

A DIFFERENT VIEW

It's time to change the recommendations on COVID-19 and human milk donations

Jean-Charles Picaud^{1,2}  | Rachel Buffin¹ | Virginie Rigourd³ | Cécile Boscher⁴ |
Delphine Lamireau⁵ | Delphine Dumoulin⁶ | Fouzia Voirin⁷ | Solène Lefur⁷ |
Pierre Frange⁸ | Bruno Lina⁹

¹Neonatal unit and Auvergne Rhone Alpes human milk bank, Croix Rousse University Hospital, Hospices Civils de Lyon, Lyon, France

²CarMen Laboratory, INSERM, INRA, Claude Bernard University, Lyon, France

³Ile de France Human Milk Bank, Hopital Necker enfants maladies, Paris, France

⁴Human Milk Bank, Hopital mère-enfant, Nantes, France

⁵Bordeaux-Marmande Human Milk Bank, Hopital Pellegrin, Bordeaux, France

⁶Human Milk Bank, Hopital Jeanne de Flandres, Lille, France

⁷Human Milk Bank, Hopital Rene Dubos, Pontoise, France

⁸Infection Control Unit, Laboratory of Clinical Microbiology, Necker – Enfants malades Hospital & EHU7328, Imagine Institute, University of Paris, Paris, France

⁹Hospices Civils de Lyon Virology Lab, Institute of Infectious Agents, National Reference Center for Viral Respiratory Infections, Croix Rousse University Hospital, Lyon, France

Correspondence

Jean-Charles Picaud, Neonatal Unit and Auvergne Rhone Alpes Human Milk Bank, Croix Rousse University Hospital, Hospices Civils de Lyon, Lyon, France.
Email: jean-charles.picaud@chu-lyon.fr

1 | THE IMPORTANCE OF DONOR MILK

The COVID-19 pandemic has raised important questions about breast milk donors and the treatment of donor milk from human milk banks.

Human milk has a very specific composition that is essential for premature infants, as it significantly reduces the risk of serious complications related to prematurity and improves long-term neurocognitive development. That is why donor human milk from certified milk banks is the preferred alternative for providing preterm infants with nutrition if their mother's own milk is insufficient or not available. It is often difficult for mothers who have delivered very prematurely to breastfeed their high-risk infant during hospitalisation, and donor human milk is essential for their infant's optimal nutrition. However, donor milk may be unavailable, or only available in limited amounts, because there is a lack of donors or because the donor milk has been discarded due to bacteriological contamination.

2 | EFFECTS OF THE PANDEMIC

During the COVID-19 pandemic, mothers who have tested positive for the severe acute respiratory coronavirus 2 (SARS-CoV-2) have been temporarily excluded from donating milk and this has disrupted, or even stopped, milk collection in some places.¹ Excluding mothers with the virus was a relevant precautionary strategy in spring 2020, when COVID-19 was first declared a pandemic, but that strategy is not supported by current data.

3 | EXAMINING THE EVIDENCE

It is important to consider five key points. First, COVID-19 has very rarely been described in newborn infants and, when it has, it has mostly been benign.² Second, milk donation and human milk banks are organised according to national regulations and, or, guidelines

Abbreviations: SARS-CoV-2, severe acute respiratory coronavirus 2.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

©2021 The Authors. Acta Paediatrica published by John Wiley & Sons Ltd on behalf of Foundation Acta Paediatrica.

that include strict hygiene rules.³ Third, SARS-CoV-2 ribonucleic acid has only been found in breast milk in very exceptional cases and for a limited period of time and its ability to pass on the virus has not been proven to date.⁴⁻⁶ Fourth, SARS-CoV-2 is eliminated by Holder pasteurisation, which is carried out in most human milk banks at 62.5°C for 30 min. The same is true for other pasteurisation protocols, including those that use 56°C for 30 min and 70°C for 5 min.^{4,7,8} Fifth, the antibodies that are specific to SARS-CoV-2 have been detected in the breast milk of mothers who have tested positive for the virus, even if their protective role still needs to be demonstrated.^{6,9,10}

