



Friday — Poster Session

Poster number

- 101P HOW FEASIBLE ARE PHYSICAL ACTIVITY AND HEALTHY EATING FOR YOUNG WOMEN?
- 102P THE EFFECTS OF GENERIC VS POPULATION-SPECIFIC EDUCATIONAL MATERIALS ON THE DIETARY AND PHYSICAL ACTIVITY HEALTH BELIEFS OF WOMEN AT RISK FOR OSTEOPOROSIS
- 103P PERCEIVED ENVIRONMENTS RELATED TO PHYSICAL ACTIVITY INVOLVEMENT IN KANIEH'KEHAKA (MOHAWK) WOMEN
- 105P USING PEDOMETERS AND BEHAVIORAL GOALS TO INCREASE PHYSICAL ACTIVITY AMONG OLDER FILIPINA-AMERICAN WOMEN: THE STANFORD STEP PILOT PROJECT
- 106P ADHESION TO A NUTRITIONAL INTERVENTION PROMOTING THE MEDITERRANEAN FOOD PATTERN IN HEALTHY WOMEN FROM THE QUÉBEC CITY METROPOLITAIN AREA
- 107P IMPROVING EXERCISE ADHERENCE THROUGH CONTROL OF EXERCISE INTENSITY
- 108P INCREASING DIETARY FIBER INTAKE FOR CHILDREN AT RISK FOR TYPE 2 DIABETES
- 109P DIETARY INTAKE REPORTS OF OVERWEIGHT AND NORMAL WEIGHT CHILDREN
- 110P ATTITUDE, PERCEIVED BEHAVIORAL CONTROL AND STAGES OF REGULAR PHYSICAL ACTIVITY ADOPTION IN INDIVIDUALS WITH DIABETES
- 111P BARRIERS TO PHYSICAL ACTIVITY PARTICIPATION: FOCUS GROUPS WITH ADOLESCENTS
- 112P PHYSICAL ACTIVITY IS RELATED TO FITNESS AND WEIGHT STATUS AMONG 11-YEAR-OLD GIRLS
- 113P EFFECTS OF INCREASING DAIRY PRODUCT CONSUMPTION IN A MULTI-ETHNIC POPULATION OF SCHOOL CHILDREN: FORMATIVE RESEARCH AND QUALITATIVE ANALYSIS
- 114P CHILDREN'S BEVERAGE CONSUMPTION HAS CHANGED OVER A 21-YEAR PERIOD
- 115P SELF-REPORTED ENERGY INTAKE BY AMERICAN INDIAN CHILDREN COMPARED WITH TOTAL ENERGY EXPENDITURE MEASURED BY DOUBLY LABELED WATER
- 116P A STUDY TO ASSESS THE VALIDITY AND RELIABILITY OF A QUESTIONNAIRE TO ASSESS PHYSICAL ACTIVITY IN YOUNG ADULTS
- 117P SELF ASSESSMENT OF SERVINGS OF FRUITS AND VEGETABLES IN YOUNG ADULTS
- 118P CLARIFYING THE CONTRIBUTION OF ENJOYMENT TO PREDICTING PHYSICAL ACTIVITY INTENTION IN ADOLESCENT GIRLS
- 119P A PILOT STUDY OF FACTORS INFLUENCING FRUIT AND VEGETABLE INTAKES OF YOUNG CANADIAN ADULTS
- 120P DIFFERENCES IN PERCEIVED SUPPORT AND ENVIRONMENT FOR PHYSICAL ACTIVITY IN YOUNG AFRICAN AMERICAN GIRLS AND THEIR PRIMARY CAREGIVERS: PRELIMINARY REPORT FROM GIRLS RULE!
- 121P EATFIT: AN INTERVENTION EFFECTIVENESS TRIAL FOR INCREASING DIETARY AND PHYSICAL ACTIVITY SELF-EFFICACY AND BEHAVIORS
- 122P EATFIT: A RANDOMIZED CONTROLLED TRIAL TO ASSESS THE EFFECTIVENESS OF "GUIDED GOAL SETTING" AMONG ADOLESCENTS
- 124P TRANSTHEORETICAL MODEL PROCESSES OF CHANGE AS PREDICTORS OF DIETARY CHANGE
- 125P NUTRITION IN PRESCHOOL-AGE: A LONGITUDINAL STUDY OF THE DETERMINANTS OF DIET QUALITY IN QUÉBEC YOUNG CHILDREN
- 126P BEHAVIORAL PREDICTORS OF HEALTHY WEIGHT MAINTENANCE
- 127P LOW LEVEL OF DIETARY AND PHYSICAL ACTIVITY COUNSELLING BY PHYSICIANS AND NURSES IN QUEBEC
- 128P COMPARISON WITH OTHERS IN DIETARY INTAKE
- 129P INTEGRATING A PHYSICAL HEALTH CAMPAIGN INTO THE MENTAL HEALTH CONTINUUM: FORMATIVE RESEARCH IN A MENTAL HEALTH CARE SYSTEM
- 130P EATING BEHAVIOURS AMONG PATIENTS TREATED WITH ATYPICAL ANTIPSYCHOTICS.
- 131P EXAMINATION OF THE AUSTRALIAN FOOD INDUSTRY'S USE AND VIEWS OF PLANT-BASED FOOD PRODUCTS
- 132P PREDICTION OF LOW IN FAT AND CHOLESTEROL DIET INTENTIONS AND BEHAVIORS
- 133P FORWARD STAGE TRANSITION DETERMINANTS OF FRUIT CONSUMPTION
- 134P AWARENESS OF PERSONAL WEIGHT STATUS
- 135P POSSIBLE DETERMINANTS OF WILLINGNESS TO PREVENT WEIGHT GAIN
- 136P THE IMPORTANCE OF SUBJECTIVE NORMS FOR PEOPLE WHO CARE WHAT OTHERS THINK
- 137P ARE VISUAL ANALOGUE SCALES USED TO ASSESS APPETITE SENSATIONS USEFUL IN CLINICAL CONTEXT?
- 138P ESTIMATION OF DAILY ENERGY NEEDS WITH TWO DIFFERENT PREDICTIVE PROCEDURES: COMPARISON TO WHOLE BODY INDIRECT CALORIMETRY MEASUREMENTS IN SEDENTARY AND ACTIVE ADULTS
- 139P COMPARISON OF THE BLOCK® CHILD ACTIVITY SCREENER WITH AN OBJECTIVE MEASURE OF PHYSICAL ACTIVITY
- 140P DEVELOPMENT OF A QUESTIONNAIRE TO ASSESS MULTI-LEVEL INFLUENCES OF PHYSICAL ACTIVITY INVOLVEMENT AMONG KANIEH'KEHAKA (MOHAWK) PARENTS

