

BIBLIOGRAFIA LATINOAMERICANA

ARGENTINA

Amino acid imbalance and body composition: Effect of natural imbalanced diets on plasma volume of rats. Nelsa E. Marcilla, María E. Rio and J. C. Sanahuja (Department of Nutrition and Food Sciences) and A. Martinez Seeber. (Department of Biological Science. Human Physiology). (School of Pharmacy and Biochemistry. University of Buenos Aires. Junin 956. Buenos Aires, Argentina). *Nutrition Reports International*, september 1975 Vol. 12 No. 3.

The influence of two natural imbalanced diets on the plasma volume of undernourished rats was studied during different experimental periods and compared to two low protein balanced diets. The results obtained with normal animals fed stock diet were used as reference. In all the experimental groups plasma volume was dissociated from weight remaining similar to that of the undernourished 25 day old rats. The data were expressed as units of plasma volume (ml/100 g body weight) and plotted as a function of age. Curves from animals fed low protein diets followed the same pattern as controls but the initial undernourishment determined a displacement. Therefore, the normal evolution of this time dependent change was preserved. The curves obtained with the groups fed imbalanced diets followed a different pattern. In these animals plasma volume was much lower than expected for weight and also for age.

Attention should be paid to the implications of these findings when interpreting the concentration of any blood constituent under different dietary conditions.

Changes in Muscle and Brain Electrolytes in Rats Fed Natural Imbalanced Diets.—S. Closa, M. L. Portela, M. E. Rio and J. C. Sanahuja. (Department of Experimental Nutrition

and Food Science, School of Pharmacy and Biochemistry, University of Buenos Aires, Buenos Aires, Argentina). *J. Nutr.* 104: 1381-1388, 1974.

The influence of a natural dietary amino acid imbalance on composition and sodium and potassium content of muscle and brain of weanling rats was studied at 50 and 90 days of age. Muscle water, the distribution of potassium and sodium, and their ratios between the intra and extracellular space were examined as indications of biochemical maturity. Rats fed an imbalanced diet up to 50 days of age showed changes in muscle, protein, and glycogen similar to those observed previously on the whole carcass, i.e., lower muscle protein and higher muscle glycogen, than in rats fed a balanced low protein diet. No significant differences in the muscle concentration of sodium or potassium were observed; however, there was a close correlation between the individual potassium and nitrogen/water ratio, indicating that muscle potassium content was dependent on the chemical maturity of tissue. Intracellular sodium concentration was higher, and the ratios intracellular potassium/extracellular potassium, extracellular sodium/extracellular potassium, and intracellular potassium/intracellular sodium were lower compared with the group fed the low protein balanced diet; all these differences are statistically significant. Brain potassium was also significantly lower than that in the group fed the balanced diet, especially when expressed as potassium to sodium ratio or potassium per gram of protein nitrogen. Animals fed an imbalanced diet up to 90 days of age showed no differences in composition in absolute values nor in relative proportions when compared with rats fed the balanced diet except for muscle glycogen, which was significantly higher in the rats fed the imbalanced diets. The distribution studies of sodium, potassium, and water showed no differences between the various body compartments of the two sets of animal. 22 references.

Sequential Renal Lipid Changes in Weanling Rats Fed a Choline-deficient Diet.—Alberto J. Monserrat, Eduardo A. Porta, Amiya K. Ghoshal and S. B. Harmant. (Centro de Patología Experimental, Departamento de Patología, Facultad de Medicina, Universidad de Buenos Aires, Buenos Aires, Argentina, and Department of Pathology, School of Medicine, University of Hawaii, Honolulu, Hawaii 96822). *J. Nutr.* 104: 1496-1502, 1974.

To clarify conflictive aspects related to the possible pathogenic role of renal lipid changes in the usually fatal renal necrosis occurring in choline-deficient rats, a severely hypolipotropic basal diet that induces renal necrosis was fed ad libitum to male rats for 5 days. Control rats were pair-fed the same basal diet supplemented with choline. Renal lipid changes were sequentially studied at days 2, 4, and 5, and the values of these determinations were expressed using different base parameters to facilitate adequate interpretation. Since at day 5 almost 50% of the choline-deficient rats had renal necrosis, the data obtained at this time were separated into those preceding and those accompanying necrosis. The analyses of the results obtained under these conditions suggested that the most significant pre-necrotic lipid change is a decrease in the renal content of phospholipids occurring shortly before necrosis (day 5). At this time the levels of sphingomyelin in the non-necrotic kidneys of choline-deficient rats were significantly higher than those of the control rats while the levels of phosphatidylinositol were significantly lower. It is concluded that contrary to recent proposals, the possibility still exists that a renal phospholipid deficit and/or other more subtle changes in the individual renal phospholipids may play a role in the pathogenesis of this condition.

BRASIL

Self Selection of Dietary Protein from rice and beans.—Nelson de Souza and J. E. Dutra de Oliveira. (Faculdade de Ciências Médicas e Biológicas de Botucatu, SP, Brazil, and Faculdade de Medicina de Ribeirão Preto, SP, Brazil). *Ecology of Food and Nutrition* 1974, Vol. 3, pp. 3-5.

When rats were given a choice between diets of rice and beans containing 7 percent protein, they ate on the average four

times more rice than beans. Supplementation of the bean diet with methionine increased the intake of beans to a level very close to that of unsupplemented rice. When lysine and threonine were added to the rice diet, the intake of this supplemented cereal increased. The ratio of consumption of rice to beans was similar to the unsupplemented rice and bean diets. Protein Efficiency Ratios (PER) were increased and growth performance was better than that observed for rats eating the unsupplemented foods. The amino acid supplementation of both rice and bean diets resulted in the high average intake of rice being maintained. In addition the intake of beans was increased compared to the intake when the beans were not supplemented. Weight gain was double that found in the groups fed on unsupplemented rice and beans, the PER values were high. Thus, it appears that the free choice of rats can be changed through amino acid supplementation of natural food with a resulting improvement in the nutritive value of the diet. This can be important in planning the supply of protein from staple foods for feeding humans. 10 references.

Relation between weight at birth, maternal height, gestational age and feeding restrictions in normal pregnant women.—C. Ciari, P. A. M. de Almeida and A. A. F. de Siqueira. *Rev. Saúde públ., S. Paulo*, 9: 33-42, 1975.

The influence of maternal height, gestational age and feeding restrictions in normal pregnant women on the weight at birth of offspring was studied. The results showed that the weight at birth rises along with maternal height and gestational age. Feeding restrictions caused a decrease of 251 grammes in the average newborn weight and was responsible for a third of all births of underweight children. The authors consider that, in women less than 1.50 m tall, pregnancies of 38 and 39 weeks may increase fetal risk. The prescription of restrictive diets to normal pregnant women should not be founded solely on rigid weight-gaining schemes due to damage that may be caused to the newborns' weight. 15 references.

Comparison between hematological values of the mother and newborn. Szarfarc, S. C. *Rev. Saúde públ., S. Paulo*, 9: 43-7, 1975.

Information on the relationship between hematological indices of mother and new-

born is contradictory. In order to compare the mentioned indices, the present study was carried out. The results of our study show that the higher the hematologic indices in the mother the higher the hematologic indices in the newborn. 9 references.

