

production and stimulation of specific and nonspecific immunity.¹⁸ In sum, Probiotics are generally thought to affect the gastrointestinal tract and the associated CD (local) immune system. Several studies have been performed to investigate the effects of different probiotic bacteria. From these studies it has become clear that different strains of lactobacilli induce very different effects. In addition, effects seen in a certain human population with one strain of bacteria can often not be reproduced. This makes a final overall conclusion very difficult.

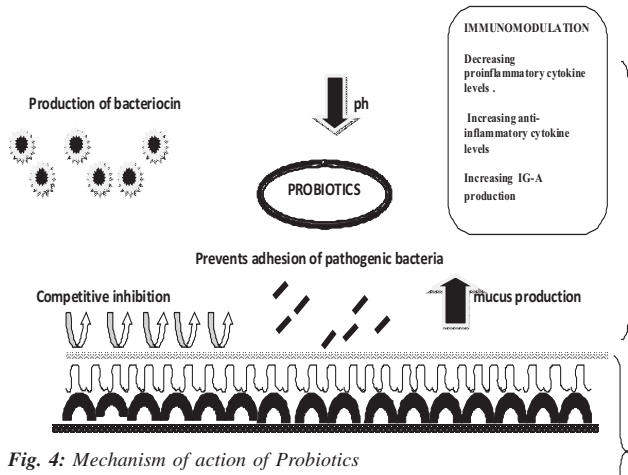


Fig. 4: Mechanism of action of Probiotics

FUTURE OUTLOOK AND CONCLUSION

The health promoting benefits and efficacy of Probiotics has been demonstrated in many models of gastrointestinal disease. Fermented milks, cheese, enriched yoghurt; yoghurt-like products are the commonly used probiotic food preparation. They are also marketed as capsules, and powders. In future, they are expected to be found in fermented vegetables and meats.

Probiotics seem to have beneficial effects in some diarrheal and inflammatory conditions in the gastrointestinal tract, where there seems to be an imbalance between 'good' and 'bad' bacteria. Until now, only a few small studies have been undertaken to define the role of Probiotics in clinical practice, the results of which are encouraging. The advantage of these products includes ease of administration, low cost, and good safety profiles.

The mechanisms of action, the optimal regimen – such as dose, strain(s), vehicle and frequency of administration and the duration of

probiotic treatment are not known. The quality control of the commercialised probiotic food supplements, the exactness of the label and the indications need to be improved. More research on pharmacodynamic and pharmacokinetic aspects is also needed. Safety should be better assessed in pre-term, immunodeficient and immunocompetent individuals for any risk of overstimulation (or modification) of the immune system in susceptible subjects. The establishment of standards of identity for probiotic-containing food products will serve to accelerate their development and availability.

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