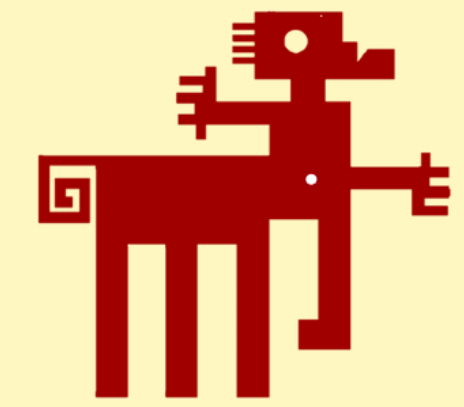


REVIEW OF CANINE COLOSTRUM AND PASSIVE IMMUNE TRANSFER IN NEWBORNS. ALTERNATIVES TO NATURAL COLOSTRUM AND IMMUNE SYSTEM STIMULATORS



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FINAL DEGREE PROJECT | JUNE 2021



OBJECTIVES

Remarking the importance of colostrum intake to achieve a proper passive immune transfer in newborns. Seeking for alternatives to natural colostrum, immune system and energy stimulators.

INTRODUCTION

- Colostrum is a specific secretion of the mammary gland produced during the first two days post-partum.
- It provides passive immunity by the transfer of immunoglobulins (Ig). Newborns are nearly agammaglobulinemic at birth (0.3 g/L IgG in blood).
- Newborns need to intake colostrum the first 12-24 hours of life.

ALTERNATIVES TO NATURAL COLOSTRUM

Study performed by Chastant-Maillard et al. (2019) stated:

- Industrial Milks (IndMs) are not satisfactory for fatty acid concentration.
- It is preferred IndMs with higher levels of totally fatty acid concentration, SFA (Saturated Fatty Acid), DHA (Docosahexaenoic Acid), and EPA (Eicosapentaenoic Acid), because of its role in neurological development.

HOW TO PERFORM A COLOSTRUM BANKING?



Optimal time for colostrum collection: 24 hours after whelping.

1

Clean bitch's teats (chlorhexidine), dry and milk.

2

Store colostrum in 1-5 ml polypropylene or glass tubes and freeze at **-20°C**.

3

Warm up to **30-35°C**:
✓ baby-bottle warmer or water-bath
X microwave

4

Administration at a minimal volume of **1.5mL/100g** of BW/day.

