

# IMUNOTERAPIA COM LEITE MATERNO

*Colostroterapia estendida*



UNIDADE DE NEONATOLOGIA DO HMIB

PROTOCOLO INSTITUCIONAL

HMIB/SES/DF 2024

Apresentação: Nathalia Bardal

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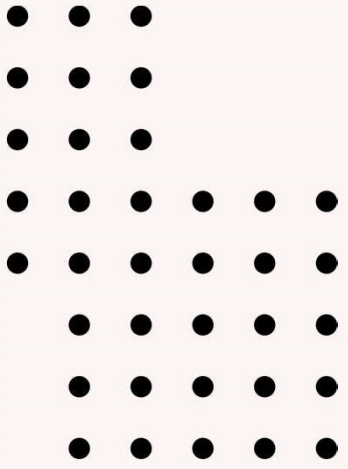
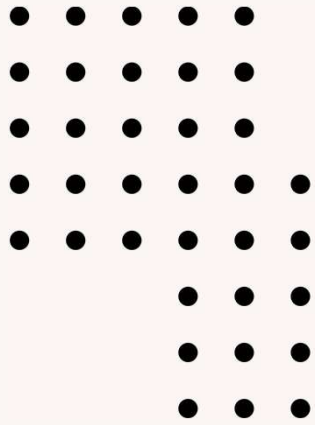
Brasília, 30 de outubro de 2024

# O QUE ME MOTIVOU PARA ESTAR AQUI

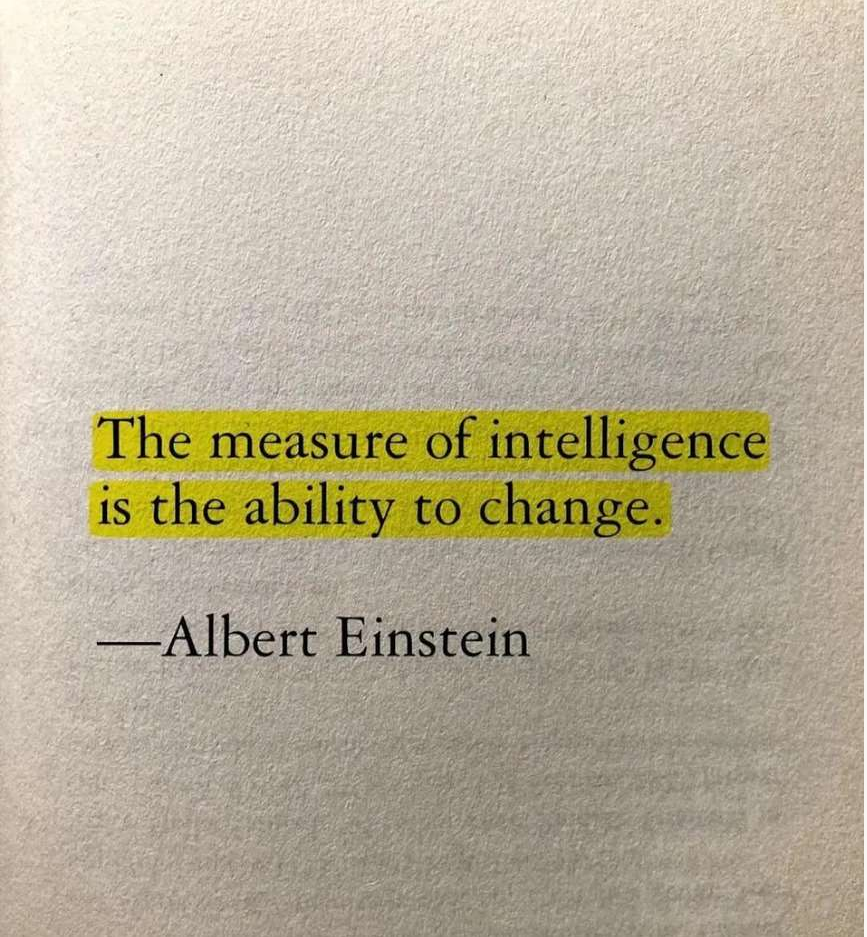
A Nathália que escolheu  
fazer neonatologia ainda na  
faculdade.



UMA NOVINHA CHEIA DE SONHOS



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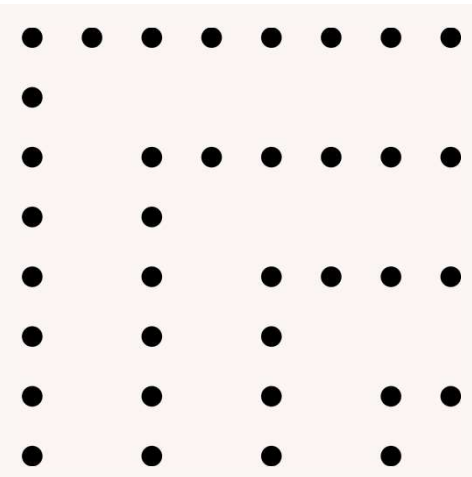
The measure of intelligence  
is the ability to change.

—Albert Einstein

“A MEDIDA DA INTELIGÊNCIA  
É A CAPACIDADE DE  
MUDAR.”

ALBERT EINSTEIN

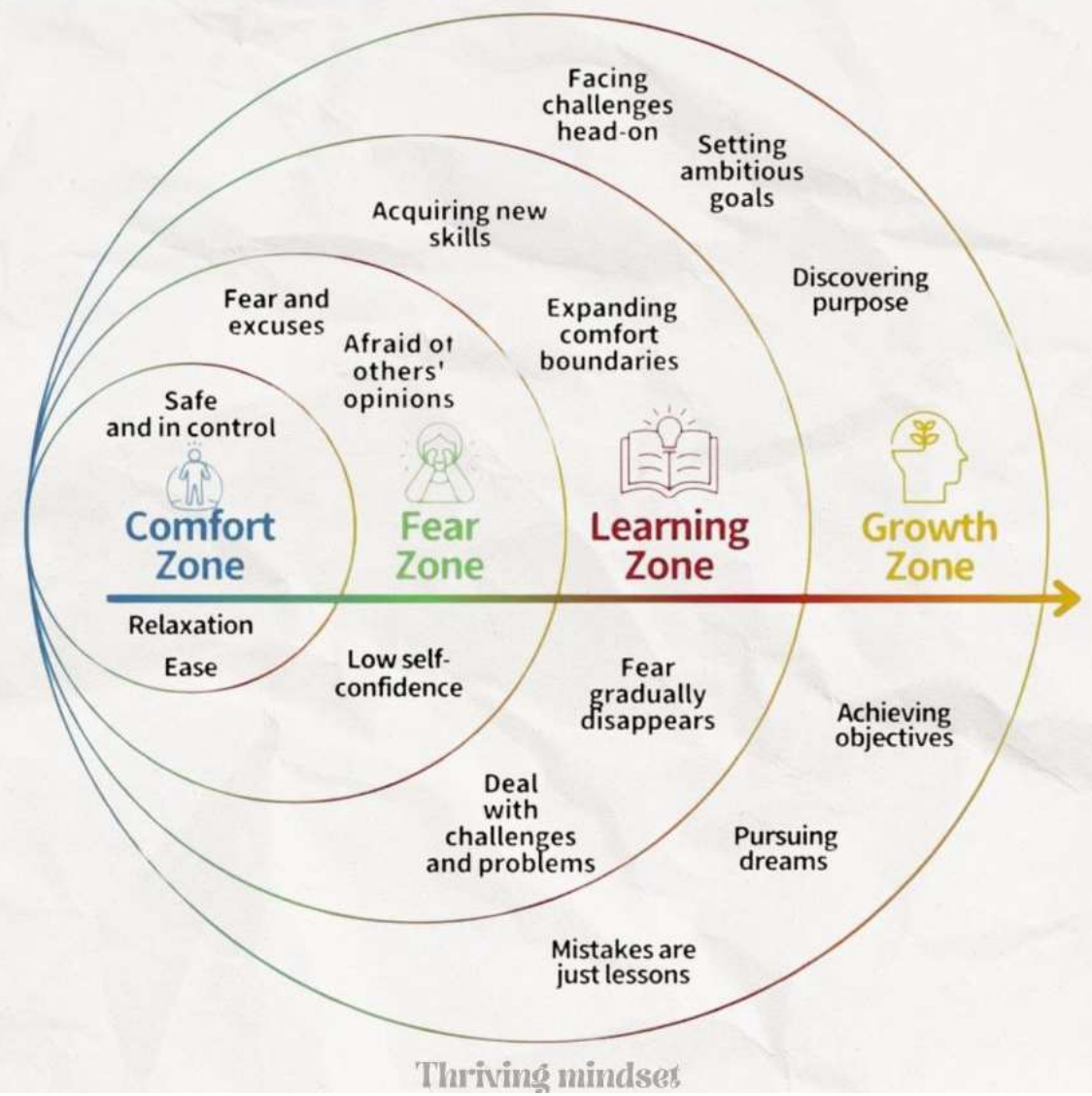
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# MUDAR É DIFÍCIL

ONDE ESTAMOS HOJE NA  
JORNADA DO NOSSO  
CRESCIMENTO COMO  
EQUIPE???

