

Supplémentation vitaminique entérale du nouveau-né prématuré : la dose unique ne convient pas à tous !

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Conflits d'intérêts

- Rien à déclarer

Nouveau-nés prématurés

- **Prématurés** = 7% des naissances en 2021

- 738 000 naissances en 2021

- 51 660 prématurés

- **ESPGHAN** : Société Européenne de Gastroentérologie, Hépatologie et Nutrition Pédiatrique

- Electrolytes
 - Oligoéléments
 - Vitamines

...

Enteral Nutrition in Preterm Infants (2022): A Position Paper From the ESPGHAN Committee on Nutrition and Invited Experts

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ABSTRACT

Objectives: To review the current literature and develop consensus conclusions and recommendations on nutrient intakes and nutritional practice in preterm infants with birthweight <1800g.

Methods: The European Society of Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) Committee of Nutrition (CoN) led a process that included CoN members and invited experts. Invited experts with specific expertise were chosen to represent as broad a geographical spread as possible. A list of topics was developed, and individual leads were assigned to topics along with other members, who reviewed the current literature. A single face-to-face meeting was held in February 2020. Provisional conclusions and recommendations were developed between 2020 and 2021, and these were voted on electronically by all members of the working group between 2021 and 2022. Where >90% consensus was not achieved, online discussion meetings were held, along with further voting until agreement was reached.

Results: In general, there is a lack of strong evidence for most nutrients and topics. The summary paper is supported by additional supplementary digital content that provide a fuller explanation of the literature and relevant physiology: introduction and overview; human milk reference data; intakes of water, protein, energy, lipid, carbohydrate, electrolytes, minerals, trace elements, water soluble vitamins, and fat soluble vitamins; feeding mode including mineral enteral feeding, feed advancement, management of gastric residuals, gastric tube placement and bolus or continuous feeding; growth; breastmilk buccal colostrum, donor human milk, and risks of cytomegalovirus infection; hydrolyzed protein and osmolality; supplemental bionutrients; and use of breastmilk fortifier.

Conclusions: We provide updated ESPGHAN CoN consensus-based conclusions and recommendations on nutrient intakes and nutritional management for preterm infants.

Key Words: enteral nutrition, neonatal intensive care unit, neonate, nutritional requirements, preterm infant

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What Is Known

- Nutrient intakes and nutritional practices have a major impact on short-term morbidities and long-term outcomes.
- The available literature has expanded dramatically in the 12 years since the previous European Society of Paediatric Gastroenterology, Hepatology and Nutrition position paper was developed.

What Is New

- We provide an expert consensus on conclusions and recommendations for nutrient intakes and nutritional practices for preterm infants with a birthweight of <1800g.
- We provide recommendations that can be used in clinical practice, but highlight the lack of strong evidence in several topic areas and the need for further high-quality research especially studies that assess long-term functional outcomes.

The Committee of Nutrition (CoN) of the European Society for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) recognized the need to provide an update of the previous position paper on enteral nutrition (EN) for preterm infants and this was approved by the ESPGHAN council in 2019. The working group was coordinated by members of CoN but recognized the benefit of including additional experts. An initial planning meeting was held as in Oslo in March 2019, at which potential topics were

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Problématique

- **Une seule solution polyvitaminique** indiquée chez le prématuré en France
 - **Dose unique**
 - Ne prend pas en compte l'âge
 - Ne prend pas en compte la **masse corporelle**

Objectifs

1

Vérification

Adéquation : Apports de la dose unique **vs** Recommandations

Si dose unique inadéquate

2

Optimisation

Proposition : Posologie révisée adaptée aux recommandations

Population

- Nouveau-nés **prématurés**
 - Âge gestationnel < 37 semaines d'aménorrhée
 - Poids de naissance < 1,8 kg
 - Masse corporelle : 0,5 - 3 kg

1 Dose unique vs Recommandations

	Vitamine	Quantité dose unique	Apports recommandés Prématuré (ESPGHAN)
A	Rétinol	3000 UI	1333 - 3300 UI/kg/j
D	Cholécalciférol	1000 UI	400 - 700 UI/kg/j (< 1000 UI/j)
E	Tocophérol	5,01 mg	2,2 - 11 mg/kg/j
C	Acide ascorbique	50,01 mg	17 - 43 mg/kg/j

