longum NCC3001 was detected in 17 % of cases. Enterobacteria diminished 1 log in the test group ($P=0.08$) whereas it did not change in the control group.

Conclusion: The use of pro- and prebiotic did not alter the tolerance of enteral feeding in the PICU, it is safe, and promotes a positive balance of the intestinal microbiota.

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CALCIUM/CREATININE RATIO IN ONE URINE SAMPLE INADEQUATELY REFLECTS NORMO- AND HYPERCALCIURIA IN PRETERM BORN INFANTS

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Background and aims: Preterm born infants can develop nephrocalcinosis or osteopenia. The urinary calcium/creatinine ratio is frequently used to screen for these conditions. In this pilot study we investigated variations of calcium/creatinine ratios in spot urine samples and the relation to total calcium excretion in 24 hours to detect hypo, normo or hypercalciuria.

Methods: Six to eight urine portions were collected from one feeding to the next, which combined, resulted in a 24hr urine collection. Calcium excretion was measured in mmol/l and calculated into mg/kg.day (Reference 1-7 mg/kg.day). Calcium/creatinine ratios were estimated in mmol/mmol (Reference 0.3-2.2 mmol/mmol). Fourteen preterm born infants (gestational age < 34 weeks) were more than two weeks old at the time of urine collection.

Results: Mean gestational age was 28.9 weeks with a mean age of 55 days at the time of urine collection. No patient was hypocalciuric. In 4 hypercalciuric infants 26 urine samples were collected. The calcium/creatinine ratio of 11 samples (42%) was in the normal range, thus appeared to be false negative for the detection of hypercalciuria. In 10 normocalciuric infants 68 urine samples were collected of which 7 (10%) showed elevated calcium/creatinine ratios, so 10 % of the samples did not match the diagnosis normocalciuria.

[Calcium/creatinine ratio versus calcium excretion]

Conclusion: Calcium/creatinine ratios estimated in one urine sample inadequately reflect normo or hypercalciuria in preterm infants and should not be used for this purpose.

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ASSOCIATIONS BETWEEN POLYUNSATURATED FATTY ACIDS IN PLASMA AT DELIVERY AND IN HUMAN MILK AT THE 6TH WEEK OF LACTATION

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Background and aims: It is generally accepted that considerable polyunsaturated fatty acid (PUFA) supply with human milk (HM) originates from maternal stores, however, the exact relationship is not fully understood.

Method: We investigated with gas chromatography fatty acid composition of maternal and cord plasma phospholipids at delivery and of human milk at the 6th week of lactation (n=61).

Results: We found no relationship between n-6 PUFAs either in maternal plasma (MP) or in cord plasma at birth and HM at the 6th week of lactation. In contrast, there were significant positive association between n-3 PUFAs in HM at the 6th week of lactation and n-3 PUFAs in the mothers at delivery (table). Similarly, we found significant positive correlations between cord plasma C20:5n-3 values at birth and the most important n-3 long chain PUFA metabolites, the C20:5n-3 ($r=0.45$, $p<0.001$) and C22:6n-3 ($r=0.30$, $p<0.05$) values in HM at the 6th week of lactation.

	HM C18:3n-3	HM C20:5n-3	HM C22:5n-3	HM C22:6n-3
MP C18:3n-3	0.10	0.21	0.28a	0.24
MP C20:5n-3	-0.07	0.29a	0.18	0.37b
MP C22:5n-3	-0.14	0.45c	0.20	0.30a
MP C22:6n-3	-0.22	0.20	0.10	0.18

[Table]

^a= $p<0.05$, ^b= $p<0.01$, ^c= $p<0.001$

Conclusion: Our findings that maternal n-3 PUFA status at delivery is significantly and positively associated to n-3 PUFA content of human milk at the 6th week of lactation call further attention to optimal n-3 PUFA supply during pregnancy.

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THE EFFECT OF LACTOBACILLUS RHAMNOSUS GG SUPPLEMENTED ENTERAL FEEDING ON THE MICROBIOTIC FLORA OF PRETERM INFANTS-DOUBLE BLINDED RANDOMIZED CONTROL TRIAL

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Aim: The intestinal flora of preterm infants, dominantly presents with decreased amounts of probiotics. This is enhanced by formula feeding. The aim of this double blinded randomized control trial was to compare the stool flora of bottle fed preterm infants randomized to receive lactobacillus rhamnosus GG 3×10^9 or placebo with each enteral feed.

Method: Within 0-3 days after birth 46 healthy preterm enterally fed infants were enrolled to receive either the probiotic or placebo. Rectal and throat swabs were preformed together with faecal sampling at study day 7, 21, 42. The presence of lactobacillus rhamnosus GG, colonization and somatic growth were recorded during the study. **Results:** In the probiotic fed group, both the number of lactobacillus in the stool and the amount of colonized infants were significantly higher ($p=0.014$ and $p=0.03$ respectively) on study day 7, aswell as study day 21 ($p=0.024$ and $p=0.022$ respectively). At the same time we did not note a significant difference in e.coli colonization on any of the following study days 7,21,42 ($p=0.93$, $p=0.37$ and $p=0.47$ respectively). Further on we did not show a significant difference in weight gain upon discharge between the two study groups ($p=0.567$, 95% CI (-168,305)).

Conclusions: An preterm infant formula with a addition of probiotics leads to a rapid growth of lactobacillus rhamnosus in the gut of bottle fed infants, but does not have a potential to decrease the amount of pathogenic organisms, nor to increase weight gain during enteral nutrition.

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HYDRATION OF FAT-FREE MASS IN HUMAN NEWBORNS: ASSESSMENT AND IMPLICATIONS WHEN CALCULATING BODY COMPOSITION FROM BODY DENSITY

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Background and aims: Assessment of infant body composition is of interest when investigating nutritional requirements and when early origins of overweight and obesity are studied. Equipment (PeaPod) for assessing infant body volume accurately and conveniently has recently become available. Together with body weight, body volume can be used to calculate body density. Body composition can be calculated from body density using the "Fomon" or the "Butte" model. These models differ regarding the water content in fat-free mass (hydration factor, HF). We assessed HF and its biological variability in newborns and compared results calculated using the two models at one and 12 weeks of age.

Methods: Body volume and body weight were measured in 12 healthy fullterm infants less than