë qui a subi une atteinte hépatique aiguë à la suite de l'administration de pégaspargase.

Notre patient a été traité avec succès avec de la l-carnitine et du complexe de vitamine B pendant 8 jours et a récupéré sa fonction hépatique.

N-acétyl cystéine module l'agent chimiothérapeutique doxorubicine (DOX) qui induit un stress oxydatif sur le foie des rats

Cell Biochem Funct. 2010 Dec 2;28(8):673-7. doi: 10.1002/cbf.1707. Epub 2010 Nov 8.

N-acetylcysteine modulates doxorubicin-induced oxidative stress and antioxidant vitamin concentrations in liver of rats.

Koçkar MC[1], Nazıroğlu M, Celik O, Tola HT, Bayram D, Koyu A.

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Abstract

Doxorubicin (DOX) is a chemotherapeutic agent, and is widely used in cancer treatment. The most common side effect of DOX was indicated on cardiovascular system by experimental studies. There are some studies suggesting oxidative stress-induced toxic changes on liver related to DOX administration. The aim of the present study was to evaluate whether antioxidant N-acetylcysteine (NAC) relieves oxidative stress in DOX- induced liver injury in rat. Twenty-four male rats were equally divided into three groups. First group was used as a control. Second group received single dose of DOX. NAC for 10 days was given to constituting the third group after giving one dose of DOX. After 10 days of the experiment, liver tissues were taken from all animals. Lipid peroxidation (LP) levels were higher in the DOX group than in control whereas LP levels were lower in the DOX+NAC group than in control. Vitamin C and vitamin E levels were lower in the DOX group than in control whereas vitamin C and vitamin E levels were higher in the DOX+NAC group than in the DOX group. Reduced glutathione levels were higher in the DOX+NAC group than in control and DOX group. Glutathione peroxidase, vitamin A and β-carotene values were not changed in the three groups by DOX and NAC administrations. In histopathological evaluation of DOX group, there were mononuclear cell infiltrations, vacuolar degeneration, hepatocytes with basophilic nucleus and sinusoidal dilatations. The findings were totally recovered by NAC administration. In conclusion, N-acetylcysteine induced modulator effects on the doxorubicin-induced hepatoxicity by inhibiting free radical production and supporting the antioxidant vitamin levels.

PMID: 21104935 DOI: 10.1002/cbf.1707

Le but de la présente étude était d'évaluer si la N-acétylcystéine (NAC) antioxydante soulage le stress oxydatif chez le rat dans les lésions hépatiques induites par le DOX-. Vingt-quatre rats mâles ont été répartis également en trois groupes.

Le premier groupe a été utilisé comme témoin. Le deuxième groupe a reçu une dose unique de DOX. NAC pendant 10 jours a été donné à constituer le troisième groupe après avoir donné une dose de DOX. Après 10 jours de l'expérience, des tissus hépatiques ont été prélevés sur tous les animaux.

En conclusion, la N-acétylcystéine induit des effets modulateurs sur l'hépatotoxicité induite par la doxorubicine en inhibant la production de radicaux libres et en favorisant les niveaux de vitamines antioxydantes.

Régulation alimentaire hypo-allergisante

Sans Gluten →

- ∅ Blé, seigle, orge, avoine
- ✓ Riz, quinoa, sarrasin, millet, amarante…

Sans Lactose →

- ∅ Lait animal non délactosé, fromage à pâte fraiche, yogourts
- ✓ Laits végétaux (riz, quinoa, amandes…), séré maigre, fromage à pâte dure

Reminéraliser avec compléments alcalinisants

Citrates → Citrate de potassium : alcalin+++, régule le pH sanguin.
Le citrate de calcium : Calcium bio disponible+++
Dioxyde de silicium: Riche en silice
Citrate de magnésium : minéral anti-stress

Légumes verts → Aliments dont le PRAAL ≤ 0
Les légumes (pomme de terre +++)
& légumes riches en Calcium.

Chou frisé (150g)	195 mg
Epinard (150g)	156 mg
Brocoli (150g)	114 mg

Ostéoporose et concentration en citrates dans les os et le plasma

Bone and plasma citrate is reduced in osteoporosis.

Chen H[1], Wang Y[2], Dai H[1], Tian X[3], Cui ZK[4], Chen Z[1], Hu L[1], Song Q[1], Liu A[5], Zhang Z[6], Xiao G[7], Yang J[8], Jiang Y[9], Bai X[10].