Consideration on food intake in Icapara and Pontal de Ribeira, State of S. Paulo, Brazil.—Mazzilli, R. N. *Rev. Saúde públ., S. Paulo*, 9: 49-55, 1975.

The dietary survey carried out among 105 families from Icapara, and 56 from Pontal (Región of the Ribeira River Valley, state of S. Paulo, Brazil) showed some nutritional deficiencies. The food intake of 24 hours was obtained by applying the method of direct weighing combined with the recall method. Foodstuffs of greater consumption were: cassava flour, fish and polished rice. The inadequacy of diet as regards some nutrients, such as vitamin A, thiamine, riboflavin, vitamin C and Calcium, is connected with food habits. These populations rarely include milk, vegetables or fruit in their daily diet. Animal protein was not a problem in the studied communities because fish was greatly consumed. An integrated program of nutrition and Health Education is fundamental to improve dietary and social standards in these populations. 5 references.

Infant mortality trends in Salvador.—(Bahia) Dias, C. G. N. *Rev. Saúde públ., S. Paulo*, 9: 57-69, 1975.

The death causes of children under year of age in the city of Salvador, Brazil, between 1962 and 1971, including a statistical investigation of the secular tendency of the infant mortality rate, were reviewed. For some data a straight line was adjusted with a mathematical equation of the type $Y = a + bx$ (method of the least squares). For other a modified exponential curve of the type $Y = k + ab^x$ was used. The general tendency of the infant mortality rate was descendent throughout the period 1962 to 1970, arising in 1971 to levels observed in 1964. A similar fact was encountered when neonatal mortality and mortality rates by gastroenteritis and other diarrheal diseases were studied. 18 references.

A model for global childcare in teaching hospitals.—Conceição, J. A. N. et al. *Rev. Saúde públ., S. Paulo*, 8: 341-58, 1974.

A model for multiprofessional care to be used in teaching hospitals was presented.

The systematization of basic data allows specific identification of the physical and psychosocial conditions of the child, besides knowledge of the family situation and community characterization. With these elements the elaboration of a global diagnosis aiming at the treatment of the child, the changing of favourable conditions for its growth and development becomes possible. This approach, regarding attention, permits treatment that fulfils the child's biological, cognitive, affective and psychomotor needs. As for tuition, it propitiates the development of personnel with a biological and psychosocial view of health, creating opportunities for multiprofessional teamwork. In reference to research, it allows the undergoing of studies regarding standardization of patterns of care in the medical, social work, nursing, nutrition and health education fields.

Hematological study of pregnant women and newborn children.—Szarfarc, S. C. *Rev. Saúde públ., S. Paulo*, 8: 369-74, 1974.

The present paper was planned to study prevalence of iron deficiency in a group of women at delivery and newborn children of comparable social and economic status. The biochemical survey included hemoglobin concentration, packed cell volume, serum iron and iron binding capacity. The results showed a prevalence of anemia of 52,3% for the newborn. Iron administration, at specialized services would be a sound prophylactic measure.

A study to evaluate the feeding of the preschool child through the family average intake.—Mazzilli, R. N. *Rev. Saúde públ., S. Paulo*, 8: 375-89, 1974.

The possibility of evaluating the feeding of the preschool child by measuring the family intake averages obtained by two processes was here studied. A sample of 54 families and 85 preschool children aged 2 to 7 years belonging to two cities of the State of S. Paulo was used. The children were divided into two groups, according to the child/adult relationship in each family. The dietary data referring to the children and families were obtained by applying the record dietary method combined with the recall method during 24 hours. The results of the individual intake of the preschool children and the mean family intake obtained were compared within each family. It was shown that in order to discover the preschool individual intake of nutrients it is necessary to carry out individual dietary

surveys. However, for population group studies it is possible to use the average per "equivalent-child" for total proteins and calcium, whatever the family composition. As regards the other nutrients the results suggest the utilization of the family mean or the "equivalent-child", according to the family composition. 22 references.

Cottonseed meal compared to ground soybeans in the production and composition of cow milk. I.—Roberto Pereira de Mello, Homero Abilio Moreira, Tacito Silva, Rubens Ferreira Barbosa, Antonio de Almada Lopes. Arq. Esc. Vet. UFMG, 26 (2): 131-145, 1974.

The present study was carried out at Escola Média de Agricultura de Florestal, Federal University of Viçosa, had as its main objective compare the effects of ground soybeans (*Glycine max* (L.) Merr) with cottonseed meal in the yield and composition of cow milk. Others objectives of the study were the economic aspect of the substitution, palatability of diets, live weight and health of the animals, nutrient intake and smell and flavor of milk produced. It was adopted a double change — over design with twenty four cows crossbred Holstein frisian red and with or Brown swiss and Zebu distributed in eight latin squares 3 x 3, in regime of confinement in a period of 77 days, including a previous period of 14 days. The cows were selected with according to the degree of crossing, stage of lactation, live weight, age, number of lactations and current milk production.

The three experimental rations (with equal amounts of nitrogen, with 18% of crude protein) were designated by "A" (corn meal plus ground soybeans, with 82.60% TDN); "B" (corn meal plus cottonseed meal, with 73.86% TDN) and "C" corn meal plus cottonseed meal plus cottonseed oil, with 82.60%) and fed according to NATIONAL RESEARCH COUNCIL (1966), having the last (C) functioned as contrast for comparison between A and B.

Besides the concentrate rations the cows received all the sorghum silage, mineral mixture and water.

According to the data obtained it is concluded:

1.—The total substitution of cottonseed meal by ground soybeans revealed satisfactory economic results with increase in milk productions (4% fat), higher fat content, fat produced, amount of protein and total solids, with statistically significant differences.

2.—It was concluded that with the above substitution the ash, protein and solids-not-fat content of milk, were not altered.

3.—It not affected smell and flavor of milk, palatability of concentrate mixture, health and live weight of animals.

4.—The data about the consumption of feed and nutrients showed that they were almost enough for maintenance and production (11.9 kg of corrected fat milk).

5.—The average of feed intake for day, for animal were 27.47; 0.058, 4.900; 4.668 and 4.870 kg of sorghum silage, mineral mixture and concentrates mixtures, in the treatments A, B and C respectively, having the last given to cows in the base of 1 kg for 2.4 kg of milk produced.

6.—The differences observed in milk produced and its composition was probably induced for the energy levels and fatty acids composition of the diets, no having influences of protein sources. 52 references.

Salmonellae in poultry carcasses in some poultry processing plants in Belo Horizonte, Brazil.—Fernando Antonio de Avila, Maria Das Dores Ferreira, Edir Nepomuceno Da Silva. Arq. Esc. Vet. UFMG, 26 (2): 211-214, 1974.

The bacteriological examination of 100 samples of poultry carcasses collected with swabs, from some poultry processing plants in Belo Horizonte, Brazil, during the period of April 1972 to January 1973, revealed 13 (13% positive for Salmonellae.

The contamination of the carcasses increased after evisceration and weighing processes, decreasing after cooling. The propagation of Salmonellae from bird to bird was evident during the processing.

In the live birds only one serotype was isolated from the cloaca. 12 references.