4 | OUR THREE-POINT ACTION PLAN

Having examined the evidence, the authors, who come from numerous French human milk banks and include experts on viral respiratory infections, believe that the milk bank guidelines should be updated. This paper presents a three-point action plan. We believe that specific questions about COVID-19 should continue to be included in the usual health questionnaire for donors, to determine whether or not they are contagious. That is defined as a positive test for SARS-CoV-2 or symptoms that are suggestive of COVID-19, such as a fever, a headache, severe weakness, a cough, diarrhoea, vomiting and a loss of smell or taste. We also recommend that milk donations from symptomatic mothers should be authorised, pending careful ongoing monitoring, and that any further donations must be delayed until she is no longer considered contagious. However, human milk collected during this period can be later pasteurised. This recommendation to temporarily suspend the collection of milk during the contagious period will also protect the healthcare professionals who collect the donated milk. The contagious period is defined as a minimum of seven days after the onset of symptomatic COVID-19 and the suspension should not end until the mother has been free of any symptoms for at least 48 hours. The definition also includes seven days after the first positive SARS-CoV-2 diagnostic test result using molecular amplification, namely reverse transcription polymerase chain reaction or reverse transcription loop-mediated isothermal amplification or the antigen test for asymptomatic COVID-19.

5 | CONCLUSION

Healthcare professionals have faced many different dilemmas during the COVID-19 pandemic and caring for vulnerable preterm babies has been one of the greatest challenges. We believe that our three-point plan provides a valid strategy that will help to ensure

that high-risk neonates are provided with sufficient amounts of donor human milk if their own mother is unable to feed them. This strategy will continue to be reviewed as, and when, new evidence becomes available.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

ORCID

Jean-Charles Picaud  <https://orcid.org/0000-0002-4999-6668>

REFERENCES

1. Marinelli KA. International perspectives concerning donor milk banking during the SARS-CoV-2 (COVID-19) Pandemic. *J Hum Lact.* 2020;36(3):492-497.
2. Salvatore CM, Han J-Y, Acker KP, et al. Neonatal management and outcomes during the COVID-19 pandemic: an observation cohort study. *Lancet Child Adolesc Health.* 2020;4(10):721-727.
3. The good practice rules for the collection, preparation, qualification, treatment, storage, distribution and dispensing on medical prescription of human milk by the milk banks. Decision of December 3rd, 2007. French official Journal 2008; January 5th:328. https://association-des-lactariums-de-france.fr/wp-content/uploads/lactarium_guide_bonnes_pratiques_5_janvier_2008_traduction_anglais.pdf
4. Chambers C, Krogstad P, Bertrand K, et al. Evaluation for SARS-CoV-2 in breast milk from 18 infected women. *JAMA.* 2020;324(13):1347-1348.
5. Tam PCK, Ly KM, Kernich ML, et al. Detectable severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in human breast milk of a mildly symptomatic patient with coronavirus disease 2019 (COVID-19). *Clin Infect Dis.* 2020;72(1):128-130. <https://doi.org/10.1093/cid/ciaa673>
6. Peng S, Zhu H, Yang L, et al. A study of breastfeeding practices, SARS-CoV-2 and its antibodies in the breast milk of mothers confirmed with COVID-19. *The Lancet Regional Health - Western Pacific* 4. 2020:100045.
7. Conzelmann C, Groß R, Meister TL, et al. Pasteurization Inactivates SARS-CoV-2 Spiked Breast Milk. *Pediatrics.* 2021;147(1):e2020031690.
8. Walker GJ, Clifford V, Bansal N, et al. SARS-CoV-2 in human milk is inactivated by Holder pasteurisation but not cold storage. *J Paediatr Child Health.* 2020;56(12):1872-1874.
9. Dong Y, Chi X, Hai H, et al. Antibodies in the breast milk of a maternal woman with COVID-19. *Emerg Microbes Infect.* 2020;9(1):1467-1469.
10. Fox A, Marino J, Amanat F, et al. Robust and specific secretory IgA against SARS-CoV-2 detected in human milk. *iScience.* 2020;23(11):101735.

How to cite this article: Picaud J, Buffin R, Rigourd V, et al. It's time to change the recommendations on COVID-19 and human milk donations. *Acta Paediatr.* 2021;00:1-2. <https://doi.org/10.1111/apa.15782>