High concentration of citrate exists in bone of humans and all osteo-vertebrates, and citrate incorporation imparts important biomechanical and other functional properties to bone. However, which cells are responsible for citrate production in bone remains unclear and whether the citrate component changes with bone loss during osteoporosis is also not known. Here, we show that the citrate content is markedly reduced in the bone of mice or rats with age-related, ovariectomy-induced or retinoic acid-induced bone loss. Plasmic citrate is also downregulated in osteoporotic animals. Importantly, the plasmic citrate level of aged osteoporotic males is significantly lower than that of young healthy males and positively correlates with human lumbar spine bone mineral density (BMD) and total hip BMD. Furthermore, citrate production increases with in vitro osteoblastic differentiation, accompanied by upregulation of proteins involved in citrate secretion, suggesting that osteoblasts are highly specialized cells that produce citrate in bone. Our findings establish a novel relationship between citrate content and bone loss-related diseases such as osteoporosis, suggesting a critical role of bone citrate in the maintenance of the citrate balance in the circulation. Serum citrate level may thus represent a novel marker for osteoporosis.

Il est important de noter que le taux plasmique de citrate chez les hommes ostéoporotiques âgés est significativement inférieur à celui des jeunes hommes en bonne santé et est en corrélation positive avec la densité minérale osseuse de la colonne lombaire (DMO) et la DMO totale de la hanche. De plus, la production de citrate augmente avec la différenciation ostéoblastique in vitro, accompagnée d'une régulation accrue des protéines impliquées dans la sécrétion de citrate, ce qui suggère que les ostéoblastes sont des cellules hautement spécialisées qui produisent du citrate dans les os. Nos résultats établissent une nouvelle relation entre la teneur en citrate et les maladies liées à la perte osseuse comme l'ostéoporose, ce qui suggère un rôle critique du citrate osseux dans le maintien de l'équilibre du citrate dans la circulation. Le taux sérique de citrate peut donc représenter un nouveau marqueur de l'ostéoporose.

Reprise de masse musculaire

Protéines → Selon l'ESPEN, AQR en protéines =
1 à 1,5 gr/kg et même jusqu'à 2 gr/kg

Acides Gras Essentiels → Supplémentation en oméga 3
AQR: 500 mg/j

Indices Glycémique Bas → Dans l'assiette: Céréales complètes (exempts en gluten), légumes et fruits à indice glycémique bas

AQR: 2x à 3x/jour pour les adultes entre 50 et 85 gr/repas (selon la céréale).

Apport protéique et alimentation réelle en prévention de la sarcopénie

Curr Opin Clin Nutr Metab Care. 2009 Jan;12(1):86-90. doi: 10.1097/MCO.0b013e32831cef8b.

Dietary protein recommendations and the prevention of sarcopenia.

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Abstract

PURPOSE OF REVIEW: To draw attention to recent work on the role of protein and the amount of protein needed with each meal to preserve skeletal muscle mass in ageing.

RECENT FINDINGS: Ageing does not inevitably reduce the anabolic response to a high-quality protein meal. Ingestion of approximately 25-30 g of protein per meal maximally stimulates muscle protein synthesis in both young and older individuals. However, muscle protein synthesis is blunted in elderly when protein and carbohydrate are coingested or when the quantity of protein is less than approximately 20 g per meal. Supplementing regular mixed-nutrient meals with leucine may also enhance the muscle protein synthetic response in elders.

SUMMARY: On the basis of recent work, we propose a novel and specific dietary approach to prevent or slow down muscle loss with ageing. Rather than recommending a large, global increase in the recommended dietary allowance (RDA) for protein for all elderly individuals, clinicians should stress the importance of ingesting a sufficient amount of protein with each meal. To maximize muscle protein synthesis while being cognizant of total energy intake, we propose a dietary plan that includes 25-30 g of high quality protein per meal.