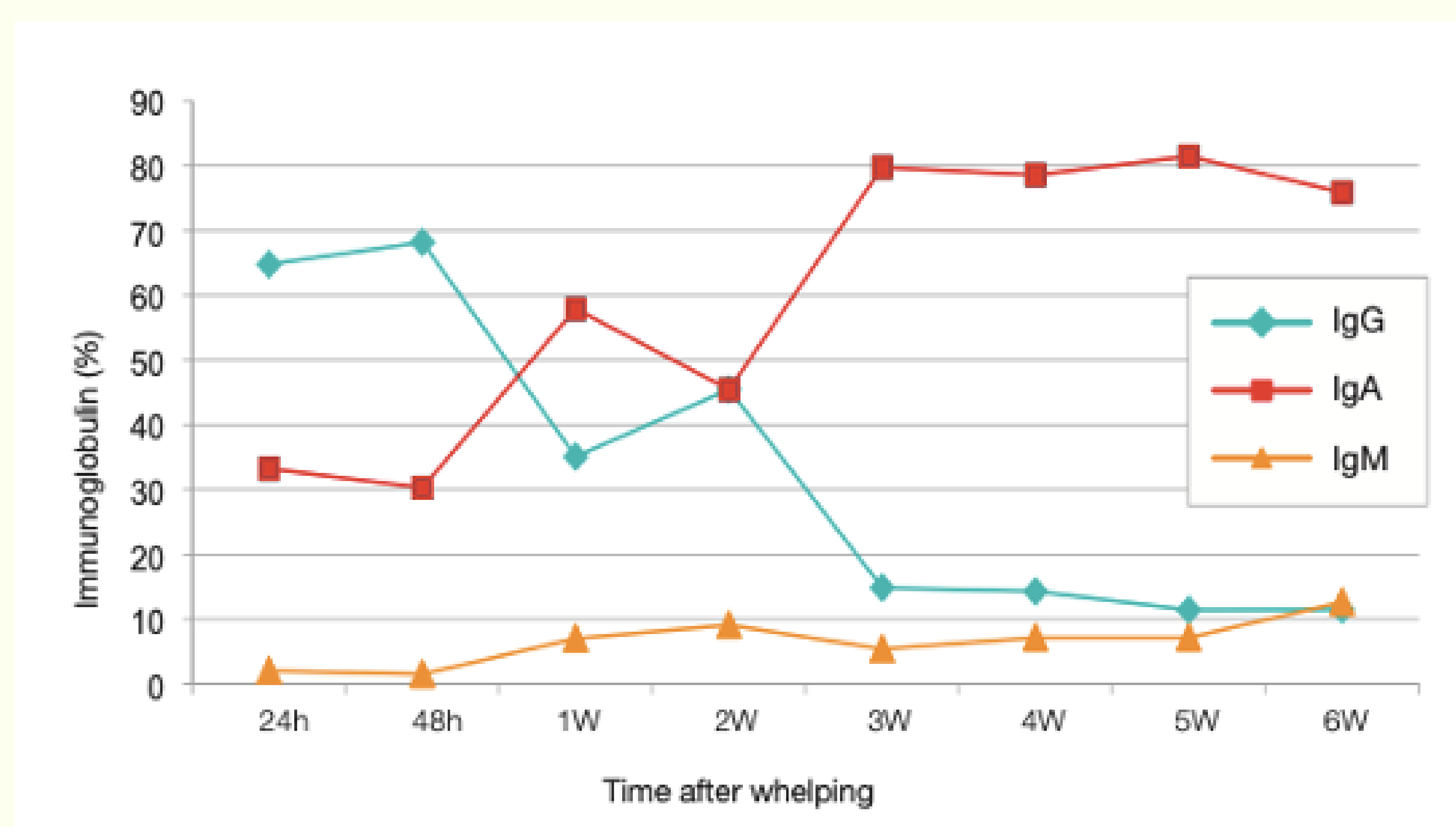
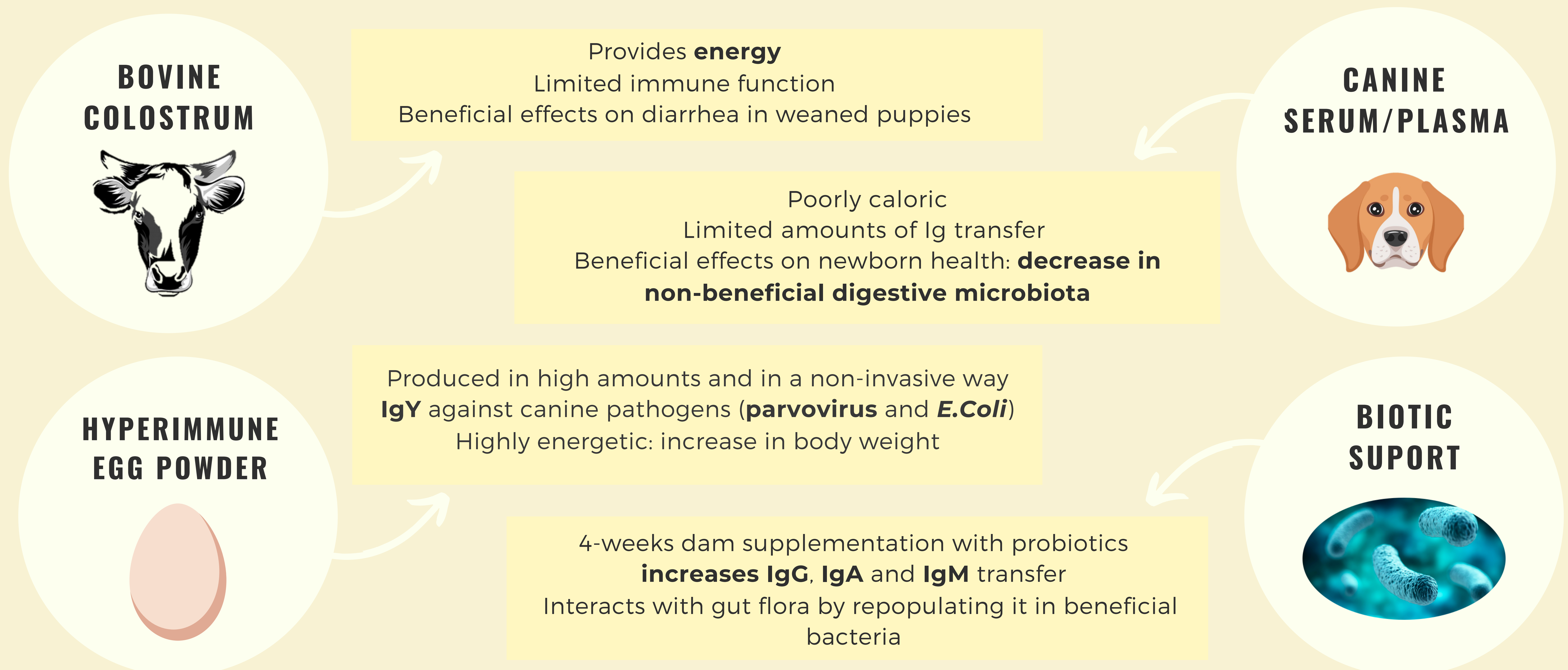


Figure 1: Immunoglobulins in colostrum and milk in relation to different times after whelping
From (Chastant-Maillard and Mila 2016)

IMMUNE SYSTEM AND ENERGY STIMULATORS



CONCLUSION

The best option to replace natural colostrum does not exist. However, each alternative could assist in some of the crucial points.

A vital advance to decrease neonatal mortality would be the development of a colostrum substitute which ensures:

- Energy supply
- Immunological support
- Efficiency against canine pathogens

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Chastant-Maillard S, Mila, H, Adib, A. 2019. Fatty acid profile of canine colostrum, milk and industrial milks. Reprod Domest Anim. 54 (2):1-114