101P

HOW FEASIBLE ARE PHYSICAL ACTIVITY AND HEALTHY EATING FOR YOUNG WOMEN?

Crawford David, Ball Kylie and Warren Narelle, Deakin University, Melbourne, Australia

The obesity epidemic highlights the ineffectiveness of nutrition, physical activity and weight control recommendations to the public. It may be that the types of weight gain prevention messages that are promoted may not be feasible for individuals in the context of their lives. This study investigated women's perceptions of the feasibility of specific physical activity and dietary strategies. A randomly selected sample of 462 women 18-32 years (41% response) completed a questionnaire that sought details of socio-demographic background, height and weight and the perceived feasibility of 29 physical activity and 15 eating behaviors. While most healthy eating behaviors were viewed as feasible, many physical activity behaviors were seen as definitely not feasible by more than half of the women. These included active transport options (e.g. walking or cycling to work, parking the car and walking the extra distance), the use of stairs, physical activity at their place of work/study, or when traveling to work/study. The data suggest that efforts to promote activity among young women should focus on leisure-time activity in their home or local neighborhood as women generally see activity as feasible in these settings. A key finding to emerge from this study was that women with children were less likely than were other women to see most physical activity as being feasible for them. It is important that efforts to prevent weight gain in young women be tailored to take into account the feasibility for individuals to make the behavioral changes that are advocated.

102P

THE EFFECTS OF GENERIC VS POPULATION-SPECIFIC EDUCATIONAL MATERIALS ON THE DIETARY AND PHYSICAL ACTIVITY HEALTH BELIEFS OF WOMEN AT RISK FOR OSTEOPOROSIS

Jung, M., Martin Ginis, K., Phillips, S., Lordon, C., McMaster University, Hamilton, Ontario, Canada

As osteoporotic fracture rates increase in the aging population, mortality and morbidity rates, as well as public health care costs also rise (Schönau, 1998). Among the many predisposing factors of osteoporosis (OP), dietary calcium intake and weight bearing physical activity (PA) are potentially modifiable risk factors (Rubin, 1999; Tudor-Locke, 2000). Despite the efficacy of existing preventative OP educational materials for increasing knowledge about these factors, 20-25% of young women still consume inadequate amounts of calcium (Horwath, 2001), and over 50% are insufficiently active (CFLRI, 2001; USDDHS, 1996). The purpose of this experiment was to determine whether educational materials designed specifically for young women (Ex) would have a greater impact on their health beliefs than standard OP educational materials (Control). All participants (N = 133, M age = 18) reported calcium deficient diets. Health Belief Model (HBM; Rosenstock, 1974) constructs were measured pre and post delivery of intervention materials, which focused on the preventative role of diet and PA in OP pathology. A MANOVA with posthoc ANOVAs indicated both conditions perceived greater benefits, severity, susceptibility, and self-efficacy for consuming adequate calcium post intervention ($p < .05$), but Ex had a greater increase in perceived benefits ($p < .01$) and susceptibility ($p < .01$) than Control. All of the HBM constructs improved similarly for both groups with regard to PA ($p < .05$). These results suggest some benefit of tailoring public health materials to the target population in order to change cognitions about PA and nutrition behaviours.

103P

PERCEIVED ENVIRONMENTS RELATED TO PHYSICAL ACTIVITY INVOLVEMENT IN KANIAN'KEHAKA (MOHAWK) WOMEN

Lévesque, L., Queen's University, Kingston (ON); Duplantie, J., Gauvin, L., Université de Montréal, Montréal (QC); Macaulay, A.C., McGill University, Montréal (QC), and Kahnawake Schools Diabetes Prevention Project, Kahnawake, (QC) Canada

Understanding the determinants of physical activity (PA) involvement is important for the development of effective community-based interventions. Researchers are increasingly recognising the importance of environmental influences on PA involvement, and there is early evidence to support associations between PA and environmental factors. Within the context of the Kahnawake Schools Diabetes Prevention Project, an ongoing community-based participatory intervention and research project, we investigated the relationship between perceptions of selected environmental influences and activity status among 139 adult women (mean age = 36.8 years, SD = 7.0). Perceived environmental influences were assessed by conducting a randomized telephone survey asking moderately active (43.9%) and inactive (56.1%) respondents about home exercise equipment, about neighbourhood attributes (e.g., feeling safe after dark, feeling safe from traffic, presence of enjoyable scenery), and about awareness of community PA resources using items drawn from the Perceived Environments Related to Physical Activity Scale (PERPAS; Sallis, et al., 1997). Bivariate relationships between perceived environmental variables and PA were examined by conducting chi-square analyses. Only feeling safe walking alone after dark was found to be significantly associated with activity status among these women ($p < .05$). In a separate question, 92 out of 139 of the women reported having walked for exercise during the past week, yet only 23.4% of these women reported walking in their own neighbourhood. This finding may have implications for looking beyond the immediate physical context (i.e., neighbourhood) to study environmental influences upon activities such as walking in women.