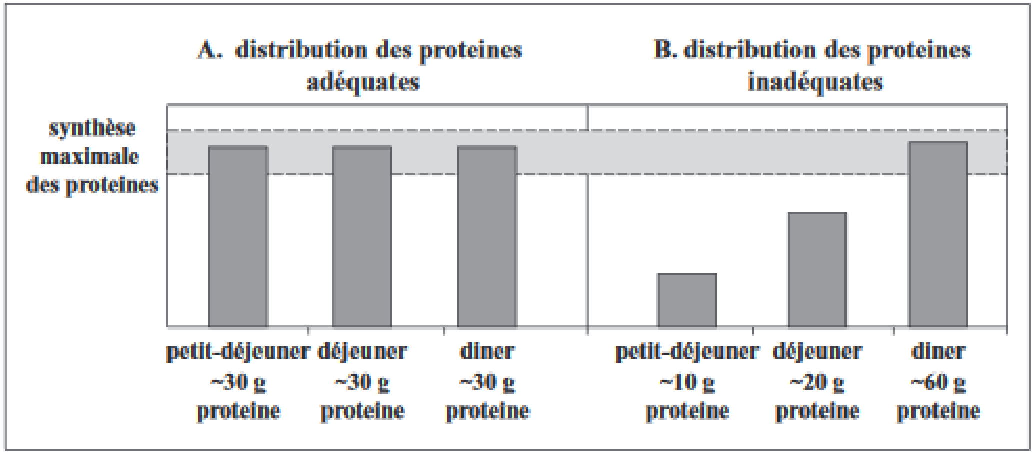

Figure 1. Relations entre les quantités de protéines ingérées par repas et la réponse anabolique correspondante.[11] (A) Ingestion de 90 g de protéines réparties uniformément sur 3 repas. (B) Ingestion de 90 g de protéines inégalement réparties dans la journée. La stimulation de la synthèse des protéines musculaires postprandiales est soumise à un effet plafond. La répartition uniforme des apports dans la journée est plus susceptible d'entraîner une réponse anabolique élevée que des apports protéiques inégalement répartis dans la journée.

Les cliniciens devraient insister sur l'importance d'ingérer une quantité suffisante de protéines à chaque repas. Pour maximiser la synthèse des protéines musculaires tout en tenant compte de l'apport énergétique total, nous proposons un régime alimentaire qui comprend 25-30 g de protéines de haute qualité par repas.

Efficacité de la supplémentation de ω-3 sur l'état nutritionnel, les muscles squelettiques et la toxicité de la chimio-radiothérapie chez les patientes atteintes d'un cancer du col utérin

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Efficacy of ω-3 supplementation on nutritional status, skeletal muscle, and chemoradiotherapy toxicity in cervical cancer patients: A randomized, triple-blind, clinical trial conducted in a middle-income country.

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Abstract

OBJECTIVES: Supplementation with ω-3 has been shown to favor the preservation of body weight and skeletal muscle. The aim of this study was to evaluate the efficacy of ω-3 supplementation on nutritional status, skeletal muscle quantity and quality, and toxicity for treatment of women with cervical cancer.

METHODS: This was a randomized, triple-blinded, placebo-controlled clinical trial in women diagnosed with cervical cancer who underwent chemoradiotherapy between March 2016 and August 2017. The intervention group received four capsules with ω-3 (2.5 g/d) and the control group (CG) received the same number of identical-looking capsules with olive oil, for 45 d. Nutritional status was measured by anthropometry and Patient-Generated Subjective Global Assessment. Body composition was assessed by computed tomography. The skeletal muscle index was calculated using the range -29 to +150 HU. For skeletal muscle quality, the area comprised between -29 and +29 HU was denominated low-radiodensity skeletal muscle index and the range between +30 and +150 HU high-radiodensity skeletal muscle index, representing the skeletal muscle area with high or low intramuscular fat infiltration, respectively.

RESULTS: The study population comprised 40 patients, with an average age 44.53 ± 8.73. The intervention group maintained body weight and showed an improvement in Patient-Generated Subjective Global Assessment score. A significant reduction in skeletal muscle index was observed in both groups. However, in regard to skeletal muscle quality, patients in the intervention group preserved low- and high-radiodensity skeletal muscle index, whereas those in the control group had increased low-radiodensity skeletal muscle index and significantly reduced high-radiodensity skeletal muscle index, reflecting high intramuscular fat infiltration only in the control group. The incidence of chemotherapy toxicity was significantly lower in the intervention group.

CONCLUSIONS: The results suggest that ω-3 supplementation is effective in maintaining nutritional status, skeletal muscle quality, and reduced symptoms of chemoradiotherapy among women with cervical cancer.

Conclusions

Les résultats suggèrent que la supplémentation de ω-3 est efficace pour maintenir l'état nutritionnel, la qualité des muscles squelettiques et la réduction des symptômes de la chimio-radiothérapie chez les femmes atteintes d'un cancer du col de l'utérus.

Carbohydrate Nutrition and the Risk of cancer

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Carbohydrate Nutrition and the Risk of Cancer.

Maino Vieytes CA[1], Taha HM[2], Burton-Obanla AA[1], Douglas KG[2], Arthur AE[3,4,5].