## The Growth Journey





# CADA GOTTA CONTA

A colostroterapia já era utilizada em nossa unidade, e devido a novos estudos, seu tempo de utilização será estendido, assim como será administrada a uma gama maior de pacientes.



## O QUE É?

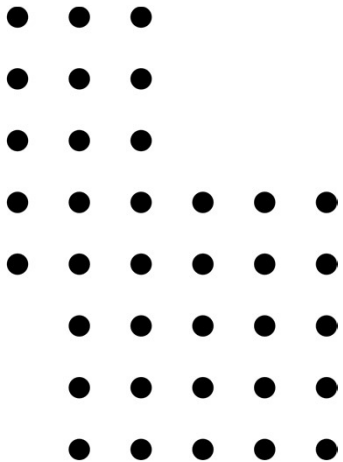
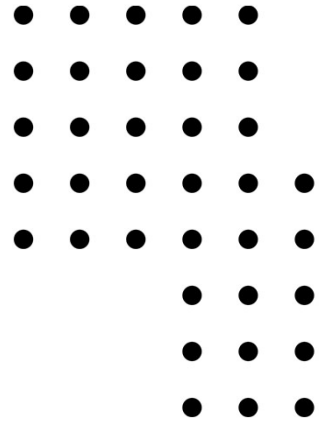
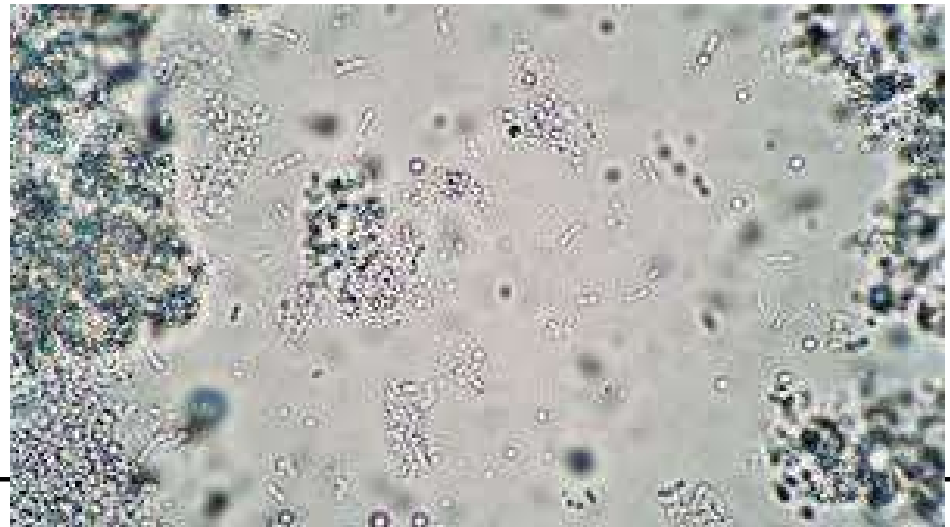
Administração de leite humano, seja colostro, leite de transição ou maduro, diretamente na mucosa oral de qualquer recém-nascido internado na UTI NEONATAL, independente da administração da dieta, até que o mesmo esteja mamando ao seio materno.



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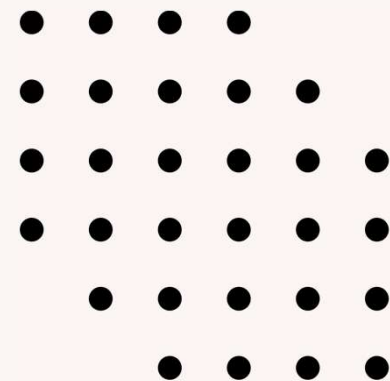
# POR QUE FAZER

Devido aos fatores imunológicos bioativos, como as citocinas, os oligossacarídeos, imunoglobulina A secretora, lactoferrina e os antioxidantes.



# IMPORTÂNCIA

- Melhoria da resposta imune
- Modulação da microbiota intestinal
- Proteção contra infecções (enterocolite, sepse tardia e pneumonia associada à ventilação mecânica)
- Melhora da progressão da dieta enteral





# COMO FAZER ACONTECER???

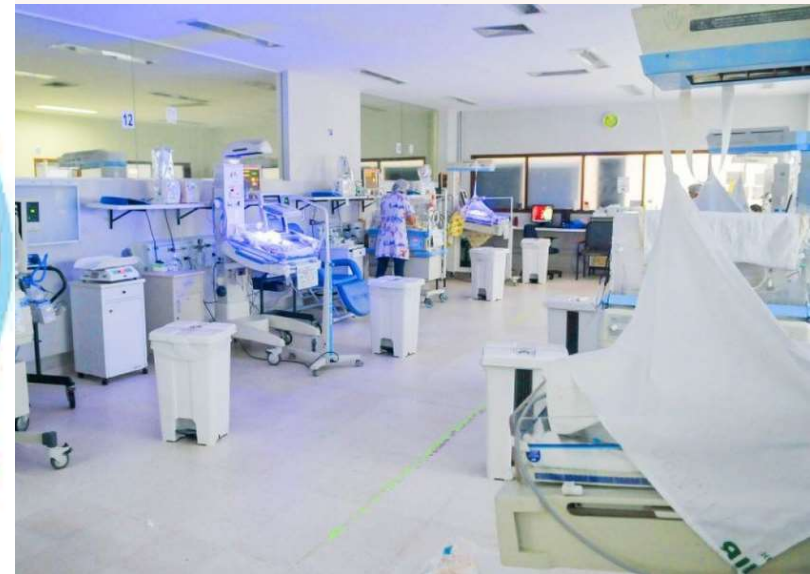


QUAIS SÃO AS NOSSAS  
BARREIRAS?

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# Onde estão as mães?????



## Importância do cuidado centrado na família



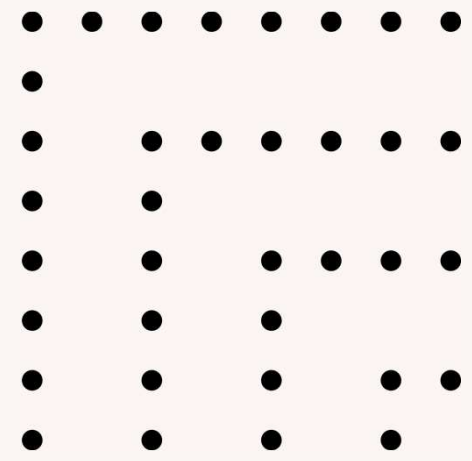
The image features a light beige background with decorative patterns of black dots in the corners. In the top right, the dots form a grid that tapers to the right. In the bottom left, the dots form a grid that tapers to the left. The text is centered in the middle of the page.

**FAZER IMUNOTERAPIA  
COM LEITE MATERNO  
É DAR PROTAGONISMO  
À MÃE**

Você já parou para pensar em como se sente uma mãe de um RN internado na UTIN, entubado, com acesso central, antibióticos e drogas vasoativas