105P

USING Pedometers AND BEHAVIORAL GOALS TO INCREASE PHYSICAL ACTIVITY AMONG OLDER FILIPINA-AMERICAN WOMEN: THE STANFORD STEP PILOT PROJECT

Atienza, A.A., & Pruitt, L.A., Stanford Center for Research in Disease Prevention, Stanford University School of Medicine, USA

Purpose: The physical activity patterns of Asian-American populations are often overlooked, particularly older women. This pilot investigation tested whether a goal-directed behavioral intervention using pedometers could increase the physical activity patterns among 15 sedentary Filipino-American women aged 65 years and older (mean: age = 71.1 ± 5.4 years; income = \$10,000-\$20,000; education = 14.4 ± 3.5 years). In addition, adherence to wearing the pedometer was evaluated. Method: Participants were given pedometers and asked to record their daily steps for 6 weeks. The

intervention consisted of individualized pedometer goals given to participants based on the number of steps taken during the first week. Mailed postcards that documented daily activity were used to assess adherence. Results/Findings: Average initial daily pedometer counts = 4224 ± 1800 ; average initial weekly moderate-intensity or greater activity = 2.5 ± 3.0 hours. Results indicated that wearing pedometers alone did little to change physical activity, but the addition of behavioral goals+pedometers increased physical activity by 4720 steps/week (or 16%) on average by the end of 6 weeks ($p < .05$). Average daily compliance to the wearing the pedometer was 91%. Those who reported higher initial levels of physical activity had greater increases in pedometer steps during the study. Conclusions: This pilot investigation suggests that the addition of behavioral goals to pedometers is necessary to increase the physical activity levels of older sedentary Asian-American women. Further research of the effectiveness and utility of using low-cost pedometers to increase the physical activity patterns of sedentary older Asian-American women is warranted.

106P

ADHERION TO A NUTRITIONAL INTERVENTION PROMOTING THE MEDITERRANEAN FOOD PATTERN IN HEALTHY WOMEN FROM THE QUÉBEC CITY METROPOLITAIN AREA

Goulet, J. Lamarche, B. Lemieux, S., Nutraceuticals and Functional Foods Institute, Department of Food Science and Nutrition, Université Laval, Québec, Canada

Purpose: To evaluate the adhesion to a nutritional intervention promoting the Mediterranean food pattern of 62 healthy women, aged between 30 and 65 years. Methods: The 12-week nutritional intervention in free-living conditions consisted of 2 group courses and 7 individual sessions with a dietitian. A follow-up visit was performed 12 weeks after the end of the intervention (week 24). A Mediterranean dietary score (MDS) was derived from a food frequency questionnaire, administrated at 0, 6, 12 and 24 weeks. This score based on the 11 components of the Mediterranean pyramid was established to evaluate the adhesion to the Mediterranean food pattern and ranged from 0 to 44. A higher score indicated a better compliance to the Mediterranean food pattern. Results/findings: The MDS increased from 21.3 ± 3.5 at baseline to 29.2 ± 4.5 after 12 weeks of intervention ($p < 0.0001$). The consumption of olive oil, fruits, vegetables, legumes, nuts and seeds, poultry and fish increased significantly and the consumption of red meat/processed meat and sweets decreased significantly between week 0 and 12. At week 24, the MDS was significantly decreased (26.7 ± 4.6) compared to the value measured at week 12 ($p < 0.0001$). The consumption of olive oil, legumes, nuts and seeds and fish decreased and the consumption of sweets increased significantly between week 12 and 24 ($p < 0.03$). Conclusion: Nutritional intervention promoting the Mediterranean food pattern in free-living conditions was effective in modifying food habits of healthy women from the Québec City metropolitan area. These changes were partially maintained 3 months after the end of the intervention.

107P

IMPROVING EXERCISE ADHERENCE THROUGH CONTROL OF EXERCISE INTENSITY

Purslow, L.R., Blundell, J.E., King, N.A., BioPsychology Group, School of Psychology, University of Leeds, UK; Hendrickx, H., Unilever Research, Bedford, UK

This study investigated the impact of the degree of control of intensity upon mood change following an acute bout of aerobic exercise. 24 female regular exercisers were studied under separate conditions: a) 40 minutes cycling at a self-selected variable intensity, b) 40 minutes cycling at 35% VO_{2max} , c) 20 minutes cycling at 70% VO_{2max} and d) 40 minutes quiet reading. All sessions were carried out in the laboratory at the same time of day for each participant. Mood was measured immediately prior to and 5 minutes after each experimental session using the PANAS. Although all sessions resulted in small but significant decreases in negative affect, only the 40 minute self-selected intensity exercise session produced a significant increase in positive affect post exercise. The quiet reading session resulted in a significant decrease in positive affect. It appears that while exercise and rest improve mood by reducing negative affect, individual control (i.e. self-selection) of exercise intensity is required to enhance positive affect. Participants were free to choose the time and dates for all experimental sessions but maximising the control participants had over intensity resulted in the most positive experience from the exercise session. The coercive imposition of exercise intensity may lead to feelings of failure or lack of challenge and therefore minimise the positive experience. Self-selection of exercise intensity leads to enhanced positive feelings and is therefore likely to be more effective at improving exercise adherence and converting exercise into a habitual routine.

