



Late introduction of complementary feeding, rather than duration of breastfeeding, may protect against adult overweight

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ABSTRACTS 19th International Congress of Nutrition

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(44%carb, 27%prot and 29% fat) with 223 mg of dietary cholesterol. There were not statistically differences in Total cholesterol, Triacylglycerol, LDL, Albumin and Prealbumin ($p > 0.05$) due to BD consumption. Moreover, LCL formula has similar effect to the LCH formula concerning lipids and protein parameters ($P > 0.05$). On the other hand, during the protocol every 3 weeks of BD consumption markedly increased HDL-C level by 1.38 mg (95% CI: 0.204, 2.561 mg/dl). We conclude that in the majority of elderly people, an addition sterilized, egg-contained, low-carbohydrate blenderized supplement to a usual diet has improved HDL levels regardless of low-cholesterol or high-cholesterol recipes. Therefore, the use of this BD is of cost-effectiveness and has a positive repercussion on blood lipoproteins.

DP22-05 VIETNAMESE CORIANDER AS A FUNCTIONAL NUTRIENT

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Flavor constituents characterized from the fresh leaves of *Polygonum odoratum* Lour, locally known as "rau ram" and used as a food spice in Vietnam, were tested for their effects on *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 35640 using a broth dilution method. Among the compounds tested, dodecanol (C12) was the most effective against this food-born bacterium with an MBC of 6.25 $\mu\text{g/mL}$ (34 μM), followed by decanol (C10) with an MBC of 12.5 $\mu\text{g/mL}$ (67 μM). The time-kill curve study showed that both were bactericidal against *S. choleraesuis* at any growth stage and this activity was not influenced by pH values. The primary antibacterial action comes from their ability to function as nonionic surface-active agents (surfactants), disrupting the native function of integral membrane proteins nonspecifically. Thus, the bactericidal action was mediated by biophysical processes. Additionally, the effects of major constituents of "rau ram" on animal cells were tested by using murine B16-F10 melanoma cells as a model system. Polygodial and (2E)-decanol show the most potent toxic effects, which is measured by trypan blue exclusion and MTT assays, among the tested compounds were observed, (29 μM) and (30 μM) respectively. IC50 of two alkanols, dodecanol and decanol, against the B16 melanoma cells cannot be observed within their soluble concentrations. Alkanols are superior anti-Salmonella agents since they are chemically stable, colorless, inexpensive, biodegradable and essentially non-toxic to humans.

DP22-06 RELATION BETWEEN DIETARY PATTERN AND HIRSUTISM IN YUONG WOMEN IN AHWAZ, IRAN

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RATIONALE & OBJECTIVES: Hirsutism is defined as the excessive growth of terminal hair on the face and body of a woman in a typical male pattern distribution. It is either due to increased androgen production or to increased sensitivity of the hair follicle to androgens. This study was carried out to determine contributory dietary factors of hirsutism in young university students in Ahwaz.

MATERIALS & METHODS: In this cross sectional study 180 young female university students in Ahwaz were randomly selected (63 hirsutism and 117 non-hirsutism). Hirsutism was evaluated by the Ferriman & Gallway test. A Food Frequency Questionnaire (FFQ) was used to assess the dietary pattern. The main dietary components of interest were fat, protein and isoflavonoides. Chi square test was used for statistical analyses by SPSS software (version 13).

RESULTS: There was a direct relationship between protein intake and hirsutism ($P=0.05$), but no significant relationship was observed between fat intake and hirsutism ($p=0.07$). A significant inverse relationship was observed between isoflavonoides intake and hirsutism ($p=0.01$).

CONCLUSION: According to findings of this study, increasing the intakes of foods rich in isoflavonoides is recommended.

DP22-07

EFFECTS OF FLAXSEED (*LINUM USITATISSIMUM*) AND BLACK SEED (*NIGELLA SATIVA* LINN) ON SERUM LIPID PROFILE IN HYPERLIPIDEMIC RABBITS

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OBJECTIVES: We studied the effects of dietary supplementation with flaxseed and black seed on serum lipid profile in hyperlipidemic rabbits.

METHODS: Male rabbits after 2 weeks of adaptation were received 0.5 % cholesterol for 1 month. Then the rabbits were divided into three groups, the rabbits in control group were continued on the 0.5 % cholesterol diet and the other two groups received 7.5 g/kg bw/day crushed flaxseed or black seed added to the control's diet, each for 2 months. All diets were isocaloric and isonitrogenous. Fasting blood samples were obtained at baseline, after hyperlipidemia, 1 month and 2 months of intervention to determine the concentrations of serum lipid profile.

RESULTS: Serum TC and LDL-C were significantly lower in flaxseed group after 1 and 2 months of intervention as compared to control group ($P < 0.001$). Also black seed group had significantly lower levels of serum TC, LDL-C, HDL-C, TG and TC/HDL-C after 1 month and lower levels of TC, LDL-C, TG, TC/HDL-C and LDL-C/HDL-C after 2 months of intervention as compared to control group ($P < 0/05$).

CONCLUSION: The results of this study demonstrate that dietary flaxseed and black seed favorably decrease serum lipid profile and may be developed as useful therapeutic approaches for hyperlipidemia.

DP23: Infant and Young Child Nutrition (breastfeeding, complementary foods, etc.) II

DP23-01

LATE INTRODUCTION OF COMPLEMENTARY FEEDING, RATHER THAN DURATION OF BREASTFEEDING, MAY PROTECT AGAINST ADULT OVERWEIGHT

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RATIONALE & OBJECTIVES: Early nutrition may influence risk of overweight in later life, and this study explores the effect of duration of breastfeeding (BF) and age at introduction of complementary feeding (CF) on BMI during childhood through adulthood.

MATERIALS AND METHODS: A cohort study ($n=5068$) established in 1951-69 with information on BF and CF ("spoon-feeding", "vegetables", "egg", "meat", and "firm food") and several covariates collected in infancy, and information on BMI during childhood through adulthood (42 y).

RESULTS & FINDINGS: Median (10, 90th percentile) duration of any BF and age at introduction of "spoon-feeding" were 2.50 (0.23, 6.50) and 3.50 (2.00, 6.00) mo, respectively. After 1 y of age, BF was not associated with BMI in regression models also adjusting for CF and covariates. Late introduction of CF was associated with a lower risk of overweight at age 42 y (OR, 95% CI per mo of age at introduction of: "spoon-feeding" 0.94 (0.86 - 1.02), "vegetables" 0.90 (0.81 - 0.98), "meat" 0.93 (0.87 - 1.00) and "firm food" 0.92 (0.86 - 0.98)).

CONCLUSION: A protective effect of BF against overweight in adulthood was not suggested, but an increasing age at introduction of CF appeared protective.