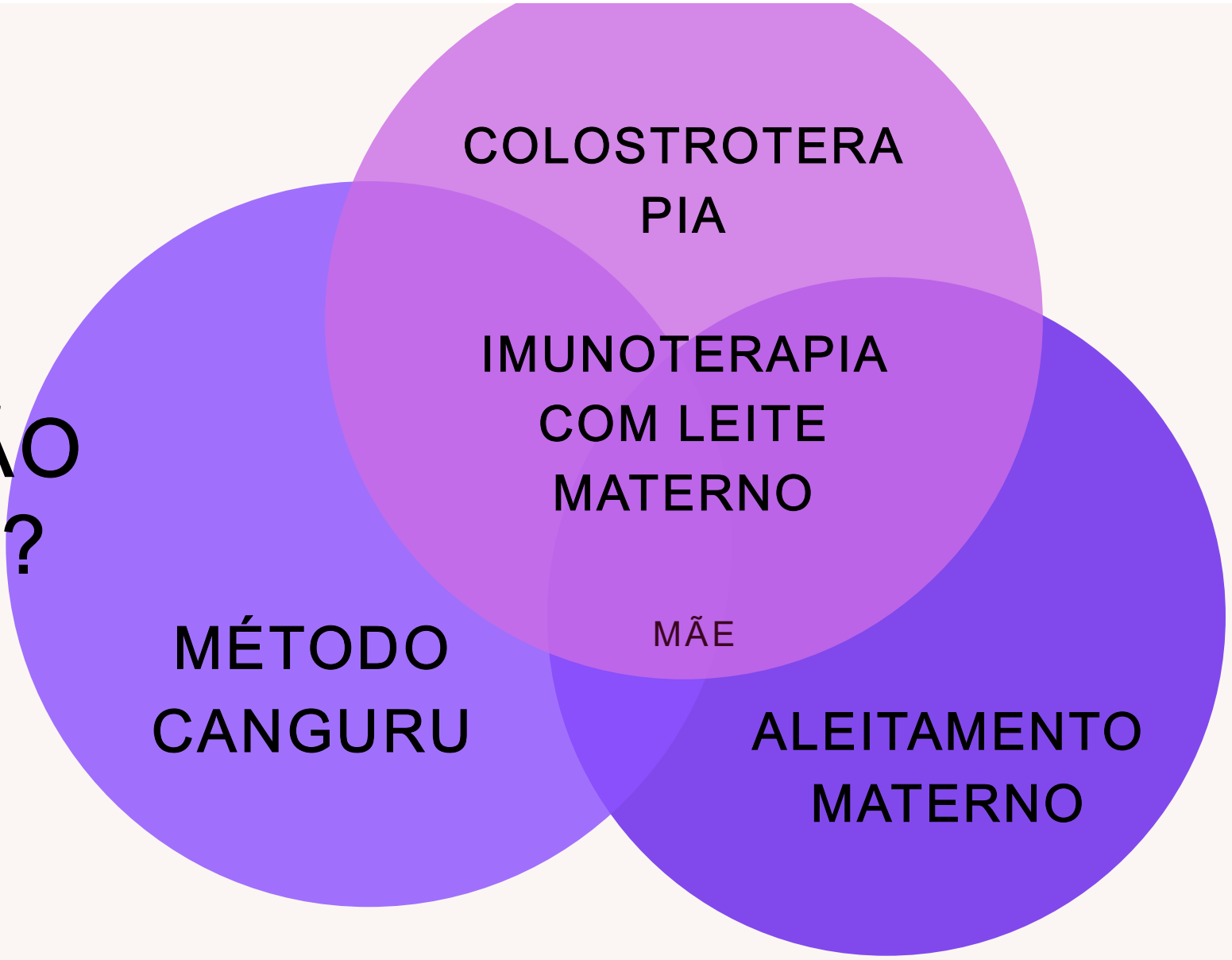


EM ALGUNS MOMENTOS CRÍTICOS, A MÃE TALVEZ SÓ CONSIGA PARTICIPAR DOS CUIDADOS ATRAVÉS DA IMUNOTERAPIA...



# ONDE ESTÃO AS MÃES???

A presença da mãe é imprescindível para a boa evolução do RN na UTIN





MUNDO  
IDEAL

“FAMILY UNITY”

[nature](#) > [journal of perinatology](#) > [commentary](#) > [article](#)

Commentary | Published: 25 March 2016

## The next big ideas in NICU design

[R D White](#) 

[Journal of Perinatology](#) **36**, 259–262 (2016) [Cite this article](#)

1894 Accesses | 19 Citations | 1 Altmetric |

[The next big ideas in NICU design.](#)

White RD.J Perinatol. 2016 Apr;36(4):259-62. doi: 10.1038/jp.2016.6.PMID: 27012591 No abstract available.

Neonatal care has seen many dramatic changes over its first generation as a specialty, none more pervasive than the design and operation of the neonatal intensive care unit (NICU) itself. Neonatology started in small rooms carved out from newborn nurseries, then evolved into bright, noisy, crowded, windowless units where families were largely excluded and infants were bombarded with noxious stimuli. Today we are building quiet, attractive, family-friendly units.



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# ESTRATÉGIAS A MÉDIO PRAZO

PARA A **NOSSA** REALIDADE





# SALA PARA ORDENHA

ARMAZENAMENTO  
DE LEITE CRU  
PERTO DA UTIN



# MAIS LEITOS DE MÃE NUTRIZ



QUEM SABE UM ALOJAMENTO DE  
MÃES???

# PROJETO DE LEI - PASSE LIVRE

 CÂMARA LEGISLATIVA  
DISTRITO FEDERAL

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[Comunicação](#) > [Notícias](#) > [Saúde](#) > [Gratuidade de transporte para pais de be...](#)

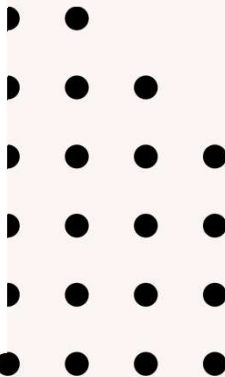
**SAÚDE**

## Gratuidade de transporte para pais de bebês em UTI neonatal pode virar lei ainda em 2024

Publicado em 06/06/2024 18h54



Foto: Autora do projeto, a deputada Paula Belmonte presidiu a comissão geral

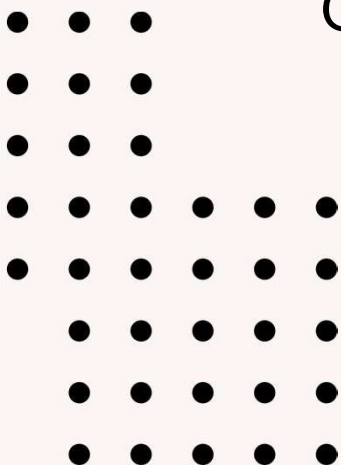


# ESTRATÉGIAS A CURTO PRAZO

Melhorar o trabalho diário com as mães

“BUSCA E APREENSÃO DAS MÃES,  
ONDE QUER QUE ELAS ESTEJAM”

Dra. Nicole Gianini



# PERGUNTA:

DEVEMOS ESPERAR ATÉ  
QUE TENHAMOS **TODAS**  
AS CONDIÇÕES IDEAIS  
PARA EFETIVAR O  
PROTOCOLO DE  
IMUNOTERAPIA COM  
LEITE MATERNO?



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**EVIDÊNCIAS**  
CIENTÍFICAS





oropharyngeal colostrum



Search

oropharyngeal colostrum

oropharyngeal colostrum administration

oropharyngeal colostrum preterm

oropharyngeal colostrum therapy

MY CUSTOM FILTERS

48 results

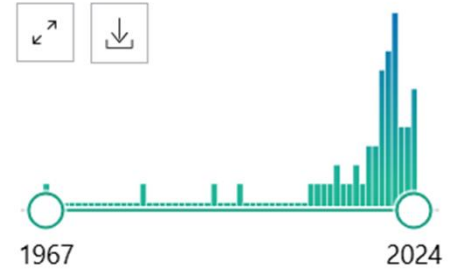
RESULTS BY YEAR



1

Cite

Share



# INÍCIO EM 2009

NANCY RODRIGUEZ -  
ENFERMEIRA  
CHICAGO, ILLINOIS, USA  
TRIAL EM 2015:  
USO DA IMUNOTERAPIA  
ATÉ IGC DE 32 SEM  
RESULTADOS EM 2023

[Oropharyngeal administration of colostrum to extremely low birth weight infants: theoretical perspectives.](#)

Rodriguez NA, Meier PP, Groer MW, Zeller JM. *J Perinatol.* 2009 Jan;29(1):1-7. doi: 10.1038/jp.2008.130. Epub 2008 Sep 4. PMID: 18769379. Review. [Artigo Gratis!](#)

Journal of  
Perinatology

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State of the Art | Published: 04 September 2008

State-of-the-Art

## Oropharyngeal administration of colostrum to extremely low birth weight infants: theoretical perspectives

[N A Rodriguez](#) , [P P Meier](#), [M W Groer](#) & [J M Zeller](#)

*Journal of Perinatology* 29, 1–7 (2009) | [Cite this article](#)

2410 Accesses | 74 Citations | 3 Altmetric | [Metrics](#)

### Abstract

Studies in adults have shown that the oropharyngeal route can be used to effectively and safely administer interferon- $\alpha$ , an immune cell-derived cytokine, to patients who are unable to tolerate its parenteral administration. The mechanism for this appears to be the stimulatory effects of the cytokine, on the oropharyngeal-associated lymphoid tissue system. Own mother's colostrum (OMC) is rich in cytokines and other immune agents that provide

15 ANOS DE HISTÓRIA ....  
...E AINDA NÃO EFETIVAMOS O USO NO HMIB!

[nature](#) > [journal of perinatology](#) > [articles](#) > [article](#)


Article | Published: 03 January 2023


# A randomized controlled trial of oropharyngeal therapy with mother's own milk for premature infants

[Nancy A. Rodriguez](#), [Fernando Moya](#), [John Ladino](#), [Adel Zauk](#), [Preetha Prazad](#), [Jorge Perez](#), [Maximo Vento](#), [Erika Claud](#), [Chi-hsiung Wang](#) & [Michael S. Caplan](#) 

*Journal of Perinatology* **43**, 601–607 (2023) | [Cite this article](#)

665 Accesses | 3 Citations | 5 Altmetric | [Metrics](#)

 A [Correction](#) to this article was published on 16 January 2023

 This article has been [updated](#)

OPT-MOM DID NOT REDUCE L-OS, NEC OR DEATH. GROUP A TRENDED TOWARDS A REDUCED STAY AND BETTER NUTRITIONAL OUTCOMES, BUT RESULTS WERE NOT STATISTICALLY SIGNIFICANT.

[A randomized controlled trial of oropharyngeal therapy with mother's own milk for premature infants.](#)

Rodriguez NA, Moya F, Ladino J, Zauk A, Prazad P, Perez J, Vento M, Claud E, Wang CH, Caplan MS. *J Perinatol.* 2023 May;43(5):601-607. doi: 10.1038/s41372-022-01589-x. Epub 2023 Jan 3. PMID: 36596945 Clinical Trial.