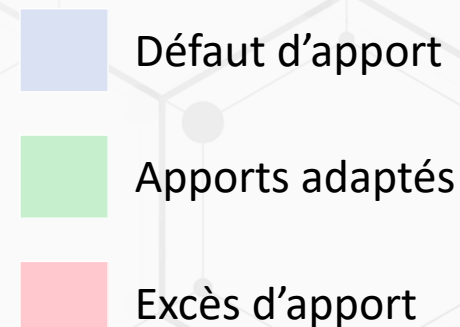


Tableau 1. Apports de la dose unique et recommandations d'apport de l'ESPGHAN.

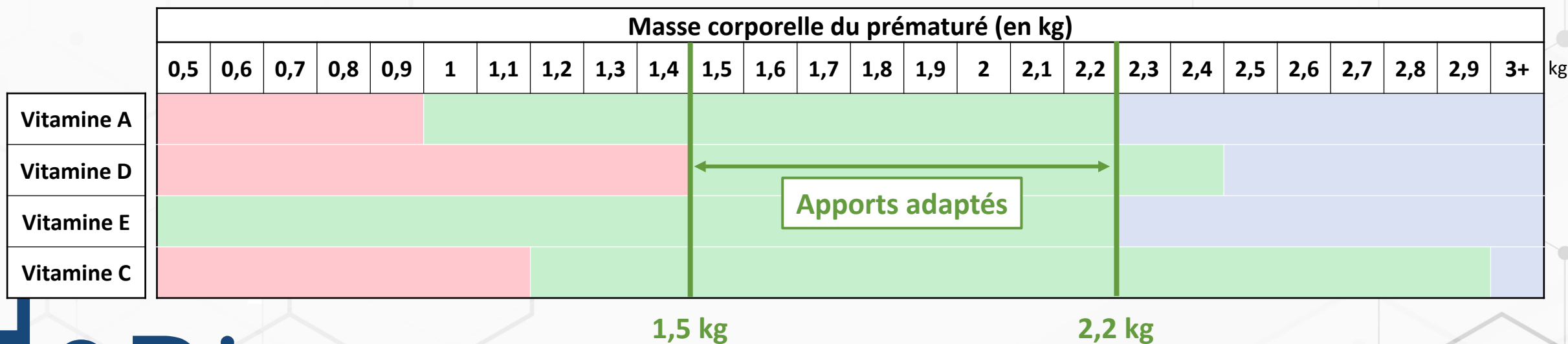


Tableau 2. Apports vitaminiques de 0,3mL de solution polyvitaminique rapportés à la masse corporelle du patient prématuré.