108P

INCREASING DIETARY FIBER INTAKE FOR CHILDREN AT RISK FOR TYPE 2 DIABETES

Dempsey, L.A., Trevino, R.P., Garcia, O.A.; Mobley, C.; McConn, M.; Yin, Z.; The Social and Health Research Center, University of Texas Health Science Center, University of Incarnate Word, San Antonio, TX; Medical College of Georgia, Augusta, GA, USA

The Bienestar Health Program is an elementary school-based diabetes prevention program targeted at children in a low income predominately Hispanic public school district. The program consists of parent, health class, school cafeteria and after-school programs with the same messages of encouraging children to increase daily servings of vegetables, fruits and fiber, decrease dietary fat intake and to increase their physical activity. The purpose of this longitudinal study is to assess the effectiveness of the program in changing habits and preventing diabetes in children. The population for this study was 4th grade students (mean age 9.7) from 13 intervention and 14 control schools. During the fall of 2001 and spring of 2002, three 24 hour dietary recalls were collected via face to face interviews by trained data collectors for 1 weekend and 2 weekdays of intake. The children's intake for all meals was entered into the NDS-R (Univ. of Minnesota) software for analysis. At baseline, intervention and control group children had similar dietary habits. The average intake for all children was 1,736 kilocalories, with 50% from carbohydrates, 35% from fat 15% from protein ($N=1,425$). The average fiber intake was 11.4 grams, well below RDA recommendations. At follow up ($N=1,305$) the control group's average fiber intake remained the same (11.2 to 11.2 grams), while the intervention group's fiber intake increased from 11.4 to 12.2 grams

($p=.000$). These results show promise for behavioral intervention programs in increasing children's servings of dietary fiber, and decreasing their risk for diseases such as type 2 diabetes.

109P

DIETARY INTAKE REPORTS OF OVERWEIGHT AND NORMAL WEIGHT CHILDREN

Dempsey, L.A., Trevino, R.P., Garcia, O.A.; Mobley, C.; Wood, T.; The Social and Health Research Center; University of Texas Health Science Center, University of Incarnate Wood, San Antonio, TX, USA

The Bienestar Health Program is an elementary school-based diabetes prevention program targeted at children in a low income predominately Hispanic public school district. The purpose of this longitudinal study is to assess the effectiveness of the program in changing habits and preventing diabetes in children. The population for this study was 4th grade students (mean age 9.7) from 13 intervention and 14 control schools. During the fall of 2001 and spring of 2002, three 24 hour dietary recalls were collected via face to face interviews by trained data collectors for 1 weekend and 2 weekdays of intake. The children's intake for all meals was entered into the NDS-R (Univ. of Minnesota) software for analysis. Body mass index (BMI) was calculated by dividing weight in kilograms by height in centimeters squared. Expected energy requirements were calculated based on guidelines given by Pellett (Am J Clin Nutr,1990) which take into account, age, gender and weight to give an estimated range. For example, a 62 lb. 9 yr old would be expected to consume between 1550-2170 kcal/day. When these values were compared with the actual calorie intakes reported, a trend of "underreporting" seemed to be occurring among the overweight children. Higher BMI children reported a greater proportion of their days at calories less than would be expected for their weights and reported a lower average calorie intake overall than normal weight children. What these results suggest is that dietary recall reports may be especially unreliable from overweight children.

110P

ATTITUDE, PERCEIVED BEHAVIORAL CONTROL AND STAGES OF REGULAR PHYSICAL ACTIVITY ADOPTION IN INDIVIDUALS WITH DIABETES

Boudreau, F., Université du Québec à Trois-Rivières, Trois-Rivières, Canada; Godin, G., Lambert, L.-D., Université Laval, Québec, Canada

The purpose of this study was to examine the relevance of the stages of change model and the theory of planned behaviour (TPB) in understanding physical activity adoption among diabetic individuals. The data for this cross-sectional study was collected as part of Quebec's population health survey. Selected by means of a probability sampling method, a group of 605 diabetic individuals completed a self-administered questionnaire. Results revealed that 27.1% of diabetic individuals were in the Precontemplation stage, 12.4% in Contemplation, 34.9% in Preparation, 4% in Action, and 21.7% in Maintenance. The MANOVA (Wilks's $\lambda = .48$, $F_{8, 1198} = 65.64$; $p < .0001$) indicated an overall significant difference in terms of the two psychosocial variables. The ANOVA showed that the variables attitude ($F_{4, 600} = 91.59$; $p < .0001$) and perceived behavioral control ($F_{4, 600} = 112.43$; $p < .0001$) contributed to differentiating the stages of regular physical activity adoption. The ANOVAS were followed up with post hoc comparisons. The following comparisons are of particular interest. First, the means for the two psychosocial variables were higher in the Preparation stage than those in the Contemplation stage. Second, the means for the two psychosocial variables were higher in the Action stage than those in the Preparation stage. Finally, the means for the two psychosocial variables were higher in the Maintenance stage than those in the Action stage. The results suggest that variables from the TPB are useful in differentiating among the stages of regular physical activity adoption among individuals with diabetes.