Cochrane Database of Systematic Reviews

## Oropharyngeal colostrum in preventing mortality and morbidity in preterm infants (Review)

Nasuf AWA, Ojha S, Dorling J

[Oropharyngeal colostrum in preventing mortality and morbidity in preterm infants.](#)

Nasuf AWA, Ojha S, Dorling J. Cochrane Database Syst Rev. 2018 Sep 7;9(9):CD011921. doi: 10.1002/14651858.CD011921.pub2. PMID: 30191961 **Artigo Gratis**. Review

### Key results

Six studies were eligible for inclusion, involving 335 preterm infants with gestational ages ranging from 25 to 32 weeks' gestation and birth weights of 410 to 2500 grams. Reviewers noted no differences between OPC and control for rate of NEC, infection, or death before hospital discharge. Similarly, they observed no difference in length of hospital stay between OPC and control babies. Infants who received OPC achieved full milk feeds on average 2.5 days earlier than those given placebo or no intervention. However, included studies were small, data were insufficient, and study designs were not ideal. Combining study data did not provide sufficient evidence to recommend the use of colostrum for oral priming to prevent complications in preterm infants. Five of the included studies reported no harms (adverse effects); however, no numerical data are available from these studies. Included studies were of very low quality; therefore the effects of OPC remain uncertain.

### Conclusions

[Oropharyngeal colostrum in preventing mortality and morbidity in preterm infants \(Review\)](#)  
Copyright © 2019 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

2



Cochrane Database of Systematic Reviews

Larger, better quality clinical trials would be needed to evaluate more precisely and reliably the effects of OPC on important outcomes for preterm infants. .



# SE TEM NA COCHRANE É PORQUE É IMPORTANTE!!!!

## 2018

Clinical Trial > Nutrients. 2020 Feb 5;12(2):413. doi: 10.3390/nu12020413.

## Oropharyngeal Colostrum Positively Modulates the Inflammatory Response in Preterm Neonates

Estefanía Martín-Álvarez <sup>1</sup>, Javier Díaz-Castro <sup>2 3</sup>, Manuela Peña-Caballero <sup>1</sup>, Laura Serrano-López <sup>1</sup>, Jorge Moreno-Fernández <sup>2 3</sup>, Belen Sánchez-Martínez <sup>1</sup>, Francisca Martín-Peregrina <sup>1</sup>, Mercedes Alonso-Moya <sup>1</sup>, José Maldonado-Lozano <sup>4 5</sup>, Jose A Hurtado-Suazo <sup>1</sup>, Julio J Ochoa <sup>2 3</sup>

Affiliations + expand

PMID: 32033312 PMCID: [PMC7071247](https://pubmed.ncbi.nlm.nih.gov/32033312/) DOI: [10.3390/nu12020413](https://doi.org/10.3390/nu12020413)

### Abstract

During the first days of life, premature infants have physiological difficulties swallowing, thereby missing out on the benefits of breastfeeding. The aim of this study is to assess the effects of oropharyngeal mother's milk administration in the inflammatory signaling of extremely premature infants. Neonates ( $n = 100$ ) (<32 week's gestation and/or <1500 g) were divided into two groups: mother's milk group ( $n = 48$ ), receiving 0.2 mL of oropharyngeal mother's milk every 4 h for the first 15 days of life, and a control group ( $n = 52$ ), not receiving oropharyngeal mother's milk. Serum concentrations of interleukin (IL) IL-6, IL-8, IL-10, IL-1ra, tumor necrosis factor alpha (TNF- $\alpha$ ), and interferón gamma (IFN- $\gamma$ ) were assessed at 1, 3, 15, and 30 days of postnatal life. Maternal and neonatal outcomes were collected. The rate of common neonatal morbidities in both groups was similar. The mother's milk group achieved full enteral feeding earlier, and showed a decrease in IL-6 on days 15 and 30, in IL-8 on day 30, and in TNF- $\alpha$  and INF- $\gamma$  on day 15, as well as an increase in IL-1ra on days 3 and 15 and in IL-10 on day 30. Oropharyngeal mother's milk administration for 15 days decreases the pro-inflammatory state of preterm neonates and provides full enteral nutrition earlier, which could have a positive influence on the development of the immune system and inflammatory

ENSAIO CLÍNICO ESPANHOL  
2020  
PT <1500G OU <32 SEM  
N=100  
IMUNOTERAPIA POR 15 DIAS  
DIETA PLENA  
DECRÉSCIMO DA IL-6, IL-8, TNF  
MELHORA O ESTADO  
PRÓ-INFLAMATÓRIO

[Oropharyngeal Colostrum Positively Modulates the Inflammatory Response in Preterm Neonates.](https://doi.org/10.3390/nu12020413)

Martín-Álvarez E, Díaz-Castro J, Peña-Caballero M, Serrano-López L, Moreno-Fernández J, Sánchez-Martínez B, Martín-Peregrina F, Alonso-Moya M, Maldonado-Lozano J, Hurtado-Suazo JA, Ochoa JJ. Nutrients. 2020 Feb 5;12(2):413. doi: 10.3390/nu12020413. PMID: 32033312 **Artigo Gratis!** Clinical Trial.



## SYSTEMATIC REVIEW

# Oropharyngeal colostrum therapy reduces the incidence of ventilator-associated pneumonia in very low birth weight infants: a systematic review and meta-analysis

Aijia Ma<sup>1</sup>, Jing Yang<sup>1</sup>, Yang Li<sup>1</sup>, Xuepeng Zhang<sup>1</sup> and Yan Kang<sup>1</sup>

**BACKGROUND:** Oropharyngeal colostrum (OC) is a novel feeding strategy to prevent complications of prematurity. A meta-analysis was conducted to investigate whether very low birth weight infants (VLBW) can benefit from OC.

**METHODS:** Randomized controlled trials (RCTs) were searched from Embase, PubMed, Web of Science, and Cochrane Central Register of Controlled Trials from the date of inception until May 2019. RCTs were eligible if they used OC therapy on VLBW infants. The primary outcomes included ventilator-associated pneumonia (VAP), necrotizing enterocolitis (NEC), bronchopulmonary dysplasia (BPD), late-onset sepsis, and death. The secondary outcomes included the time of full enteral feeding and the length of stay.

**RESULTS:** Eight RCTs involving 682 patients (OC group: 332; non-OC group: 350) were included in the meta-analysis. The results suggested that OC was associated with a significantly reduced incidence of VAP [odds ratio (OR) = 0.39, 95% confidence interval (CI): 0.17–0.88,  $P = 0.02$ ] and full enteral feeding days (mean difference =  $-2.66$ , 95% CI:  $-4.51$  to  $-0.80$ ,  $P = 0.005$ ), a potential significance of NEC (OR = 0.51, 95% CI: 0.26–0.99,  $P = 0.05$ ), a trend toward downregulating mortality (OR = 0.60, 95% CI: 0.34–1.08,  $P = 0.09$ ) and proven sepsis (OR = 0.64, 95% CI: 0.40–1.01,  $P = 0.06$ ).

**CONCLUSIONS:** OC could significantly reduce the occurrence of VAP, and consequently, its routine use should be considered for VLBWs to prevent infectious diseases.

*Pediatric Research* (2021) 89:54–62; <https://doi.org/10.1038/s41390-020-0854-1>

### IMPACT:

- OC significantly reduces the occurrence of VAP and NEC in VLBW infants.
- OC may reduce the incidence of VAP and NEC by increasing IgA levels.
- Early OC therapy for mechanical ventilation of low-weight infants may prevent the occurrence of VAP.

2021  
CHINA  
PAV

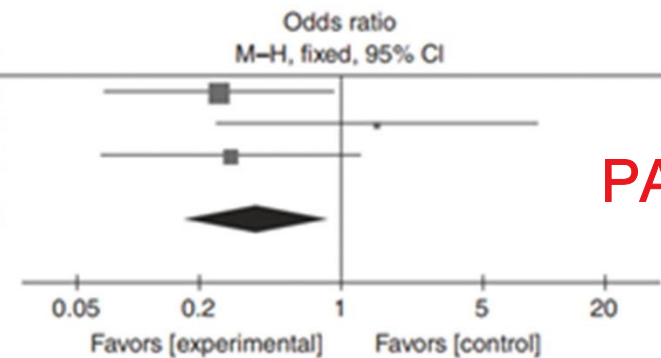
REVISÃO SISTEMÁTICA  
<32 SEM E OU 1500G  
8 ESTUDOS (RTC)  
682 PACIENTES

[Oropharyngeal colostrum therapy reduces the incidence of ventilator-associated pneumonia in very low birth weight infants: a systematic review and meta-analysis.](#)

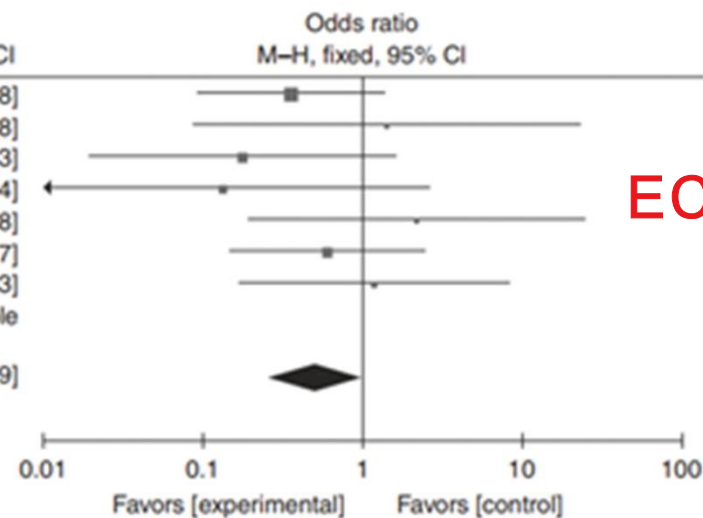
Ma A, Yang J, Li Y, Zhang X, Kang Y. *Pediatr Res.* 2021 Jan;89(1):54-62. doi: 10.1038/s41390-020-0854-1. Epub 2020 Mar 30. PMID: 32225172 **Artigo Gratís!**