2

Posologie révisée

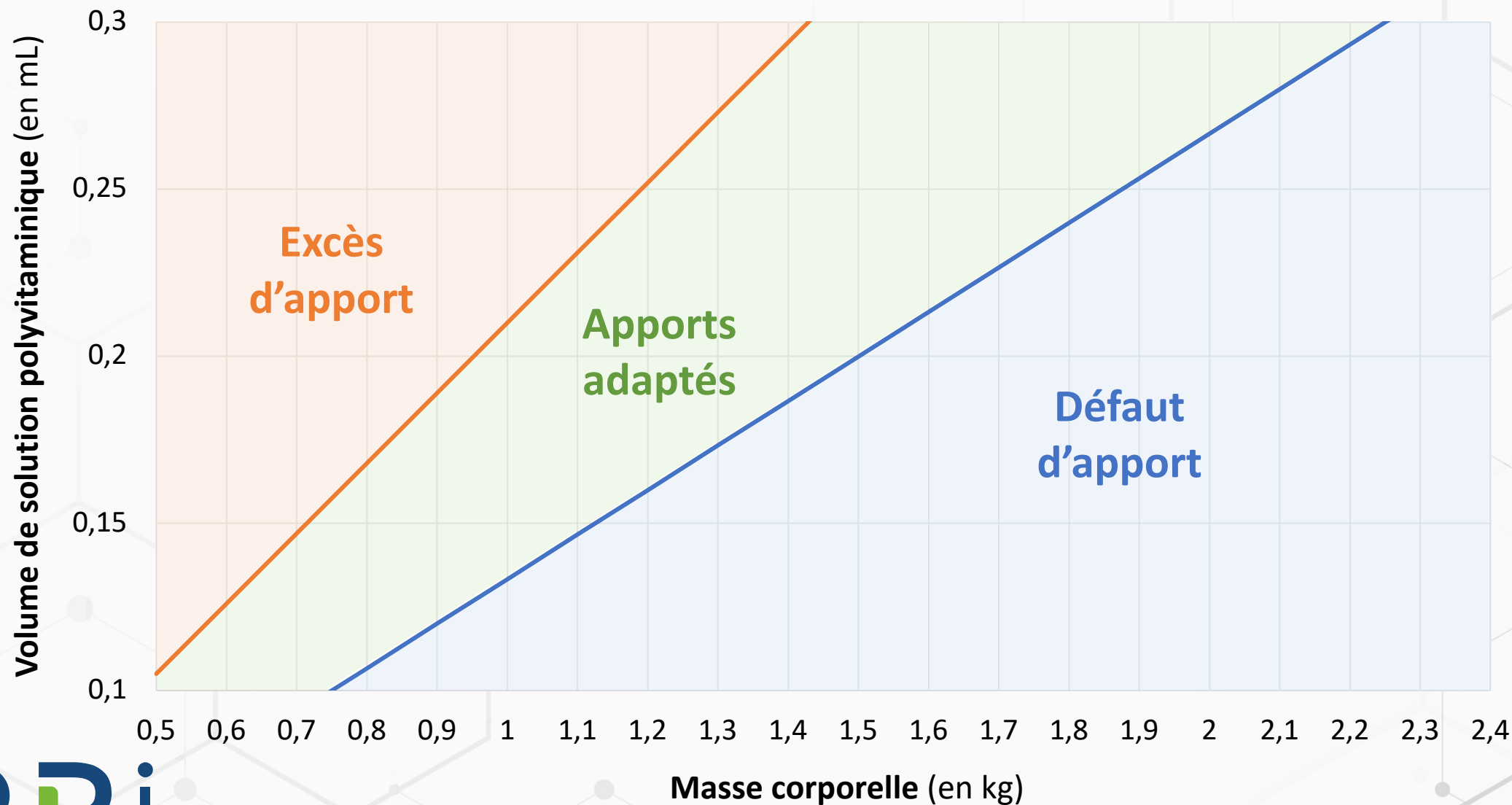


Figure 1. Volume de solution polyvitaminique à administrer en fonction de la masse corporelle selon les recommandations ESPGHAN 2022.