Farelo de Algodão comparado à soja-grão moída, na produção e composição do leite de vaca. II. Extrato seco total, extrato seco desengordurado, proteína e cinza.—Roberto Pereira de Melo, Ronon Rodrigues, Homero Abilio Moreira, Rubens Ferreira Barbosa, Tacito Silva (Escola Média de Agricultura de Florestal, Universidade Federal de Viçosa). Arq. Esc. Vet. UFMG. 26 (3): 251-259, 1974.

O presente experimento teve como objetivo comparar os efeitos da soja-grão moída, com farelo de algodão no produção e composição do leite de vaca.

Foi adotado delineamento rotativo em quadrados latinos equilibrados regulares, onde foram utilizadas 24 vacas mestiças Molandês vermelho e branco ou Schwitz x Zebu, distribuídas em oito quadrados latinos 3×3 , em regime de confinamento, durante 77 dias, incluindo 14 dias de período pré-experimental.

As três reções, experimentais isonitrôgenicas com 18,0% de proteína foram designadas por "A" (fubá + soja grão moída, com 82,60% de NDT), "B" (fubá + farelo de algodão, com 73,86% de NDT e "C" (fubá + farelo de algodão + óleo de algodão, com 82,60% de NDT, e fornecidas de cardo com o estabelecido pelo NATIONAL RESEARCH COUNCIL (196) tendo a última funcionado como contraste para comparação entre "A" e "B". Além das rações concentradas, as vacas receberam à vontade silagem de sorgo, mistura mineral e água.

Baseando-se nos resultados, concluiu-se que a substituição total do farelo de algodão pela soja-grão moída, revelou-se plenamente satisfatória, com aumento da quantidade de leite produzido (corrigido para 4% de gordura), maior porcentagem de gordura, quantidade de proteína, quantidade de gordura e extrato seco total, com diferenças estatisticamente significativas. Concluiu-se ainda que com essa substituição não foram alterados os teores de cinzas, proteína e extrato seco desengordurado do leite. 36 referencias.

Valor da proteína, gordura e extrato seco desengordurado como critério de seleção do leite na indústria.— P. Rodrigues, E. C. Dos Santos, F. Madsen, J. Rubinich, G. F. Araujo. Arq. Esc. Vet. UFMG. 26 (3): 343-349, 1974.

No presente trabalho estudou-se a composição do leite produzido na hácia leiteira de Belo Horizonte para estabelecer correlação entre gordura, proteína e extrato seco desengordurado (ESD) com o objetivo de orientar as indústrias de laticínios na seleção de um critério mais justo e real para pagamento do leite.

Utilizaram-se 6.124 amostras, coletadas diretamente do caminhão-tanque, representando 23 cooperativas regionais, filiadas à Cooperativa Central dos Produtores Rurais de Minas Gerais Ltda., totalizando 84.330.000 litros de leite produzido no período de maio/72 a abril/73.

Os percentuais médios encontrados foram de $4,19 \pm 0,19$ para gordura, $3,31 \pm 0,04$ para proteína, $9,16 \pm 0,04$ para extrato

seco desengordurado e $13,35 \pm 0,14$ de extrato seco total.

Os coeficientes de correlação entre gordura/ESD e gordura/proteína apresentaram-se com larga faixa de variação e, por conseguinte sem significância, enquanto o coeficiente proteína/ESD (0,826) mostrou-se bastante significativo.

Para uma estimativa da composição do produto, foi idealizada uma equação de regressão ($Y = 5,8639 + 0,9976 X$) que poderá ter grande aplicação por parte da indústria, principalmente no cálculo de proteína.

Pela uniforme participação da proteína nos produtos lácteos e a falta de significativa correlação entre proteína/gordura e gordura/ESD, evidenciou-se a possibilidade da formulação de novo critério de pagamento em que a proteína possa ser computada juntamente com a gordura, pois fatores limitantes foram contornados pelo uso do Pro-Milk e Milko-Tester nas análises do leite. Por isto, a formulação da equação de regressão facilita o cálculo de proteína ou ESD, mediante o conhecimento de um dos dois dados. 13 referencias.

Varição da gordura no leite de cooperativas regionais da CCPR, 1972-1973.—Edson Clemente Dos Santos, Geraldo Francisco de Araújo, Ronon Rodrigues, Jorge Rubinich, Rita Maria Resende Ladeira. Arq. Esc. Vet. UFMG. 26 (3): 351-356, 1974.

A variação da gordura no leite observada em 5.986 amostras de 23 cooperativas regionais da CCPR (Cooperativa Regional dos Produtores Rurais de Minas Gerais Ltda.), da bacia leiteira de Belo Horizonte, com o fornecimento total de 84.330.000 litros de leite no período de abril/1972 a março/1973.

A média anual foi de $4,19\% \pm 0,19$ de gordura para o total de 5.986 amostras de leite sendo a maior frequência entre as duas classes de $4,10 - 4,20\%$ e $4,20 - 4,30\%$.

As análises de gordura foram feitas nos laboratórios de Química do leite da Escola de Veterinária da UFMG - Belo Horizonte, com verificações diárias, usando o aparelho MILKO Tester MK II.

A composição anual de gordura mostrou baixo teor no fim do inverno, atingindo os limites mínimos no início da primavera (setembro) e elevada composição no fim do outono.

A pequena variabilidade nas 300 médias mensais indicou boa precisão para todas as análises de gordura. O coeficiente de

correlação gordura/proteína foi de + 0,249, bastante irregular entre as regionais, mas baixo. 17 referências.

Pelagra: Aspectos Clínicos e Laboratoriais.—Hélio Vannucchi, Alvaro Oscar Campana (Faculdade de Ciências Médicas e Biológicas de Botucatu - SP - Caixa Postal 102 - 18600 - Botucatu - SP - Brasil). Arq. Gastroent., S. Paulo, 11 (3): 129-133, 1974.

Foram estudados 14 pacientes adultos com pelagra. As lesões cutâneas eram típicas, sendo a diarréica, alterações mentais, hepatomegalia e polineuropatia as manifestações mais freqüentes. Todos os pacientes eram alcoólatras. Verificou-se esteatose hepática em dez dos 11 casos estudados; em dois deles constatou-se cirrose micronodular.

Dentre cinco pacientes, quatro apresentavam alterações leves da mucosa; a absorção de xilose estava diminuída em um dos oito casos analisados. Com exceção de um paciente, todos os demais tinham hipertensão arterial. 37 referências.

Efeitos de uma dieta livre e de uma dieta "tipo úlcera" sobre o pH do conteúdo gástrico e suas implicações na terapêutica da úlcera péptica.—Luiz de Paula Castro, João Galizzi Filho, Wilson Pessoa. (Faculdade de Medicina - Universidade Federal de Minas Gerais - Caixa Postal 340 - 30.000 - Melo Horizonte, MG - Brasil). Arq. Gastroent., S. Paulo 11 (3): 151-155, 1974.

Estudou-se em 15 pacientes com úlcera duodenal não complicada a influência de dois tipos de dieta —uma dieta "tipo úlcera" e uma dieta livre— sobre a acidez do conteúdo gástrico. Os resultados mostraram não haver diferença estatisticamente significativa entre os efeitos das respectivas dietas. Este fato permitiu concluir que não há evidência de efeito terapêutico da dieta comumente utilizada no tratamento da úlcera péptica. 17 referências.