**a**

Study or subgroup	Experimental		Control		Weight	Odds ratio
	Events	Total	Events	Total		M-H, fixed, 95% CI
Abd-Elgawad et al. <sup>22</sup>	3	100	11	100	54.5%	0.25 [0.07, 0.93]
Sharma et al. <sup>25</sup>	3	59	2	58	9.8%	1.50 [0.24, 9.32]
Lee et al. <sup>27</sup>	3	24	8	24	35.7%	0.29 [0.07, 1.25]
Total (95% CI)		183		182	100.0%	0.39 [0.17, 0.88]
Total events	9		21			
Heterogeneity: $\chi^2 = 2.70$ , d.f. = 2 ( $P = 0.26$ ); $I^2 = 26\%$						
Test for overall effect: $Z = 2.28$ ( $P = 0.02$ )						

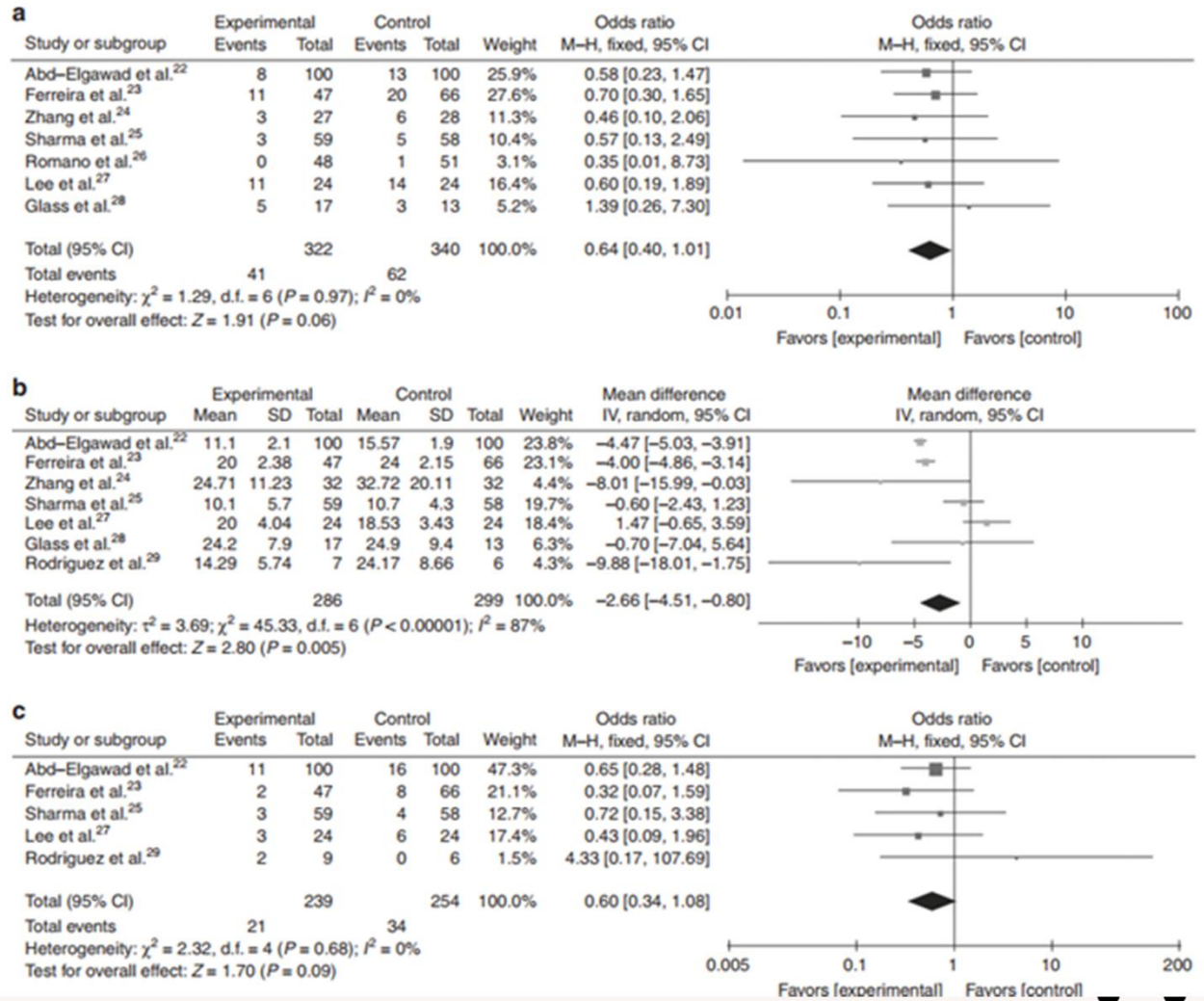
**PAV****b**

Study or subgroup	Experimental		Control		Weight	Odds ratio
	Events	Total	Events	Total		M-H, fixed, 95% CI
Abd-Elgawad et al. <sup>22</sup>	3	100	8	100	31.5%	0.36 [0.09, 1.38]
Ferreira et al. <sup>23</sup>	1	47	1	66	3.3%	1.41 [0.09, 23.18]
Zhang et al. <sup>24</sup>	1	27	5	28	19.2%	0.18 [0.02, 1.63]
Sharma et al. <sup>25</sup>	0	59	3	58	14.2%	0.13 [0.01, 2.64]
Romano et al. <sup>26</sup>	2	48	1	51	3.8%	2.17 [0.19, 24.78]
Lee et al. <sup>27</sup>	4	24	6	24	20.3%	0.60 [0.15, 2.47]
Glass et al. <sup>28</sup>	3	17	2	13	7.6%	1.18 [0.17, 8.33]
Rodriguez et al. <sup>29</sup>	0	9	0	6		Not estimable
Total (95% CI)		331		346	100.0%	0.51 [0.26, 0.99]
Total events	14		26			
Heterogeneity: $\chi^2 = 4.56$ , d.f. = 6 ( $P = 0.60$ ); $I^2 = 0\%$						
Test for overall effect: $Z = 1.98$ ( $P = 0.05$ )						

**ECN**

## FOREST PLOT DA METANALISE

ALIMENTAÇÃO  
ENTERAL COMPLETA  
(A)  
REDUZ A  
TENDÊNCIA DE  
SEPSE (B) E MORTE  
(C)





REVISTA BRASILEIRA DE SAÚDE MATERNO INFANTIL  
BRAZILIAN JOURNAL OF MOTHER AND CHILD HEALTH

2024  
Feira de Santana - 7 dias  
n=109  
menor tempo  
de internação nos > de 28 sem

[Colostrum immunotherapy and length of hospital stay in ...](#)

Artigo Gratis!

# TRABALHOS BRASILEIROS

ORIGINAL ARTICLES | Rev. Bras. Saúde Mater. Infant. 24 • 2024 | <https://doi.org/10.1590/1806-9304202400000074-en> [COPY](#)

## Colostrum immunotherapy and length of hospital stay in preterm infants: an intervention study

AUTHORSHIP

SCIMAGO INSTITUTIONS RANKINGS

Abstract  
Summary  
Introduction  
Methods  
Results  
Discussion  
Publication Dates  
History

### Abstract

#### Objectives:

to evaluate the effect of oropharyngeal colostrum immunotherapy on the length of hospital stay in preterm newborns with very low birth weight.

#### Methods:

interventional ambispective study, which consisted of eight daily administrations of 0.2 ml (four drops) of colostrum, totaling up to 56 syringes (for up to seven days). The control was historic. The main independent variable: length of hospital stay (days). Survival analysis was performed using the Kaplan-Meier Method and the survival effect was estimated - Log Rank Test (Mantel-Cox) and Breslow Test (Generalized Wilcoxon). A significance level of 5% was adopted.

#### Results:

of the 109 mother/child pairs, 56 were part of the treatment and 53 were part of the control group. There was no association between oropharyngeal colostrum immunotherapy and length of stay for preterm newborns with very low birth weight in the general sample. However, after stratification, a shorter hospital stay (42 versus 51 days, HR= 1.78, CI95%=1.02-3.09, p=0.04) was demonstrated among premature infants with  $\geq 28$  gestational weeks undergoing oropharyngeal colostrum immunotherapy.