2

Posologie révisée

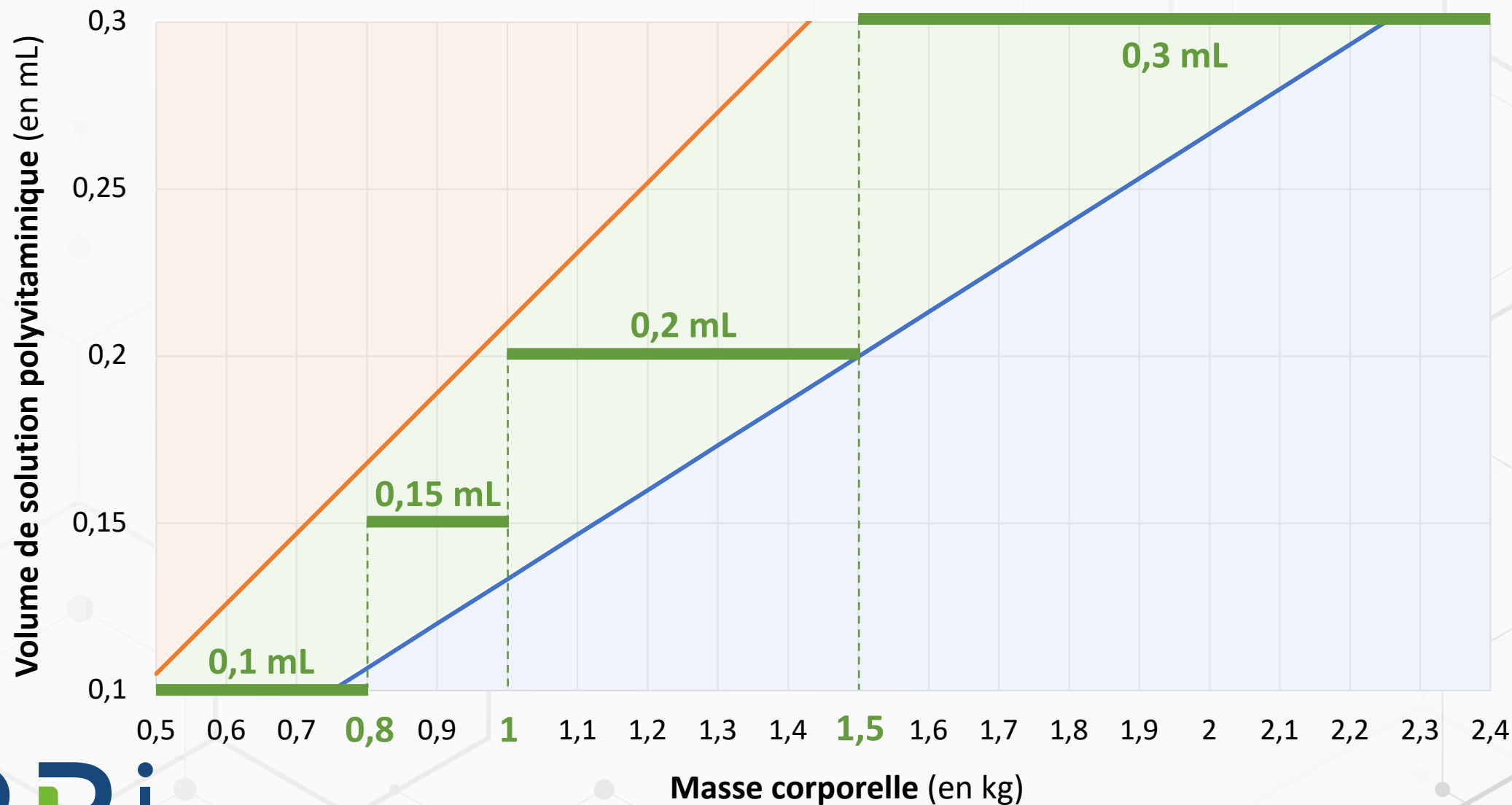


Figure 1. Volume de solution polyvitaminique à administrer en fonction de la masse corporelle selon les recommandations ESPGHAN 2022.

La dose unique ne convient pas à tous !

Posologie unique de 0,3 mL

Inadaptée pour 2 populations de patients

Patients < 1,5 kg

Facteur limitant : **Excès de vitamine D**

Hypercalcémie : vomissements, asthénie,
polyurie, insuffisance rénale...

Posologie corrigée

Patients > 2,2 kg

Facteur limitant : **Défaut de vitamines A et E**

Infections et troubles respiratoires,
rétinopathies, troubles musculaires...

Augmentation de dose impossible

→ Limite vitamine D = **1000 UI/j**

La dose unique ne convient pas à tous !

Masse corporelle (en kg)	Volume à administrer (en mL)
< 0,8	0,1
0,8 - 1	0,15
1 - 1,5	0,2
> 1,5	0,3

Tableau 3. Posologies de solution polyvitaminique révisées

Discussion avec cliniciens

- Eviter **multiplication des doses** :
 - Risque d'erreur
 - Difficulté pour les équipes
- Dispositif de **prélèvement** :
 - Précision de mesure
 - Praticité pour les équipes

Discussion avec fabricant

- Pipette actuelle incompatible avec un changement de dose : **Coût ++**
- Adaptation du RCP aux recommandations ?

Bibliographie

Statistiques prématurés

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Recommandations ESPGHAN

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Solution polyvitaminique

[4] **Résumé des Caractéristique du Produit**

Merci de votre attention ! Des questions ?

Contact

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