Atividade da glicose-6-fosfato desidrogenase eritrocitária em população de área malarígena de São Paulo (Iguape).—Sueli B. Itskan e P. H. Saldanha (Laboratório de Genética Médica da Universidade de São Paulo, Brasil). Rev. Inst. Med. trop. São Paulo 17 (2): 83-91, março-abril, 1975.

Estudou-se a atividade da glicose-6-fosfato desidrogenase e respectivo padrão eletroforético, em 88 indivíduos (59 mulheres e 29 homens) da população de Iguape. A dosagem foi espectrofotométrica sendo as variantes eletroforéticas identificadas através de eletroforese em gel de amido. A população estudada apresentou 63% de indivíduos com histórico de malária. Deficiência enzimática ocorreu em 6,8% dos homens e 3,3% das mulheres. Duas mulheres apresentaram atividades enzimáticas altas sendo classificadas como hiperativas. A dosagem da atividade enzimática revelou uma variação de 6,10 — 16,19, média 10,24 ± 0,46, nos homens; 5,90 — 24,20, média 13,26 ± 0,53, nas mulheres. A variação total foi de 5,90 — 24,20, média 12,26 ± 0,37, excluídos os deficientes e hiperativos. O estudo das variantes eletroforéticas revelou a presença de variante A(+) em um indivíduo de raça negra. Quanto às hemoglobopatias, somente uma mulher apresentou o caráter ciclêmico (AS). A média da atividade da G6PD na população de Iguape diferiu significativamente das populações caucasóide, negra e japonesa de São Paulo, usando o mesmo método de dosagem enzimática. Entretanto, comparada com a média de Índios do Xingu, não mostrou diferenças significantes. As comparações entre os grupos com e sem histórico de malária não revelaram diferenças significantes, tanto na freqüência de deficientes quanto na média de atividade enzimática. A alta atividade da G6PD encontrada na população de Iguape, bem como entre os Índios, parece ser devida a uma característica genética dessas populações. 37 referências.

A study in the use of oral massive doses of vitamin A.—Malaquias Batista, Ramanita Mayer Varela, Suzana Gomes Texeira, and William K. Simmons. (Nutrition Institute, Department of Applied Nutrition, Cidade Universitaria, Recife, Brazil). Ecology of Food and Nutrition 1974, Vol. 3, pp. 293-298.

A study was conducted in the sugar cane growing area of Northeast Brazil on the use of massive doses vitamin A. It was shown that a dose of 225,000 I.U. of water miscible preparation could be given to preschool children without any toxic side effects. Conclusions could not be drawn on the effects of the massive doses over a period of one year because of seasonal variations in the intake of carotenes. In the areas studied there was a definite increase of vitamin A intake during certain months of the year which was directly linked to

the maturation of tropical fruits such as mango.

It is recommended that a program of massive doses of vitamin A be started in certain areas of Northeast Brazil. The existing health services offer an opportunity for such a program. The program should be correlated with seasonal variation on the vitamin and with outbreaks of certain infectious diseases at which time vitamin A nutriture is lowest. 18 references.

COLOMBIA

Nutritional anthropometry: diet and health-related correlates among preschool children in Bogotá, Colombia. Eunice Romero de Gwynn and Diva Sanjur. (New York State College of Human Ecology, Cornell University, Ithaca, New York, U.S.A.). *Ecology of Food and Nutrition* 1974, Vol. 3, pp. 273-282.

Nutritional anthropometry measurements were applied in the assessment of nutritional status of preschool children attending a health center in a poor area of Bogotá, Colombia. Results showed that weight for age was the most adversely affected nutritional indicator among the group of children, followed by weight for height, height for age and head circumference. Intercorrelations between the four anthropometric measurements show that weight for height was poorly correlated with height for age and head circumference suggesting independence among these variables.

When nutritional status of the children was evaluated utilizing Gomez's criteria (weight for age) the prevalence of malnutrition was 62 percent, while a decrease to 42 percent was observed when Mora's criteria (weight for height) was applied. This result seems to indicate that certain proportion of the malnourished children evaluated by Gomez's standards may have been chronic, past "recovered" malnourished cases, while those classified by Mora's method may have been either chronic unrecovered or acute cases, or a combination of both.

Explanation of the nutritional status of the children were attempted by analyzing relationships with demographic, dietary and related variables. Frequency of diarrhea and fever, and food deprivation during diarrhea appear to be the most closely related to malnutrition. The number of children under five years of age and lack of breast feeding also correlated significantly with the child's nutritional status. Among

the dietary variables studied, the quantity of milk consumed seemed to be a promising indicator of nutritional status among that particular group of children.

GUATEMALA

Levels of immunoglobulin M (IgM) in cord blood of Latin America newborns of low socioeconomic status.—Aaron Lechtig, Leonardo J. Mata, Jean-Pierre Habicht, Juan J. Urrutia, Robert E. Klein, Guillermo Guzman, Armando Caceres and Charles Alford. (Institute of Nutrition of Central America and Panama (INCAP), Guatemala, C. A.). *Ecology of Food and Nutrition* 1974, Vol. 3, pp. 171-178.

While studying the ecology of fetal malnutrition, levels of cord serum IgM were determined by radial immunodiffusion in cord blood taken from seven groups of newborns. Group 1 was selected among the high socioeconomic Peruvian urban population. The other six groups were from the low socioeconomic strata of Peru and Guatemala (Ladino and Indian, urban and rural, among whom, very poor environmental conditions prevailed).

The results were compared with values corresponding to the low income black population of Birmingham, Alabama. All IgM level above 0.19 mg/ml were considered high, since the point of inflexion appeared between 0.19 and 0.20 mg/ml in a log normal probability chart. In Group 1, only 6 percent of infants had high IgM values, a value similar to the 4 percent in the Birmingham low-income population. On the other hand, 40 to 65 percent of infants from Groups 2 to 7 showed high IgM levels. It is suggested that one of the main factors responsible for the high IgM concentration was intrauterine infection. The significance of the findings should be explored, in view of the causal relationship between intrauterine infection and impaired physical and mental development.

Length and Weight in Rural Guatemalan Ladino Children: Birth to Seven Years of Age.—Charles Yarbrough, Jean-Pierre Habicht, Robert M. Malina, Aaron Lechtig and Robert E. Klein. (Division of Human Development, Institute of Nutrition of Central America and Panama (INCAP), Calzada Roosevelt, Zone 11, Guatemala City, Guatemala, C. A.). *American Journal*

of Physical Anthropology Vol. 42, No. 3, May 1975.

The present study reports 5.029 length and weight measurements as well as percentile distributions for a mixed longitudinal series of 1,119 rural Guatemalan Ladino children. The study sample, birth through seven years, is representative of children in clinically good health, but of suboptimal nutrition.

Boys are longer and heavier than over the age range. Guatemalan children of both sexes are smaller than American white children from Denver. Differences are least at birth, and increase through two years of age. Between two and five years, differences between the rural Guatemalan Ladino and Denver samples are rather stable, but then increase through seven years.