**RSP**Revista de  
Saúde Pública<http://www.rsp.fsp.usp.br/>

## Oropharyngeal colostrum immunotherapy and nutrition in preterm newborns: meta-analysis

Michelle de Santana Xavier Ramos<sup>1\*</sup>, Camilla da Cruz Martins<sup>2</sup>, Elivan Silva Souza<sup>3</sup>, Graciete Oliveira Vieira<sup>4</sup>, Isaac Suzart Gomes-Filho<sup>5</sup>, Ana Claudia Morais Godoy Figueiredo<sup>6</sup>, Maurício Gomes Pereira<sup>7</sup>, Simone Seixas da Cruz<sup>8</sup>

<sup>1</sup> Universidade Estadual de Feira de Santana. Departamento de Saúde, Feira de Santana, BA, Brasil

<sup>2</sup> Universidade Federal do Recôncavo da Bahia. Centro de Ciências da Saúde. Santo Antônio de Jesus, BA, Brasil

<sup>3</sup> Universidade de Brasília. Faculdade de Ciências da Saúde, Brasília, DF, Brasil

<sup>4</sup> Secretaria de Estado de Saúde do Distrito Federal, Brasília, DF, Brasil

<sup>5</sup> Universidade de Brasília. Escola de Medicina, Brasília, DF, Brasil.

### ABSTRACT

**OBJECTIVE:** To investigate the effect of oropharyngeal colostrum immunotherapy in reducing the time required for very low birth weight preterm newborns (VLBW-PTNB: < 1,500g and < 37 weeks) to achieve full enteral nutrition.

**METHODS:** Literature search was conducted using four databases, including gray literature, with additional manual search of the references of selected articles. Eligibility criteria consisted of randomized clinical trials, without restriction regarding the date or language of the publication. Two independent reviewers performed the article selection and data extraction. The random-effects meta-analysis used a non-standard technique to assess the mean difference in days to achieve full enteral nutrition, carried out by the Stata 15 statistic program.

**RESULTS:** The systematic review comprised 10 studies, and five were selected for meta-analysis, with a population of 764 VLBW-PTNB and gestational age of birth between 25 and 32 weeks. The studies were conducted between 2011 and 2018 in North America, Asia and Africa, with only one conducted in South America. Altogether, they reported the number of days it took 708 VLBW-PTNB to achieve full enteral nutrition, with newborns treated with immunotherapy showing a shorter time in only three studies. Meta-analysis showed a mean difference of -4.26 days, (95% CI -7.44; -1.08d), with high heterogeneity ( $I^2 = 83.1\%$ ).

**CONCLUSION:** The use of oropharyngeal colostrum immunotherapy can reduce the time for VLBW-PTNB to achieve full nutrition when compared to those who used a placebo or received routine care.

**DESCRIPTORS:** Infant, Very Low Birth Weight, Infant, Premature, Immunotherapy, Colostrum, Systematic Review.

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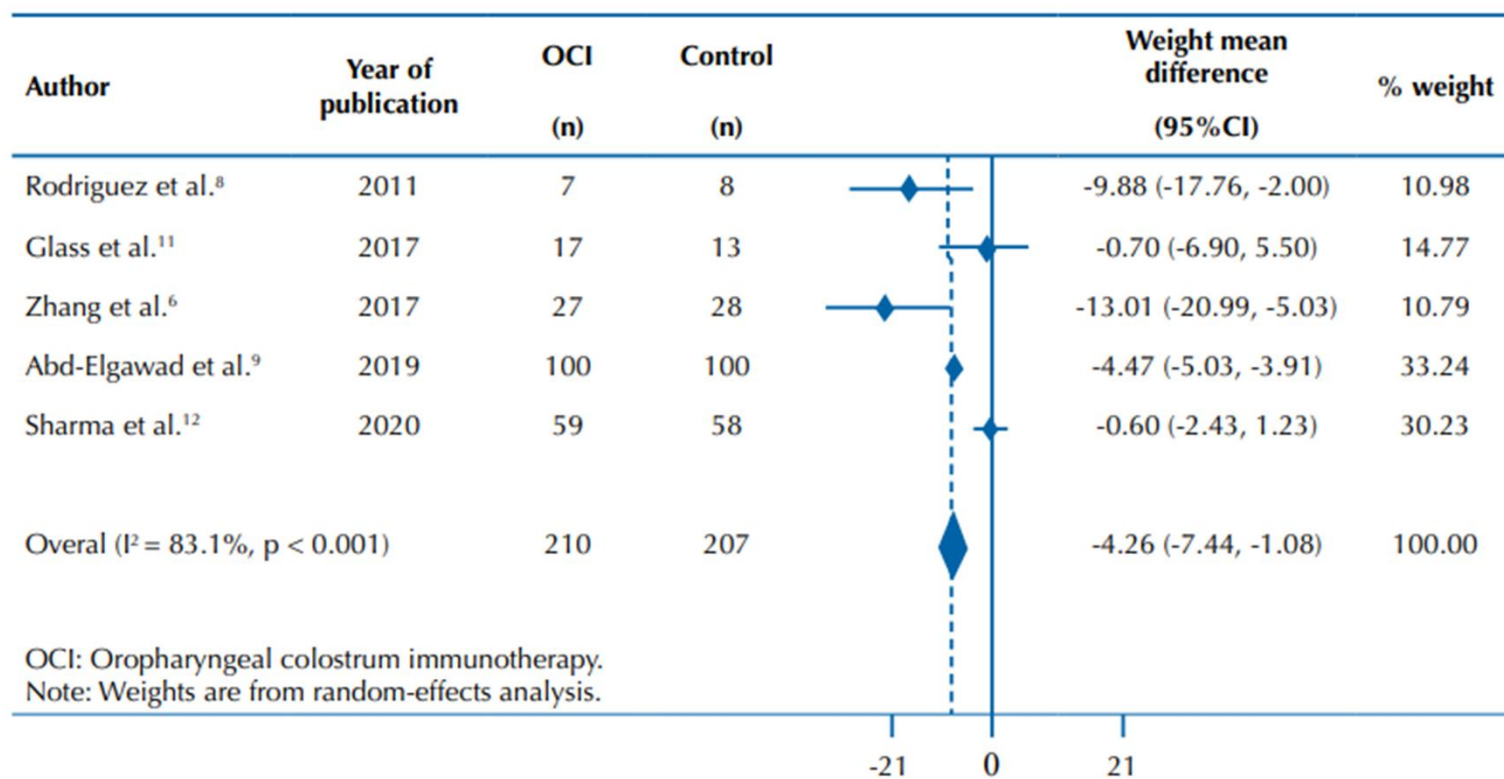
**How to cite:** Xavier Ramos MS, Martins CC, Souza ES, Vieira GO, Gomes-Filho IS, Figueiredo ACMG, et al. Oropharyngeal colostrum immunotherapy and nutrition in preterm newborns: meta-analysis. Rev Saude Publica. 2021;55:59. <https://doi.org/10.11606/s1518-8787.2021055003051>

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2020 - FEIRA DE SANTANA  
<1500G  
ATINGIR DIETA ENTERAL  
PLENA  
10 ESTUDOS - 5  
SELECIONADOS  
POPULAÇÃO 764 RN (25-32  
SEM)  
-4,26 DIAS  
( IC -7,44, - 1,08 95%)

### [Oropharyngeal colostrum immunotherapy and nutrition in preterm newborns: meta-analysis.](#)

Xavier Ramos MS, Martins CDC, Souza ES, Vieira GO, Gomes-Filho IS, Figueiredo ACMG, Pereira MG, Cruz SSD. Rev Saude Publica. 2021 Dec 17;55:59. doi: 10.11606/s1518-8787.2021055003051. eCollection 2021. PMID: 34932705 **Artigo Gratís!**



**Figure 2.** A random-effects meta-analysis of oropharyngeal colostrum immunotherapy over time to achieve full enteral nutrition in very low birth weight preterm infants.

FEIRA DE SANTANA  
2023  
MORTALIDADE  
N=138

RR OF DEATH OF 0.26  
(95% CI = 0.07-0.67; P =  
0.00  
NNT: A CADA 5 TRATADOS,  
PREVENÇÃO DE 1 MORTE  
NNT = 4.9  
(95% CI = 1.84-5.20);

[Oropharyngeal colostrum immunotherapy and risk reduction of mortality in very low birth weight premature newborns: a clinical trial.](#)

Martins CDC, Ramos MSX, Lyrio AO, Vieira TO, Cruz SSD, Vieira GO.J  
Pediatr (Rio J). 2024 Jan-Feb;100(1):32-39. doi:  
10.1016/j.jped.2023.07.007. Epub 2023 Sep  
7. PMID: 37690464 **Artigo Gratis**. Clinical Trial



ORIGINAL ARTICLE

**Oropharyngeal colostrum immunotherapy and risk reduction of mortality in very low birth weight premature newborns: a clinical trial**



Camilla da C. Martins <sup>a,\*</sup>, Michelle de S.X. Ramos <sup>b</sup>, Amanda O. Lyrio <sup>c</sup>,  
Tatiana de O. Vieira <sup>a</sup>, Simone S. da Cruz <sup>b</sup>, Graciete O. Vieira <sup>a</sup>

<sup>a</sup> Universidade Estadual de Feira de Santana, Departamento de Saúde, Feira de Santana, BA, Brazil

<sup>b</sup> Universidade Federal do Recôncavo da Bahia, Centro de Ciências da Saúde, Santo Antônio de Jesus, BA, Brazil

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Received 16 April 2023; accepted 17 July 2023

Available online 7 September 2023

**KEYWORDS**

Immunotherapy;  
Colostrum;  
Infant, premature;  
Mortality;  
Clinical trial

**Abstract**

**Objective:** To evaluate the effect of oropharyngeal colostrum immunotherapy (OCI) on the mortality of preterm newborns (PTNB) with very low birth weight (VLBW).

