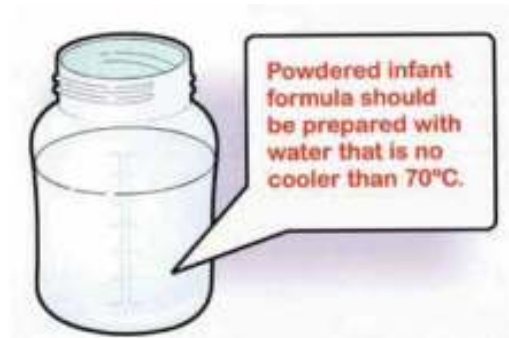

Are the bacteria in powdered formulas friendly or unfriendly?



Baby milk companies make claims that their additives to powdered formulas improve growth, make digestion easier or protect against infections. Such additives include probiotics; these are the so-called friendly bacteria which are alleged to improve infant health. The heavy promotion of products with added probiotics gives these companies a competitive edge over others.

What the companies fail to tell parents and carers is that powdered formulas are not sterile and can also contain unfriendly bacteria, harmful pathogens such as *Salmonella* species or *Cronobacter/Enterobacter sakazakii*. These bacteria can be introduced during the manufacturing process and may cause severe invasive infections which can be fatal or cause life-long disability.

For this reason, in 2007 WHO produced the Guidelines for the safe preparation, storage and handling of powdered infant formula. These recommend a lethal or decontamination step to inactivate any pathogenic bacteria which might be present, even in unopened tins of powdered formula.

When the powdered formula is made up with lukewarm water, these harmful bacteria thrive and multiply in the warm milk. However, such bacteria are **heat resistant** and so the water needs to be very hot to kill them and thus prevent rapid multiplication. Reconstitution with water first boiled and then cooled to no less than 70°C is the lethal step required for inactivation. Prepared formula should be fed to the baby promptly and then any leftovers must be discarded and not re-used.

Several governments have issued guidance and policies to implement the WHO Guidelines, including the lethal step. However, the survey of examples being prepared by IBFAN shows that manufacturers are still failing to warn and that labels on powdered formula packages give incomplete and confusing instructions. This is because the added probiotics, on which all the company claims are based, are **heat-sensitive** bacteria: they are killed off by reconstitution with water at no less than 70°C. Therefore the claims made by the companies that their formulas are 'modelled on breastmilk' or 'patterned after breastmilk' are invalidated. It is only the living fluid, breastmilk, which provides the baby with live anti-infective agents and helps boost the development of its still immature immune system.

There is evidence that the companies are actively opposing the WHO Guidelines so as to protect their market for formulas with ‘added probiotics’. However, the scientific evidence that these probiotic bacteria confer health benefits was seriously questioned again in 2011 by the ESPGHAN Committee on Nutrition: ESPGHAN. [The Opinion of the ESPGHAN](#) summarises the lack of evidence to justify most of these claims.

IBFAN’s aim is to avoid undue alarm among parents and carers but to alert them to the risks by providing accurate and objective information. In its role as IBFAN’s International Liaison Office, IBFAN-GIFA is responsible for cooperation with WHO to follow up on resolutions of the World Health Assembly, such as those in 2005 and 2008 on intrinsic contamination of powdered formulas by harmful bacteria. In 2013, IBFAN-GIFA has shared concerns over the implementation of the [2007 WHO/FAO Guidelines for the safe preparation, storage and handling of powdered infant formula](#) with the WHO.

IBFAN’s global working group is working to alert parents and carers on how to reduce the risks of invasive infections caused by bacterial contamination of powdered formula. The working group is preparing a compilation of worldwide examples of **action** by government agencies and of **inaction** by formula manufacturers to implement the WHO Guidelines. We would appreciate input from readers who can provide examples from their countries.

- Article on IBFAN website on [Cronobacter \(Enterobacter\) sakazakii infections: Time for Action](#)