Abstract

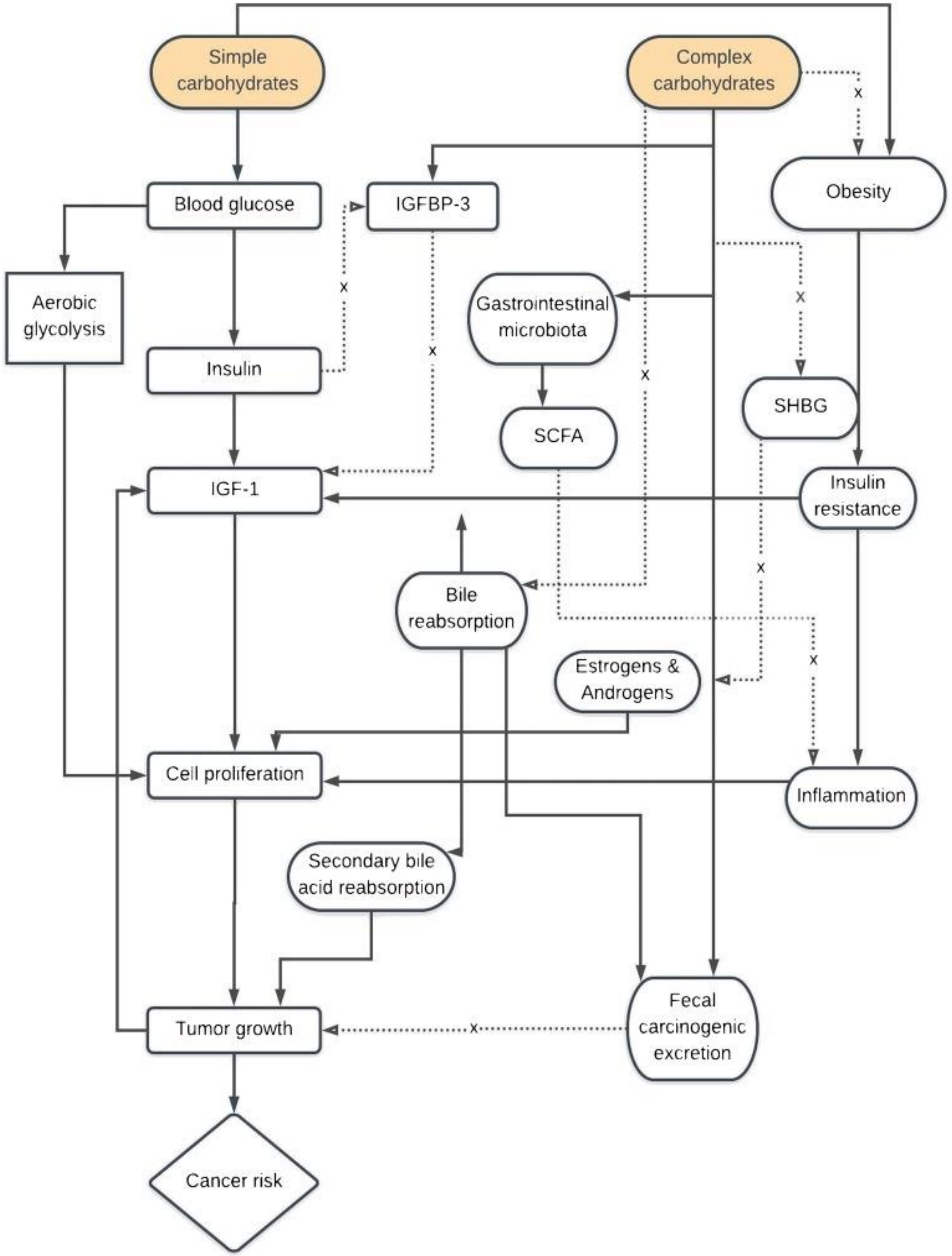
PURPOSE OF REVIEW: This review summarizes a selection of epidemiologic research assessing the associations between carbohydrate intake and cancer incidence and survival. Evidence for plausible biological mechanisms is also considered.

RECENT FINDINGS: The mechanistic paradigm explaining the relationship between carbohydrates and cancer risk has been contested by numerous observational studies. Carbohydrates have conventionally been ascribed a deleterious role in the field of cancer research due to previous preclinical findings. A breadth of studies suggests that complex carbohydrate intake is inversely associated with risk of a number of cancer types. Data from studies assessing simple carbohydrates and cancer risk are mixed. Furthermore, recommendations for subsequent studies are framed.

Schéma

→ Les glucides simples peuvent augmenter le risque de cancer en activant l'axe insuline-IGF-1 et en utilisant la glycolyse aérobie comme voie de collecte d'énergie primaire (connue sous le nom d'effet Warburg).

→ **Les glucides complexes peuvent réduire le risque de cancer en perturbant l'axe insuline/IGF-1, en neutralisant les facteurs androgènes et œstrogéniques biodisponibles, en augmentant l'excrétion fécale des carcinogènes et en modulant le microbiote gastrointestinal.**



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