**Method:** Non-randomized clinical trial, carried out with 138 mother-child pairs attended at a public maternity hospital. The treatment group used raw colostrum, dripping 4 drops (0.2 ml) into the oropharyngeal mucosa, totaling 8 administrations in 24 h, up to the 7th complete day of life (OCI). The control group was composed of newborns admitted to the same maternity hospital before the implementation of the OCI. Analyses were performed: descriptive, bivariate, multiple logistic regression and survival analysis with a significance level of 5% and 95% CI

# PROTOCOLO DE COLOSTROTERAPIA DA SES DF

Coordenadora:

Ludmylla

2021



**Assistência de enfermagem  
ao recém-nascido sob  
colostroterapia**

# COLOSTROTERAPIA IFF FIO CRUZ 2022



## EXPEDIANTE

2

### Elaboração

Giovana G. M. Salgado – Nutricionista do IFF/Fiocruz  
Juliana Pimenta - Nutricionista do IFF/Fiocruz

### Colaboração

Banco de Leite Humano (BLH) do IFF/Fiocruz  
Unidade de Terapia Intensiva Neonatal do IFF/Fiocruz

### Revisão

Everton Lima

### Design Gráfico

Fernanda Canalonga Calçada

2022

FICHA CATALOGRÁFICA NA FONTE  
INSTITUTO DE COMUNICAÇÃO E INFORMAÇÃO  
CIENTÍFICA E TECNOLÓGICA EM SAÚDE  
BIBLIOTECA DA SAÚDE DA MULHER E DA CRIANÇA

S164

Salgado, Giovana G. M.

Colostroterapia / Giovana G. M Salgado, Juliana Pimenta. – Rio de Janeiro: Fiocruz, Instituto Nacional de Saúde da Mulher, da Criança e do Adolescente Fernandes Figueira, 2022.

8 p. : il.

1. Colostro. 2. Recém-Nascido Prematuro. I. Pimenta, Juliana. II. Título.

CDD 22.ed. 613.269

# PORTAL DE BOAS PRÁTICAS

[Leite Materno como Imunoterapia - Portal de Boas Práticas](#)

Portal de Boas Práticas em Saúde da Mulher, da Criança e do Adolescente



ATENÇÃO AO RECÉM-NASCIDO

## LEITE MATERNO COMO IMUNOTERAPIA

Material de 25 de agosto de 2023

Disponível em: [portaldeboaspraticas.iff.fiocruz.br/](https://portaldeboaspraticas.iff.fiocruz.br/)

Eixo: Atenção ao Recém-nascido



Portal de Boas Práticas em Saúde da Mulher, da Criança e do Adolescente



ATENÇÃO AO RECÉM-NASCIDO

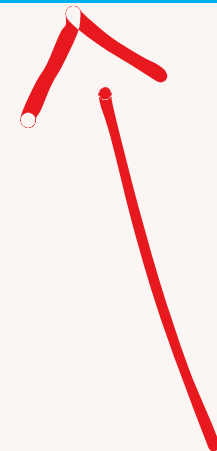
## LEITE MATERNO COMO IMUNOTERAPIA




[portaldeboaspraticas.iff.fiocruz.br](https://portaldeboaspraticas.iff.fiocruz.br)

Portal de Boas Práticas em Saúde da Mulher, da Criança e do Adolescente

LEITE MATERNO COMO IMUNOTERAPIA





 **Quem faz a busca ativa materna?**  
Todos os profissionais.

**Quem faz a extração nas unidades de internamento materno?**


Aquele profissional mais qualificado e que tenha mais experiência, seja do BLH ou da unidade neonatal.

**Quem administra o leite materno como imunoterapia?**

Profissional de enfermagem responsável pelo cuidado do RN.

 **Quando deve ser feita a Imunoterapia?**

A partir da 1ª hora de vida, até que esteja mamando no peito.

 **Como fazer a extração do leite materno?**  
Conforme orientação da Norma Técnica 47.18 da Rede Brasileira de BLH.

**Como deve ser feita a Imunoterapia?**

Administrar o volume com seringa de 1,0ml na face interna de cada bochecha do RN, no momento da rotina da dieta na unidade (3/3h ou 2/2h), mesmo que o RN já esteja recebendo dieta enteral via sonda.

 **Onde fazer a imunoterapia?**

Em todas as unidades que tenham RN com condições clínicas que impeçam a amamentação de forma temporária.

# AH, MAS NÃO TEM EVIDÊNCIA DO USO DE COLOSTROTERAPIA ESTENDIDA ....



Original Communication

## **Oropharyngeal Administration of Mother's Milk Prior to Gavage Feeding in Preterm Infants: A Pilot Randomized Control Trial**

Mahmoud Abd-Elgawad MD, Heba Eldeglá MD, Mohammed Khashaba MD, Nehad Nasef MD 

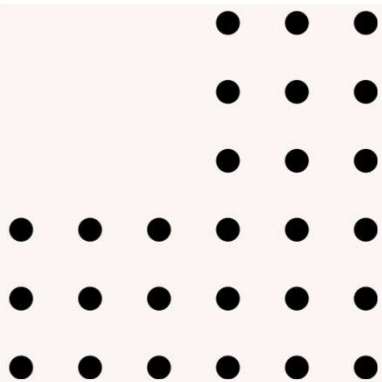
First published: 06 May 2019 | <https://doi.org/10.1002/jpen.1601> | Citations: 38

Financial disclosure: None declared.

Conflicts of interest: None declared.

[Oropharyngeal Administration of Mother's Milk Prior to Gavage Feeding in Preterm Infants: A Pilot Randomized Control Trial.](#)

Abd-Elgawad M, Eldeglá H, Khashaba M, Nasef N. JPEN J Parenter Enteral Nutr. 2020 Jan;44(1):92-104. doi: 10.1002/jpen.1601. Epub 2019 May 6. PMID: 31062377 Clinical Trial.



## Methods


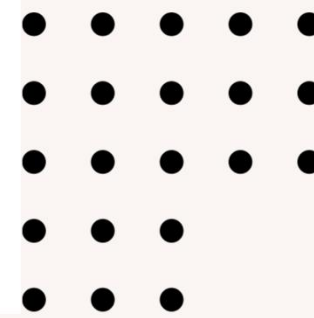
In a pilot prospective randomized study on preterm (<32 weeks gestation and 1500 g weight) infants, we compared OPAMM practice (applying 0.2 mL of mother's colostrum or milk prior to gavage feeding **until full oral feeding is reached**) with regular gavage feeding. The primary outcome was incidence of culture-proven nosocomial sepsis. Secondary outcomes included bacterial colonization of the gastrointestinal tract, feeding intolerance, time to reach full feeding, incidence of necrotizing enterocolitis, ventilator-associated pneumonia, duration of respiratory support, incidence of bronchopulmonary dysplasia (BPD), length of hospital stay, and neonatal mortality.

## Results

The outcomes of **200 neonates** (100 in each group) were analyzed. OPAMM practice did not significantly reduce the incidence of culture proven nosocomial sepsis (8% vs 13%,  $P = 0.35$ ). Infants in the OPAMM group had a significantly lower growth of *Klebsiella* species in the oropharyngeal pouch, borderline lower incidence of ventilator-associated pneumonia, shorter duration of oxygen therapy, less episodes of feeding intolerance, reached full feeding earlier, and had a shorter length of hospital stay. OPAMM practice did not affect the incidence of necrotizing enterocolitis, BPD, or neonatal mortality.

## Conclusion

OPAMM prior to gavage feeding does not reduce the incidence of nosocomial sepsis but **had beneficial effects on early achievement of feeding**, and early hospital discharge in preterm very low-birth-weight infants.



KWAIT  
2022

OMOM DECREASES THE  
INCIDENCE  
OF LATE-ONSET SEPSIS  
IN PRETERM NEONATES (  
260/7-306/7 WK) AND IS SAFE.

[Oral Application of Colostrum and Mother's Own Milk in Preterm Infants-A Randomized, Controlled Trial.](#)

Sudeep KC, Kumar J, Ray S, Dutta S, Aggarwal R, Kumar P. Indian J Pediatr. 2022 Jun;89(6):579-586. doi: 10.1007/s12098-021-03982-4. Epub 2022 Jan 10. PMID: 35006497 Clinical Trial.

Randomized Controlled Trial > Indian J Pediatr. 2022 Jun;89(6):579-586.

doi: 10.1007/s12098-021-03982-4. Epub 2022 Jan 10.

## Oral Application of Colostrum and Mother's Own Milk in Preterm Infants-A Randomized, Controlled Trial

K C Sudeep <sup>1</sup>, Jogender Kumar <sup>1</sup>, Somosri Ray <sup>1</sup>, Sourabh Dutta <sup>1</sup>, Ritu Aggarwal <sup>2</sup>, Praveen Kumar <sup>3</sup>

Affiliations + expand

PMID: 35006497 DOI: 10.1007/s12098-021-03982-4

### Abstract

**Objectives:** To evaluate the effects of oral application of mother's own milk (OMOM) on clinical outcomes in preterm infants of 26<sup>0/7</sup>-30<sup>6/7</sup> wk gestation.