111P

BARRIERS TO PHYSICAL ACTIVITY PARTICIPATION: FOCUS GROUPS WITH ADOLESCENTS

Dwyer, J.J.M.(1)., Allison, K.R.(2), Fein, A.(2), Goldenberg, E.(2), Yoshida, K.K.(2), Boutilier, M.(2)

1. University of Guelph, Guelph, Canada; 2= University of Toronto, Canada

Purpose: This study addressed the problem of declining physical activity during adolescence. The study explored perceived barriers to physical activity among adolescents of diverse ethno-cultural origins. Methods: 108 inactive and active students, predominately 15- and 16-year olds, participated in focus groups. 26 males participated in 1 of 4 sessions and 82 females participated in 1 of 7 sessions. Participants discussed what makes it difficult for them to engage in moderate and vigorous physical activity. The sessions were audiotaped and audiotapes were transcribed. Ethnograph was used to facilitate data analysis. Two researchers independently and inductively coded transcripts and subsequently generated final themes. A constant comparison approach was used to generate themes. Results: Themes common to males and females were identified: (a) adolescents' use of technology such as computer games, internet, television, and telephone decreased the time available for physical activity; (b) other commitments such as homework and part-time work left little leisure time; (c) they mentioned peer influence via hanging out with inactive friends; (d) they did not consider physical activity to be a priority, compared to school work; and (e) they reported lack of access to facilities and costs associated with programs and equipment as barriers. Males emphasised physical characteristics, such as body size, as a barrier to sports. Females underscored household chores, such as babysitting siblings, and parents' concern about their safety when outside or when travelling to facilities as barriers. Conclusions: Strategies to promote physical activity should acknowledge adolescents' perceptions of barriers, including gender differences.

112P

PHYSICAL ACTIVITY IS RELATED TO FITNESS AND WEIGHT STATUS AMONG 11-YEAR-OLD GIRLS

Savage J., Davison, K., Birch, L., The Pennsylvania State University, University Park, PA, USA

Obesity is the result of dietary intake exceeding total energy expenditure over time. Age-related declines in physical activity during adolescence are risk factors for obesity during adolescence. We investigated the relationship among measures of physical activity, fitness, and weight status using a sample of 76 non-Hispanic, White 11 year-old girls. ActiTrac accelerometers assessed girls' physical activity, specifically total activity during a day when they were

participating in a standardized research protocol and during structured free choice activity periods when they could choose sedentary, moderate or vigorous activities. Progressive Aerobic Cardiovascular Endurance Run (PACER) assessed fitness. Height and weight were measured to calculate Body Mass Index (BMI); body fat was assessed using DXA. Results revealed significant inverse relationships between girl's weight status and physical activity were noted; girls who were more active during the day had higher fitness levels and were less likely to be overweight. The magnitude of relationships between weight status and 1) free choice activity and 2) structured activity periods were similar, suggesting that while activity choice contributes to individual differences in activity level, substantial individual differences in physical activity exist even within structured situations where alternative activities are not available. Individual differences may result in part from variations in fidgeting and/or differences in activity choices within a structured setting or task.

113P

EFFECTS OF INCREASING DAIRY PRODUCT CONSUMPTION IN A MULTI-ETHNIC POPULATION OF SCHOOL CHILDREN: FORMATIVE RESEARCH AND QUALITATIVE ANALYSIS

Cheryl A. Gibson, Debra A. Sullivan, Candice Rose, Jeannine Goetz, University of Kansas Medical Center, Kansas City, KS, USA

Purpose: Research indicates that most children do not consume adequate dietary calcium, especially children from low-income households. Process objectives were to maximize and assess the cultural relevance of a program aimed at increasing dietary calcium levels of multi-ethnic children in grades 3 – 5 and to examine effects on blood pressure. We also sought to identify factors that contributed to intervention success/failure (e.g., taste, packaging, perceived lactose intolerance, staff burden, etc.). Methods: We conducted parent focus groups at 2 schools (intervention and control) to gain views on dairy foods, types of dairy foods served at home, and barriers to consumption. Among students (n=313) we held classroom discussions and performed taste-tests of 17 different dairy foods. Race/ethnicity of students was <1% Native American, 1% Asian, 18% White, 37% Black, and 43% Hispanic with >75% receiving free or reduced meals. Content analysis was performed by employing the qualitative techniques of Miles and Huberman (1984). Results: Overall, parents believe that dairy food, particularly yogurt and cheese, are healthy, promoting growth, and providing calcium, better bones and teeth. However, they reported that high sugar content or chocolate dairy products are not healthy. Parents are aware that their children prefer "kid-packaged" yogurts, but stated these items are too expensive. Students enjoyed taste testing, rating the dairy foods between "good" and "great." Milk (whole, 2%,1%) was reported as "good" while skim milk was not liked as well. Conclusions: Increasing the dietary calcium intake of children through attention to cultural issues can help to reduce barriers to consumption.