Despite these differences there is a linear weight for length relationship which is the same across all preschool ages, both sexes, and for both the Guatemalan and Denver populations. This implies that age, sex, ethnic differences between the two groups compared, and mild-to-moderate protein-calorie malnutrition do not affect the relationship between weight and length in preschool children. 15 references.

Infection and Low Birth Weight in a Developing Country.—Juan J. Urrutia, MD; Leonardo J. Mata, ScD; Frederick Trent, MS; José R. Cruz, MS; Elba Villatoro; Russell E. Alexander, MD. (A Study in an Indian Village of Guatemala). *Am J. Dis Child/Vol. 129*, May 1975.

Nutrition in Pregnancy in Central America and Panama.—Guillermo Arroyave. *Am. J. Dis Child/Vol. 129*, April 1975.

Nutritional needs during pregnancy are increased and vary for each nutrient. Therefore, recommended dietary intake for pregnant women must be different from that for nonpregnant women.

In countries where malnutrition and infection are prevalent, such as those of Central America, pregnant women and the general population exhibit nutritional deficits of calories, protein, vitamin A, riboflavin, iron, and folates. However, deficits of iron and calories are greater in pregnant women than in the general population. Newborn infants of malnourished mothers reflect in some respects the biochemical abnormalities of their mothers.

Respuesta inmune del desnutrido con especial referencia al sarampión.—Leonardo J. Mata y W. Page Faulk. (División de Biología Ambiental, Instituto de Nutrición de Centro América y Panamá (INCAP), Guatemala). *Bol. Of. San. Pan.*, vol. 77, N° 5, 1974.

Se sabe relativamente poco acerca de cómo operar los mecanismos inmunizadores en individuos desnutridos, aunque estos por lo general se encuentran expuestos a un mayor riesgo de infección que los bien nutridos. Varios estudios llevan a la conclusión de que los niveles de inmunoglobulinas parecen estar influenciados más por la magnitud de la infección que prevalece en la comunidad que por la desnutrición, aunque se acepta en otros estudios que la desnutrición severa induce un estado de anergia.

En los últimos dos decenios se ha dilucidado buena parte del fenómeno inmunitario en el sarampión; y aunque se dispone de datos experimentales sobre posibles deficiencias inmunológicas del desnutrido frente a un ataque de sarampión, el alto riesgo de muerte que se observa en el niño severamente desnutrido sugiere que la inmunidad celular se encuentra deprimida y afecta el curso del proceso vírico y de las complicaciones bacterianas. Ha sido difícil establecer la relación entre la desnutrición y la respuesta inmune, debido a las dificultades inherentes a la investigación en poblaciones humanas; sin embargo, en algunos estudios se ha logrado inducir una respuesta de anticuerpos y una inmunidad efectiva en niños moderadamente desnutridos mediante una vacuna antisarampión atenuada. Pero la respuesta normal de las células B a esta vacuna sugiere que esta inmunidad no es tan importante como la inmunidad a las células T, porque los niños desnutridos tienden a morir por sarampión aun cuando son capaces de generar una respuesta de anticuerpos normal, tanto a la vacuna atenuada como a la infección natural. Considerando, por lo tanto, que el sarampión es potencialmente prevenible, y que los niños son en particular susceptibles, se debiera hacer todo esfuerzo posible por establecer programas efectivos de vacunación contra esta enfermedad en países en desarrollo. 76 referencias.

Complicaciones del Sarampión: Experiencia en una zona rural de Guatemala.—Juan J. Urrutia y Leonardo J. Mata (División de Microbiología, Instituto de Nutrición de Centro América y Panamá (INCAP),

Guatemala). Bol. Of. San. Pan., vol. 77, N° 3, 1974.

Se analizaron 174 casos de sarampión con registros clínicos completos entre 276 casos observados en una comunidad rural de Guatemala durante siete años. Los niños fueron estudiados a intervalos frecuentes con objeto de observar la duración, severidad y complicaciones del sarampión, de acuerdo con su estado nutricional básico. Se determinó el efecto del sarampión sobre el estado nutricional del niño, evaluado en términos de pérdida de peso. Las características clínicas y la duración del sarampión no complicado fueron semejantes a las descritas para niños de países industrializados; sin embargo, las complicaciones fueron significativamente más frecuentes que en países industrializados. Las más comunes fueron diarrea y bronconeumonía, que en su mayor parte aparecieron durante el curso de la enfermedad. El efecto sobre el estado nutricional fue mayor en menores de cuatro años, especialmente cuando el sarampión se encontraba complicado. Asimismo, la pérdida de peso fue más marcada en niños que inicialmente tenían un déficit nutricional más acentuado.

Este estudio revela que el sarampión afecta al estado nutricional, principalmente cuando hay complicaciones, lo cual pone en evidencia el daño a nivel de campo, como pérdida de peso. Por otro lado, es evidente que la desnutrición acentúa la severidad del cuadro, lo que resulta en un mayor número de complicaciones y en una pérdida de peso más acentuada. 8 referencias.

Fortification of Foods in Developing Countries. — Guillermo Arroyave (Chief of the Division of Physiological Chemistry, Institute of Nutrition of Central America and Panama (INCAP), Guatemala, C. A.). En: Marabou, Nutritional Improvement of Foods. Symposium held at Marabou, Sundbyberg, Sweden, August 31, 1974. Stockholm, Sweden, Caslon Press, 1975.

The role of feeding and nutrition in the pathogeny and prevention of diarrheic processes.—Moisés Béhar. (Chief, Nutrition Section, Division of Family Health, World Health Organization). PAHO Bulletin. Vol. IX No. 1, 1975.

Diarrheic processes pose a grave health threat in much of Latin America, especially for small children. One reason for this is the close connection between diarrhea

and lack of proper nutrition. The present article seeks to explore this connection by examining two of its main mother's colostrum and milk contain antibodies against some enterobacterial antigens. For another, the so-called "bifid factor" in human milk helps discourage growth of pathogenic enterobacteria in the intestinal lumen. Furthermore, children living in unhealthy surroundings become heavily exposed to common bacteria when breast-feeding stops, a circumstance deemed largely responsible for "weanling diarrhea".

Proper nutrition in general is also important, since diarrhea tends to be more common and severe among malnourished children. Several processes that could contribute to this problem have been suggested. These include morphological alterations of the intestinal mucosa in malnourished children, poor intestinal absorption of fats and other nutrients, irritation caused by increased concentrations of free bile components: the protection against diarrhea resulting from breast-feeding and the increased vulnerability to diarrhea created by malnutrition.

Breast-feeding helps prevent enteric infections in several ways. For one thing; the acids, and changes in the composition of the intestinal flora. Though not all these processes are well understood, it is clear that malnutrition favors development of diarrhea, while diarrhea in its turn precipitate and aggravates malnutrition.

The sad plight of millions of children in the Americas is the result of this combined interaction. Many of those who experience it die, and the survivors fail to achieve their full potential growth and development. The control of diarrheic infections alone would greatly improve these children's nutritional status. Likewise, breast-feeding in the early months of life, duly supplemented later and followed by a sound diet after weaning, would considerably reduce the danger and damage caused by diarrheic infections. 16 references.