**Methods:** In this placebo-controlled randomized trial, subjects received either OMOM or sterile water, beginning at 24-72 h of life, until the infant reached 32 wk postmenstrual age or spoon-feeds were initiated, whichever was earlier. The primary outcome was a composite adverse health outcome, defined as the occurrence of either mortality, late-onset sepsis (LOS), necrotizing enterocolitis (NEC), intraventricular hemorrhage (IVH), bronchopulmonary dysplasia (BPD), or retinopathy of prematurity (ROP). Antibiotic usage and time to full enteral feed were secondary outcomes. Salivary IgA (sIgA) levels at baseline and after 7 d of application in a subset of infants were also compared.

Oral application of mother's own milk (OMOM) on clinical outcomes in preterm infants of 260/7-306/7 wk gestation decreases the incidence of late-onset sepsis in preterm neonates (260/7-306/7 wk) and is safe.

# E PARA PACIENTE CIRÚRGICO, HÁ ESTUDOS

51 PACIENTES RANDOMIZADOS  
COLOSTRO POR 3 DIAS, NÃO  
REALIZADO NO PERÍODO  
NOTURNO  
NÃO HOUVE DIFERENÇA  
2023  
IFF

ARTIGO ORIGINAL

Hellen Porto Pimenta<sup>1</sup>, Adriana Duarte Rocha<sup>1</sup>,  
Aline Carnevale Lia Dias Guimarães<sup>1</sup>, Ana  
Carolina Carioca da Costa<sup>1</sup>, Maria Elisabeth  
Lopes Moreira<sup>1</sup>

## Administração orofaríngea de colostro em recém-nascidos com gastroquise: ensaio clínico randomizado

### RESUMO

**Objetivo:** Avaliar o efeito da colostroterapia em dias para iniciar a dieta por sucção em recém-nascidos com diagnóstico de gastroquise simples.

**Métodos:** Ensaio clínico randomizado com recém-nascidos diagnosticados com gastroquise simples em um hospital federal no Rio de Janeiro que foram randomizados para receber administração orofaríngea de 0,2mL de colostro ou “procedimento simulado”, nos primeiros 3 dias de vida. A análise incluiu desfechos clínicos, como dias sem alimentação, dias com alimentação parenteral, dias para iniciar a alimentação enteral, dias para

atingir a alimentação completa, seps e tempo de internação.

**Resultados:** O início da alimentação por via oral (sucção) na gastroquise simples, em ambos os grupos, ocorreu com mediana de 15 dias.

**Conclusão:** O presente estudo mostrou que não há diferenças significativas no uso de colostroterapia em dias para início de alimentação enteral e dieta por sucção entre grupos de recém-nascidos com gastroquise simples.

**Descritores:** Leite humano; Colostro; Terapia imunológica; Gastroquise

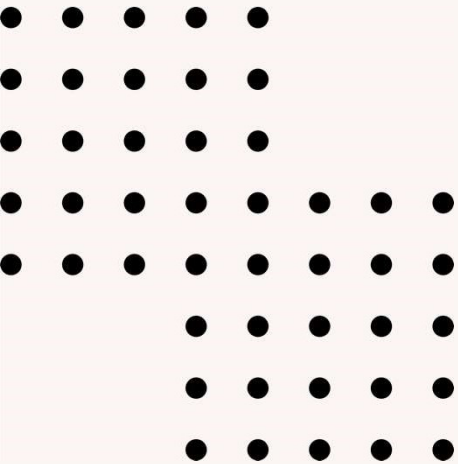
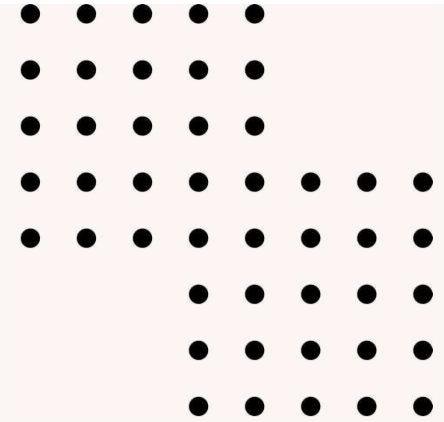
[Oropharyngeal colostrum administration in neonates with ...](#)

Artigo Gratis !

1. Instituto Fernandes Figueira - Rio de Janeiro (R.J.), Brasil.

---

NA PRÁTICA, COMO  
FUNCIONA O NOVO  
PROTOCOLO?



● ● ● ● ●  
● ● ● ● ●  
● ●  
● ●  
● ●  
● ●

PARA QUEM?



TODOS OS RN  
INTERNADOS NA UTI  
NEONATAL

QUANDO REALIZAR?

INICIAR DENTRO DAS  
PRIMEIRAS 24 HORAS  
DE VIDA.

REALIZAR ATÉ QUE O  
BEBÊ ESTEJA  
MAMANDO AO SEIO  
MATERNO.

---

● ● ● ● ●  
● ● ● ● ●  
● ●  
● ●  
● ●

QUAL LEITE UTILIZAR?



SEMPRE QUE DISPONÍVEL,  
UTILIZAR LEITE HUMANO cru  
ORDENHADO BEIRA-LEITO

(COLOSTRO, LEITE DE  
TRANSIÇÃO OU LEITE  
MADURO)

E QUANDO NÃO HÁ  
LEITE CRU DISPONÍVEL?

SITUAÇÕES DE  
EXCEÇÃO  
DEVEM SER  
DISCUTIDAS EM  
EQUIPE

---

● ● ● ● ●  
● ● ● ● ●  
● ●  
● ●  
● ●

QUAL O INTERVALO  
DE ADMINISTRAÇÃO?

DE 3 EM 3 HORAS,  
MESMO NOS RN EM  
DIETA ZERO



QUAL O VOLUME?

<1500G:0,1ML CADA  
BOCHECHA  
(OU SEJA: 1 GOTA)

>=1500G:0,2ML EM  
CADA BOCHECHA  
(OU SEJA: 2 GOTAS)

---

● ● ● ● ●  
● ● ● ● ●  
● ●  
● ●  
● ●

## COMO ADMINISTRAR?



UTILIZAR A SERINGA DE 1ML  
E APLICAR O VOLUME  
INDICADO NA FACE INTERNA  
DE CADA BOCHECHA DO RN,  
NOS MESMOS HORÁRIOS DE  
ADMINISTRAÇÃO DA DIETA.

## QUEM DEVE ADMINISTRAR?

O PROFISSIONAL DE  
ENFERMAGEM QUE ESTÁ  
PRESTANDO OS  
CUIDADOS AO RN.

---

● ● ● ● ●  
● ● ● ● ●  
● ●  
● ●  
● ●

DEVO ME PREOCUPAR  
COM O STATUS DO CMV  
MATERNO?

NÃO.

A QUANTIDADE A SER  
ADMINISTRADA É  
EXTREMAMENTE  
PEQUENA, NÃO HAVENDO  
RISCO DE REATIVAÇÃO DO  
CMV PELA IMUNOTERAPIA.



EXISTEM OUTROS  
BENEFÍCIOS ALÉM DOS  
BENEFÍCIOS  
IMUNOLÓGICOS?

SIM.

MAIOR TAXA DE ALEITAMENTO  
NA ALTA

MELHOR TOLERÂNCIA  
ALIMENTAR

MAIOR GANHO PONDERAL

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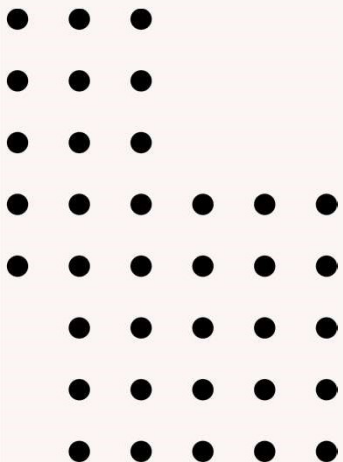
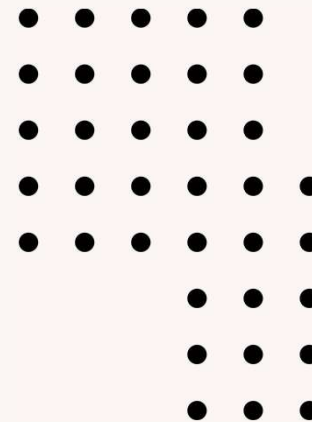
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VOCÊ É MUITO  
IMPORTANTE PARA O  
SUCESSO DESSE  
PROTOCOLO!



Vamos juntos prestar os melhores cuidados  
aos nossos pacientes, eles merecem  
receber as melhores práticas assistenciais

---





SELO DE QUALIDADE

# INCUBADOR A VAZIA



**MUITO OBRIGADA!**



**EQUIPE DO BANCO DE LEITE, NEONATAL E DA FARMÁCIA CLÍNICA**  
Brasília, 30 de outubro de 2024