114P

CHILDREN'S BEVERAGE CONSUMPTION HAS CHANGED OVER A 21-YEAR PERIOD

Yang, Su-Jau, MS; Nicklas, Theresa, DrPH; Children's Nutrition Research Center, Baylor College of Medicine, Department of Pediatrics, Texas, USA

There has been an increasing interest in children's sweetened beverage consumption and its potential nutritional impact on their diets and overweight status. The goal of this study was to examine trends in children's beverage consumption patterns from 1973 to 1994 in Bogalusa, Louisiana and its relationship to body mass index (BMI). A 24-hour dietary recall was collected on a total of 1584 10-year-old children (65% Euro-American (EA), 35% African-American; 51% girls) who were randomly selected to participate in one of seven cross-sectional surveys. Sweetened beverages were defined as soft drinks, fruit drinks, and tea or coffee with sugar. Contrary to national data, the percentage of children consuming sweetened beverages significantly decreased from 83% (1973) to 81% (1994) ($p < 0.05$), particularly consumption of soft drinks ($p < 0.01$) and coffee with sugar ($p < 0.0001$). However, the mean gram amount of tea with sugar consumed significantly increased ($p < 0.0001$) but not for fruit drinks, soft drinks, and coffee with sugar. When comparing tertiles of sweetened beverage consumption over time, the increased mean gram consumption was significant for those children who were in the medium ($p < 0.001$) to high ($p < 0.001$) tertiles. Mean BMI significantly increased ($p < 0.0001$) in the children, regardless of their tertile of sweetened beverage consumption. Children who were overweight (BMI > 85th percentile) consumed significantly more total gram amount of sweetened beverages ($p < 0.001$) than normal weight children. However, only 7% of the variance in BMI was explained by sweetened beverage consumption. Despite the association found between sweetened beverage consumption and BMI, 93% of the variance was unexplained.

115P

SELF-REPORTED ENERGY INTAKE BY AMERICAN INDIAN CHILDREN COMPARED WITH TOTAL ENERGY EXPENDITURE MEASURED BY DOUBLY LABELED WATER

Weber JL, Parker JG, Simpson PM, Flick EL, Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, AR, USA; Going SB, Eklund J, Department of Nutritional Sciences, University of Arizona, Tucson, AZ, USA

The purpose of this portion of a larger longitudinal obesity risk factor study was to validate a diet record-assisted 24-hour recall procedure against total energy expenditure (TEE) by doubly labelled water (DLW) in American Indian children. The dietary method included an innovative portion size estimation training program with DLW as the criterion for total energy intake. Thirty-three children (7 males 8-10; 9 females 8-10; 8 males 11-13; 9 females 11-13 years) were trained in diet record recording skills for 1.25 hours immediately preceding school lunch on Day 1, and continued to record their intake for a full 24 hours for each of 7 consecutive days. Trained interviewers collected 24-hour recalls, using the diet records as a memory prompt, each morning following school breakfast. The Minnesota Nutrition Data System (NDS-R 2.4) was used to collect the dietary data and calculate nutrient content. Concurrent measurement of TEE was performed for the same 7 day period using a modified two-point method. Mean percent body fat for each group ranged from 39.7-44.7%. Mean (SDs) energy intake in kcals was 1,970 (227), 1,960 (330), 1,939 (732), and 1,923 (549) for each group per above, and mean TEE in kcals was 2,718 (562), 2,293 (288), 3,110 (477), and 2,872 (651) respectively. Using PROC MIXED on the difference, only percent body fat was significant. Since no error adjustment was made for the DLW procedure, that may

account for a small proportion of the discrepancy, however in two previous studies using direct observation as the criterion, both groups of children (same age range, mean % body fat >30%) over reported energy intake slightly, but accurately (within 10%). While these data using DLW confirm underreporting of energy intake by obese children, some further evaluation of the discrepancy in results using two different criteria must be investigated.

116P

A STUDY TO ASSESS THE VALIDITY AND RELIABILITY OF A QUESTIONNAIRE TO ASSESS PHYSICAL ACTIVITY IN YOUNG ADULTS

Valerie George, Lea Schilit, Paulette Johnson, Florida International University Miami, Florida, USA

Valid and reliable, easy to use assessment tools are needed to evaluate physical activity (PA) in diverse populations. One of the most economical and frequently used methods to obtain information on PA is a questionnaire. However, very few questionnaires have been developed to assess usual/typical PA in young adults. The purpose of this study was to determine the validity and reliability of a short, six-item questionnaire, the Physical Activity Questionnaire for Young Adults-PAQYA. Thirty-eight male and 40 female students (18-24 years of age) participated in the study. The PAQYA assess participation in light, moderate, and vigorous activity. It also assesses participation in reference to the current recommendations for moderate PA and strength developing activities. To test for validity, students completed the 7-day PA recall (PAR), and wore a Caltrac Activity Monitor for 24 hours. There was a significant ($p < 0.001$) correlation between the energy expenditure (kcal/day) with the PAQYA and the PAR ($r = .50$) and the PAQYA and the Caltrac ($r = .47$). The test-retest correlation, $r = .90$ was significant ($p < 0.001$). In reference to previously reported validation studies on PA questionnaires, the PAQYA had a comparatively high correlation with the PAR and Caltrac. We conclude that the PAQYA is a valid, and reliable method to assess PA in young adults.