JAMAICA

Techniques for the measurement of human body composition.—J. S. Garrow. W. I. Med. J. 23: 165-173, 1974.

In many disorders of nutrition, and of water and electrolyte balance, body weight may be an unreliable index of the clinical state, since it may fail to reflect the change in body composition which is physiologically more important. Some techniques

by which body composition can be measured in the living subject have been briefly reviewed: recent developments in this field have included some methods of great expense and complexity, and some which are very cheap and simple. An attempt has been made to suggest which methods are most appropriate for specific applications, and to indicate the assumption which are implicit in these methods. 22 references.

The effect of lactoferrin, an iron-binding protein on complement activity.—O. S. Morgan, J. Bankay and G. A. Quash. *W. I. Med. J.* 24: 46-54, 1975.

The effect of Lactoferrin (LF), (an iron-binding protein in human milk) on complement activity has been studied using the sheep red blood cell — haemolysin system. Although Lactoferrin itself is devoid of complement activity, it does affect complement action. In the presence of 2 C50 units of complement, lysis occurs, the amount observed depending on the ratio of complement to Lactoferrin used.

C₁ was shown to be the target for Lactoferrin action, since the inhibition of lysis produced by 500 ug of Lactoferrin, could be completely reversed by crude C₁. C₃, a contaminant of this crude preparation, had no such effect.

Investigations to establish the specific effect of Lactoferrin on C₁ indicate that Lactoferrin is a potent activator of C₁, since a six-fold increase in C₁ activity results when they are mixed together.

The observations are consistent with the hypothesis, that Lactoferrin exerts an influence on the complement system, as a result of its capacity to activate C₁. 11 references.

The nutritional status of children in the Turks and Caicos Islands.—M. D. Cohen, P. Morgan and P. Baker. *W. I. Med. J.* 23: 92-97, 1974.

The nutritional status of about 800 children from birth to thirteen years on four of the six inhabited Turks and Caicos Islands was assessed.

Clinical examination revealed few signs of specific nutritional deficiencies. Dental caries was common.

Anthropometric examination showed that 4.5% of infants and 7.3% of pre-school children weighed less than 80% of international standards, a prevalence of underweight much less than recorded in other

parts of the West Indies. Mean heights and weights of school children were also relatively good although less than present-day international standards. Girls were, on average, taller and heavier than boys from 7 years of age onwards.

Haemoglobin values of less than 10 g per 100 ml were found in 23% of subjects and were probably mainly caused by iron deficiency. Supplementation of the diet with iron is desirable.

A greater prevalence of anaemia in Middle Caicos was the only significant difference in nutrition status between the islands. 7 references.

MEXICO

Fractionation and Characterization of Major Reserve Proteins from Seeds of *Phaseolus vulgaris*.—Keizo Ishino and Mario Luisa Ortega D. (Laboratorio de Bioquímica, Rama de Botánica, Colegio de Postgraduados, Escuela Nacional de Agricultura, Chapingo, México). *J. Agric. Food Chem.* 23: 500-510, 1975.

The globulin fraction (75% of the total protein) of "negro mecentral" bean (*Phaseolus vulgaris*) consisted of four major components, α , β , γ , and δ , designated in order of decreasing electrophoretic mobility which accounted for 50, 19, 10, and 12% of the globulin, respectively. The α component (14.55% of nitrogen) had a $S_{20,w}^{0.53\%} = 7.42$ S and an approximate molecular weight of 170,000. Also this component was a glycoprotein which contained 4.95% of carbohydrate (as mannose) and 1.19% of hexosamine (as glucosamine), was deficient in the sulfur-containing amino acids. Although neither 8 M urea nor 0.2 M 2-mercaptoethanol treatments induced dissociation of the α component, alkali treatment (pH 12.5) caused dissociation into the subunits, although not completely even after 24 hr. The β and γ components dissociated immediately with alkali. At pH 4.1, 62% of the globulin remained soluble in acetate buffer with $\mu = 0.5$, and 57% with $\mu = 0.1$. The resolubility of acid precipitated protein was 65% in the phosphate buffer (pH 7.5), $\mu = 0.5$. The α and β components seemed to form insoluble complexes during acidification.

Probable mecanismo neurohumoral en la hiperglucemia inicial, a la ingestión de alimento.—Mariano García-Viveros, Arturo Dib C., Javier Bor-

des, Carlos Valverde-R. y Oscar Lozano-Castañeda. (Instituto Nacional de la Nutrición, México 22, D.F.). Rev. Invest. Clín. (Méx.). 26: 299-308, 1974.

La ingestión oral de carne, carne y glucosa o glucosa sola en perros normales, produjo hiperglucemia a nivel de vena cava superior a su emergencia del hígado, en los primeros 10 minutos post-ingestión, mientras que en vena porta las variaciones fueron mínimas en el mismo lapso de tiempo.

Se comparó el efecto hipoglucemiante de dosis mínimas de insulina administrada por vía intracarotídea o intrayugular durante el ayuno. Se observó una hipoglucemia más acentuada y en un lapso más corto, cuando se aplicó la hormona por vía intracarotídea.

La administración intracarotídea de la insulina simultánea a la ingestión oral de glucosa, abolió la respuesta hiperglucémica inicial a nivel de vena cava superior.

La breve latencia entre la ingestión del alimento y la hiperglucemia suprahepática, no atribuible a absorción intestinal, su bloqueo por la administración simultánea de una pequeña dosis de insulina por vía intracarotídea y el hecho de que esta vía de administración durante el ayuno, produjese una hipoglucemia más rápida y de mayor intensidad que cuando se usó la vía intravenosa, es interpretada como sugestiva de la existencia de un mecanismo neurohumoral central, que participa en la regulación de la glucogenólisis hepática. 28 referencias.

The epidemiology of good nutrition in a population with a high prevalence of malnutrition.—Miriam Muñoz de Chavez, Pedro Arroyo, Sara Elena Perez Gil, Mercedes Hernandez, Sara Eugenia Quiroz, Marina Rodriguez, Mirta P. de Hermelo y Adolfo Chavez. (Instituto Nacional de Nutrición, Mexico 22, D.F. Mexico). Ecology of Food and Nutrition. 1974, Vol. 3, pp. 223-230.

In an attempt to detect those factors which, even in very poor families, allow good child nutrition, a comparison was made of data obtained from the families of well-nourished of malnourished children standardized by socioeconomic level.

Clear differences were found in some biological characteristics of the mother-child pair; the well-nourished children were more frequently males, they were older, their mothers had a better diet, and wean-

ing was more gradual and involved a greater number of foods.

There were also differences in family attitudes, showing that the families of the well-nourished had prejudices and a higher degree of modernization with respect to concepts and beliefs about food. 14 referencias.

Anemia ferropriva durante el embarazo y actividad enzimática de la mucosa intestinal.—Leopoldo Vega-Franco, Julio Sánchez Otamendi y Enedina Jiménez Cardoso (Dpto. de Nutrición y Gastroenterología del Hospital Infantil de México, México 7, Distrito Federal). Rev. Invest. Clín. (Méx.). 27: 113-119, 1975.

Con el objeto de investigar si la anemia ferropriva durante el embarazo altera los sistemas enzimáticos de la mucosa intestinal, en el presente estudio se informa acerca de la actividad de las dipeptidasas y de la lactasa del intestino de ratas recién nacidas cuyas madres fueron sujetas a una alimentación pobre en hierro durante toda la gestación.

Los resultados obtenidos mostraron que la anemia en las ratas madre fue reproducida experimentalmente, habiendo una diferencia estadísticamente significativa al comparar los niveles de hierro, la hemoglobina y el hematócrito, antes del apareamiento y al nacer las crías.

Fue interesante reconocer una disminución en el peso correspondiente a las camadas del grupo experimental con respecto a las del grupo control. Sin embargo, la actividad de las dipeptidasas y de la lactasa de la mucosa intestinal no mostraron diferencias estadísticamente importantes entre ambos grupos.

Se comentan los hallazgos de acuerdo a observaciones hechas por otros investigadores; se plantea la posibilidad de que el corto lapso de tiempo de gestación en la rata no es suficiente para modificar la actividad enzimática de los sistemas localizados a nivel de las microvellosidades. 26 referencias.

The epidemiology of good nutrition in a population with a high prevalence of malnutrition.—Miriam Muñoz de Chavez, Pedro Arroyo, Sara Elena Perez Gil, Mercedes Hernandez, Sara Eugenia Quiroz, Marina Rodriguez, Mirta P. de Hermelo and Adolfo Chavez. (Instituto Nacional

de Nutricion, Mexico 22, D.F. Mexico). Ecology of Food and Nutrition 1974, Vol. 3, pp. 223-230.

In an attempt to detect those factors which, even in very poor families, allow good child nutrition, a comparison was made of data obtained from the families of well-nourished and of malnourished children standardized by socioeconomic level.

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There were also differences in family attitudes, showing that the families of the well-nourished had less prejudices and a higher degree of modernization with respect to concepts and beliefs about food.

Effect of economic growth on nutrition in a tropical community.—Mercedes Hernandez, Carlos Perez Hidalgo, Juan Ramirez Hernandez, Herlinda Madrigal and Adolfo Chavez. (Instituto Nacional de Nutrición, Mexico 22, D.F. Mexico). Ecology of Food and Nutrition 1974, Vol. 3, pp. 283-291.

In order to assess the effect of agricultural development on nutrition, surveys made both prior to, and following the implementation of an extensive agricultural programme in a tropical area. Over a period of 13 years, agricultural production increased almost sixfold, whereas in the same period the population only doubled. It was found that the average food intake rose significantly, but this change was the result of the economic impact of the higher income group. Approximately 30 percent of the population, comprising the poorest peasants, showed no improvement in food intake so the prevalence of malnutrition in the area was virtually unchanged. Thus, in 1958, 26.1 percent of children under 5 years of age showed second and third degree malnutrition; in 1971 this proportion dropped to only 22.5 percent. It follows that agricultural development alone does not necessarily alter the feeding pattern of low income peasants nor does it prevent malnutrition.

Anemias megaloblásticas. Algunos datos sobre su frecuencia en México. J. F. Figueroa Sandoval, A. Vaz Pinto y L. Sánchez Meda. (Dpto. de Hematología. Instituto Nacional de la Nutrición, México 22, D.F.).

Rev. Invest. Clín. (Méx.) 27: 121-126, 1975.

Se revisaron los expedientes clínicos de los enfermos con anemia megaloblástica atendidos en el Instituto Nacional de la Nutrición en los años de 1946 a 1973. En ese período se atendieron 76,000 enfermos y en 93 se estableció el diagnóstico de anemia megaloblástica, o sea una frecuencia de 1 por cada 817 pacientes. En todos los casos el diagnóstico se confirmó por el estudio de médula ósea. En 57 enfermos la anemia se debió a desnutrición y en 19 a malabsorción intestinal secundaria a múltiples causas: sprue tropical (10 casos), sprue no tropical (3 casos), ileítis regional (2 casos), tuberculosis intestinal (3 casos), y resección de íleo (1 caso). En 17 el diagnóstico fue anemia pernicioso, el que en 13 se comprobó por los estudios de absorción intestinal de la vitamina B₁₂ los que pusieron de manifiesto la falta de factor intrínseco.

Los estudios de absorción de la vitamina B₁₂ en algunos enfermos de los otros dos grupos de anemia megaloblástica corroboraron la ausencia de defecto importante en la absorción en los casos debidos a desnutrición y la absorción deficiente no corregible al administrar factor intrínseco en los debidos a malabsorción intestinal. Se muestran los resultados de las determinaciones de vitamina B₁₂ y folatos en el suero de algunos pacientes de los tres grupos de anemia megaloblástica. Se comenta que la anemia pernicioso puede observarse en el indígena y en el mestizo americanos aun cuando con menor frecuencia que en las poblaciones europeas. 21 referencias.

Fórmula para calcular los déficit de hierro en pacientes con anemia ferropriva.—Aymoré Vaz Pinto. (Departamento de Hematología, Instituto Nacional de la Nutrición, Av. San Fernando y Viaducto Tlalpan, México 22, D.F.). Rev. Invest. Clín. (Méx.). 27: 127-128, 1975.

PERU

Avances en la detección y aporte al estudio epidemiológico de la diabetes mellitus.—José Benigno Peñaloza Jarrín, Luis Fernández Cano. (Programa de Detección e Investigación Epidemiológica y Educación Sanitaria de la Diabetes Mellitus en el H. C. del E.). Acta Médica Peruana. Vol. III. Núm. 1. Marzo 1974.

En el presente trabajo, se reporta los resultados obtenidos en un programa de detección precoz de la diabetes mellitus en el Hospital Central del Empleado. La muestra comprende una población supuesta sana de 7,019 personas de ambos sexos, que acudieron para control de su estado de salud o en primera consulta, por dolencias leves, no relacionadas con la diabetes. Todos fueron encuestados y en ellos se efectuó determinación de la glicemia postprandial de dos horas, mediante una cinta glucorreactiva. Se consideraron positivas las glicemias mayores de 130 mgs. Para la confirmación del diagnóstico se realizó un test de tolerancia a la glucosa.

En el análisis estadístico se emplearon las técnicas usuales para encuestas demográficas y los cálculos se hicieron mediante una Computadora IBM 1130.

Se confirmó la diabetes por un anormal tolerancia a la glucosa en 218 individuos, lo que nos da una frecuencia de 3.1.

En relación al estado de nutrición y la edad, hubo un progresivo aumento de esta tasa, a medida que la edad avanza, tanto en obesos como en no obesos, siendo siempre en la comparación de grupos etareos, mayor la tasa de los obesos y preferentemente en el sexo femenino. En relación a los antecedentes, ésta fue mayor que el grupo con familiares diabéticos.

En el grupo de mujeres detectadas diabéticas, las que tenían hijos, mostraron una alta incidencia de macrosomía fetal, y, en el grupo de casadas se halló un alto porcentaje de esterilidad.

Estudio de hormona tiroidea en niños normales y severamente desnutridos.—George G. Graham, Enrique Morales, Robert Blizzard. (Médicos del Instituto de Investigación Nutricional, Lima, Perú). *Acta Méd. Peruana*, Vol. III N° 2: 97-104, 1974.