117P

SELF ASSESSMENT OF SERVINGS OF FRUITS AND VEGETABLES IN YOUNG ADULTS

Greene, G.W., University of Rhode Island, Kingston, RI, USA

Stage of Change algorithms for servings of fruits and vegetables generally rely on self-assessment of servings. Optimistic bias, i.e., perceiving a greater fruit and vegetable intake than actually consumed, could preclude use of self-assessment without an objective measure of intake. Although one study found optimistic bias in adults, few studies have focused on young adults and none have included an intervention. This study compared young adult students' ($N=105$, mean age=21 years, 72% female, 57.5% living in dorms) self-assessment of intake to intake measured by 3, nonconsecutive 24-hour recalls using the University of Minnesota Nutritional Data System (NDS). Self-assessed intake was measured using the format, "How many servings of _ do you usually eat each day?" The initial assessment (FV1) and assessment following a brief educational program (FV2) measured fruits and vegetables combined. Servings of fruits, followed by vegetables, were assessed separately then the two food groups were added (F+V). There was a main effect of method ($F(3, 102) = 42$, $p < .001$) with both FV1 ($M=2.56 \pm 1.43$) and FV2 ($M=3.14 \pm 1.58$) underestimating intake compared to NDS ($M=4.11 \pm 2.42$) ($p < .05$) but F+V was fairly accurate ($M=3.88 \pm 1.86$) (NS). The educational intervention increased self-assessed servings ($t(104) = 4.3$, $p < .001$). The degree of underestimation in young adults suggests a pessimistic bias; use of self-assessed intake for stage classification is likely to increase the proportion in pre-action stages of change compared to classification based on recall. Assessing fruits and vegetables separately then adding servings or providing brief instruction about fruits and vegetables may improve accuracy of self-assessment in young adults.

118P

CLARIFYING THE CONTRIBUTION OF ENJOYMENT TO PREDICTING PHYSICAL ACTIVITY INTENTION IN ADOLESCENT GIRLS

Robertson-Wilson, J. E., Lévesque, L., & Deakin, J., Queen's University, Kingston, Canada

Current evidence suggests that activity enjoyment may positively influence physical activity (PA) involvement in adolescent girls. However, the contribution of enjoyment to predicting intention to engage in PA relative to other known correlates of PA intention has not been investigated. The purpose of the present study was to assess the importance of theory of planned behaviour constructs (i.e., attitude, subjective norm, self-efficacy), and enjoyment as predictors of intention to engage in PA in a cohort of adolescent girls. The participants were involved in the Ontario Physical and Health Education Association's "Go Girls! Healthy Bodies, Healthy Minds" intervention program. Forty-three adolescent girls from grades seven through eight completed validated questionnaires (Motl et al. 2000; 2001) measuring PA attitude, PA subjective norm, PA self-efficacy, PA intention, and PA enjoyment. Standard multiple regression analyses revealed low to moderate correlations among predictors that together accounted for approximately 68% of the variance in PA intention. Enjoyment ($\beta = .456$, $p < .01$), self-efficacy ($\beta = .409$, $p < .01$), and subjective norm ($\beta = .313$, $p < .01$) were found to be the most important predictors of physical activity intention while attitude was not a significant predictor of PA intention ($\beta = -.128$, $p > .05$). These findings support the inclusion of measures of enjoyment into tests of the theory of planned behaviour for physical activity involvement in adolescent girls.

119P

A PILOT STUDY OF FACTORS INFLUENCING FRUIT AND VEGETABLE INTAKES OF YOUNG CANADIAN ADULTS

Sheeshka, J., Chulak, T., University of Guelph, Guelph, Canada

PURPOSE: Pilot study examining psycho-social influences on fruit/vegetable intakes. **METHODS:** A convenience sample of university students ($n = 186$; 91% female) was used. Measures for independent variables (self-efficacy, taste, habit, perceived benefits, knowledge of recommendations, satisfaction with current consumption) were from U.S. (e.g., Krebs-Smith et al., 1995) and Dutch (e.g., Lechner, Brug, & DeVries, 1997) research. **RESULTS:** The best predictors of self-reported intakes ($R^2 = .28$) were self-efficacy (Beta = .31, $p < .0001$), being in the habit of eating fruits/vegetables since childhood (Beta = .23, $p < .005$) and believing that fruit/vegetables reduce chronic disease risk (Beta = .19, $p < .005$). Taste and social influences had no significant effects. Of interest were 7% ($n=13$) who knew the recommendations, did not meet them yet were satisfied with their intakes. **CONCLUSIONS:** Segmenting audiences according to knowledge of

recommendations, reported intakes and satisfaction with current consumption identifies those who lack knowledge vs dietary assessment skills vs motivation to change.

120P

DIFFERENCES IN PERCEIVED SUPPORT AND ENVIRONMENT FOR PHYSICAL ACTIVITY IN YOUNG AFRICAN AMERICAN GIRLS AND THEIR PRIMARY CAREGIVERS: PRELIMINARY REPORT FROM GIRLS RULE!

Ward, D.S., Flower, K., Meyer, A.-M. and Ammerman, A., University of North Carolina, Chapel Hill, North Carolina, USA

BACKGROUND: Understanding environment and caregiver support for physical activity (PA) is important obesity prevention. **PURPOSE:** To assess association of PA levels in preadolescent girls with perceived caregiver support and PA-promoting neighborhood characteristics. **METHODS:** Subjects were 44 African-American girls, age 6-9 yrs. and their primary female caregivers (n=42) who participated in Girls Rule!, a pilot church-based obesity prevention program. Baseline interviews and questionnaires measured caregiver and environmental support PA. Girls were divided into high (HA) and low (LA) activity levels by 7-day CSA accelerometer data. T-tests and chi-square analyses were used to compare groups. **RESULTS:** HA girls were younger (7.6 vs. 9.1 years; $p=0.27$), had lower age-based BMI percentages (62% vs. 84%; $p=0.02$), and were more likely to report support for PA by their caregivers compared with LA girls, although these differences were not significant. More HA girls reported that their mothers like to watch them play sports or games (86% vs. 63%; $p=0.099$). Conversely, mothers of LA girls were more likely than mothers of HA girls to report that they support and prompt girls' activity, however, this was not significant. HA girls were more likely to report favorable physical environmental characteristics, including access to parks (86% vs. 58%; $p=0.05$); and vacant lots (57% vs. 16%; $p=0.007$). **CONCLUSIONS:** Findings suggest younger girls are more active, have lower age-based % BMI, and that environmental and parental support may be better for HA girls. Discrepancies were noted between reported support for PA by girls and their caregivers, suggesting avenues for intervention approaches.