Se determinó los niveles de hormona tiroidea en niños normales con marasmo y con Kwashiorkor. La tiroxina sérica (T_4) es más alta por debajo del año de edad que al nacimiento o después del año. La tiroxina libre (T_4L) es más alta a los 2-3 meses que posteriormente. La globulina de enlace (TBG) disminuye ligera pero no significativamente con la edad. La hormona tirotrópica (TSH), elevada en el suero del cordón umbilical, disminuye a valores normales del adulto, a los 2-3 meses de edad.

A pesar de tener globulina de enlace de tiroxina (TBG) normal, la tiroxina sérica

(T_4) puede estar disminuida en el marasmo y durante su recuperación; la tiroxina libre (T_4L) puede estar alta o baja inicialmente, normal o baja durante la recuperación; la hormona tirotrópica (TSH) en el suero estuvo baja o normal en ambas oportunidades. En el Kwashiorkor la globulina de enlace de tiroxina (TBG) inicialmente baja, explicó los niveles bajos de tiroxina (T_4) pero la tiroxina libre (T_4L) fue normal o elevada; la hormona tirotrópica (TSH) fue normal. Durante la recuperación, la globulina de enlace de tiroxina (TBG) retornó a lo normal, pero la tiroxina (T_4) sólo lo hizo parcialmente y la tiroxina libre (T_4L) disminuyó lo mismo que la hormona tirotrópica (TSH). La pre-albúmina de enlace de tiroxina (TBPA) no varió significativamente con la edad ni el estado nutricional. 22 referencias.

Hacia una nueva tecnología de la harina de pescado.—Manuel Carranza M. (Tercer Informe - Praxis y Teoría de la Alimentación). *Bol. Soc. Química del Perú*. Vol. 40, N° 2: 110-127, 1974.

El concentrado del Hidrolizado de Pescado encuentra una nueva aplicación no solamente en la alimentación animal sino también en la humana, así como en el tratamiento de algunos males orgánicos y como coadyuvante de los fármacos y es una esperanza para recuperar un tipo de enfermos mentales que no ceden a las terapias convencionales. 7 referencias.

URUGUAY

Problemas de nutrición y su tratamiento por alimentación parenteral. Mario Medina. Con la colaboración del equipo médico del C.T.I. de la Asociación Española 1ª de Socorros Mutuos, integrado por los Dres. M. Medina; A. Cid; W. Verderosa; C. Rodrigo; A. Arismendi; L. Baccino y N. Rey. (Clínica Médica "1" de la Facultad de Medicina de Montevideo). *La Rev. Médica del Uruguay*. Vol. 1 N° 2: 53-69, 1974.

Los autores exponen la composición corporal normal y analizan sus constituyentes. Estudian la respuesta metabólica a las lesiones, analizando las distintas fases descritas por Moore. Se valoriza la importancia de la desnutrición. Se expone la técnica de la alimentación parenteral, precisando sus indicaciones, procedimiento técnico, controles, complicaciones y resultados.

Se muestra la experiencia personal de los autores en una serie de 15 pacientes tratados.

Finalmente se precisan las conclusiones a que arriban luego del análisis de los casos citados. 25 referencias.

VENEZUELA

Beans of high or low toxicity.—Werner G. Jaffé & Maria J. Gomez. (Inst. Nac. Nutricion, Venezuela). Qual. Plant. - Pl. Fds. hum. Nutr. XXIV, 3/4: 359-365, 1975.

Extracts of seeds from four bean cultivars representing the four hemagglutinin specificity types were injected into mice. The lethal doses LD₅₀ when injected by the intraperitoneal route were for type A; 470 mg/kg, type B; 1500 mg/kg, Type C; 590 mg/kg, and type D; > 3000 mg/kg calculated as injected bean protein per kg of body weight.

When applied intravenously the D-type extract resulted also the less toxic. Intradermal injections of the four extracts produced local lesions which were most severe with the A-type extracts and very light with the D-type extracts. The genetical selection of the non-toxic D-type beans is recommended. 11 references.

Estudio de las proteínas séricas en niños parasitados.—M. Curiel y J. Chávez (Cátedra de Fisiopatología, Univ. de Carabobo). Arch. Venez. Pueric. Pediatría, Vol. 37, N° 3: 63-77, 1974.

Se estudiaron las proteínas séricas por medio de la electroforesis sobre papel en 3 grupos de niños: un primer grupo constituido por 141 niños parasitados con moderada desnutrición y procedentes de familias de bajas condiciones socioeconómicas de uno de los barrios que rodean la población de Guacara (zona sub-urbana); un segundo grupo de 30 niños parasitados, eutróficos al examen clínico y procedentes de familias de buen nivel socioeconómico de la ciudad de Valencia; y un tercer grupo utilizado como control, constituido por 40 niños aparentemente sanos al examen clínico, con examen parasitológico de heces negativo y también pertenecientes a familias de buen nivel socioeconómico de la ciudad de Valencia.

Los cambios proteicos más llamativos en todos los niños parasitados fueron la hipalbuminemia asociada a una elevación de gamma globulina. Los niños de bajas condiciones socioeconómicas presentaron las mayores alteraciones de esas 2 fracciones proteicas y son consecuencias de su déficit nutricional y de la mayor incidencia de poliparasitismo en este grupo. En los parasitados de buenas condiciones socioeconómicas la disproteinemia es debida fundamentalmente a las parasitosis que padecen.

No se pudo repsonsabilizar a ningún parásito en particular de las alteraciones proteicas encontradas. 12 referencias.

Estudios de crecimiento y desarrollo y su importancia como indicadores de salud pública, nutrición y condiciones ambientales.—H. Méndez Castellano, M. López de Olavarría y I. de Limongi. (Dpto. de Pediatría, U.C.V. y Dpto. de Bioingeniería, U.S.B.). Arch. Venez. Pueric. Pediatría, Vol. 37, N° 3: 97-113, 1974.

Se presenta el proyecto de los Estudios de Crecimiento y Desarrollo que actualmente se realizan en Venezuela para la obtención de los valores normales en cuanto a Crecimiento y Desarrollo del venezolano. Destácanse la importancia de tales Estudios en las áreas Científicas, de Salud Pública y Ecológicas en que el individuo se desarrolla. Se esquematiza los objetivos, la Programación y Organización de dichos Estudios que han sido divididos para su ejecución en etapas, desde el Estudio Transversal Antropométrico (etapa I en ejecución) y Longitudinal (etapas II y III), hasta los Estudios Comparativos y Especializados (etapas IV y V), dichos Estudios tendrán una duración aproximada de 8 a 10 años.

Para la realización de este Proyecto ha sido solicitado financiamiento al CONICIT; la ejecución y análisis de los resultados estarán a cargo de diferentes Instituciones (USB, UCV, IVAL, INN, LIGA DE HIGIENE MENTAL). Dada la complejidad operativa del Proyecto todas las actividades serán programadas por computadoras digitales. Los primeros datos del Estudio Transversal de Crecimiento y Desarrollo están siendo procesados y sus resultados serán motivos de futuras comunicaciones.