121P

EATFIT: AN INTERVENTION EFFECTIVENESS TRIAL FOR INCREASING DIETARY AND PHYSICAL ACTIVITY SELF-EFFICACY AND BEHAVIORS

Marilyn Townsend, PhD, R.D., Mical Kay Shilts, PhD Candidate, M.S., Marcel Horowitz, M.S., University of California, Davis Davis, California, USA

The Social Cognitive Theory played an essential role in the development and evaluation of the EatFit intervention. The intervention engages students in a self-assessment of eating and physical activity behaviors. Students set individual goals, based on the assessment. The intervention provides skill-building activities to help reach those goals. Purpose A controlled field trial was conducted to investigate the effectiveness of the EatFit intervention on improving dietary and physical activity self-efficacy and behaviors in adolescents. Methods Sixty-four 8th grade students from an ethnically diverse urban middle school in Central California participated in the 10-hour intervention. A one-group pre-test 1, pre-test 2, post-test design was used. Participants served as their own control. The evaluation instrument assessed targeted dietary and physical activity behaviors and self-efficacy. Findings Forty-one ethnically diverse participants with a mean age of 14 years old were included in analysis (63% male). Between 44% and 73% of participants improved dietary and/or physical activity self-efficacy and behaviors. Paired T-test indicated participants made positive changes in dietary behaviors ($p=0.03$) and physical activity self-efficacy ($p=0.02$). Seventy-one percent of participants indicated their confidence had increased for eating "healthy" and for doing physical activities. When students set a dietary goal they significantly increased positive dietary behaviours specific to that goal ($p=0.04$). Seventy-four and 69% of participants rated themselves as making one lasting improvement in dietary and physical activity choices, respectively. Conclusion The EatFit intervention was successful at improving dietary behaviors and physical activity self-efficacy, but did not significantly impact physical activity behaviors or dietary self-efficacy.

122P

EATFIT: A RANDOMIZED CONTROLLED TRIAL TO ASSESS THE EFFECTIVENESS OF "GUIDED GOAL SETTING" AMONG ADOLESCENTS

Mical Kay Shilts, PhD Candidate, M.S., Marcel Horowitz, M.S., Marilyn Townsend, PhD, R.D. University of California, Davis Davis, California, USA

We investigated the effect of guided goal setting on middle school adolescents' dietary and physical activity self-efficacy and behaviors. Methods: A convenience sample of 136 participants was drawn from an urban middle school in a low-income community in Central California. Participants were randomly assigned to treatment (intervention with goal setting) or control (intervention without goal setting). The EatFit intervention engaged students in personal assessment of eating and physical activity behaviors. Students set one dietary and one physical activity goal, based on the results of the personal assessment. To ensure appropriately designed goals, yet provide for student autonomy, guided goal setting (pre-formulated goals containing attributes such as specificity, difficulty, and proximity) was developed specifically for this age group. Findings: Ninety-four ethnically diverse 8th grade participants were included in the analysis (55% male). Chi square tests revealed more treatment participants made improvements in dietary behaviors ($p=0.04$) and physical activity self-efficacy ($p=0.01$) compared to control participants. Treatment participants who made goal effort scored significantly higher on dietary behavior ($p=0.02$), physical activity behavior ($p=0.04$) and physical activity self-efficacy ($p=0.02$) variables than control participants who did not spontaneously set goals (ANCOVA). Those participants who set a specific goal to increase strength activities rated themselves as having significantly higher self-efficacy to participate in strength training activities compared to the those who did not set a strength goal ($p=0.04$). No other significant differences were found between groups for other physical activity or dietary goals. Conclusion: Guided goal setting was shown to enhance outcomes for this controlled study.

124P

TRANSTHEORETICAL MODEL PROCESSES OF CHANGE AS PREDICTORS OF DIETARY CHANGE

R. Shepherd, A. Moore, University of Surrey, Guildford, UK; G. Frost, Hammersmith Hospital, London, UK

Purpose: There are few empirical tests of the efficacy of Transtheoretical model in the dietary domain. The present study is an intervention on fat intake with type 2 diabetics, comparing a stage-matched intervention to a general intervention and control. Method: Participants (n=955) completed a baseline questionnaire assessing stage of change for fat intake, dietary behaviors associated with fat intake, decisional balance, processes of change and demographic variables. They were randomized to receive a stage-matched intervention, a general intervention or no intervention and followed up after 6 months. Results: Participants in the pre-action stages at baseline performed significantly fewer of the low fat behaviors than those in the post-action stages and also showed differences in the use of processes, decisional balance and self efficacy. There was little difference in stage movement at 6 months follow up between those in the stage-matched, general and no intervention conditions. However, those participants who moved forward from pre-action stages (regardless of intervention type) showed increased low fat behaviors at follow up. Also greater use of several of the processes of change at baseline was associated with greater likelihood of progressing through the stages, while greater self efficacy at baseline was found in those who did not progress. Conclusions: While this study does not offer evidence for improved dietary change with stage-matched interventions it does demonstrate greater process use predicting forward movement through the stages.

125P

NUTRITION IN PRESCHOOL-AGE: A LONGITUDINAL STUDY OF THE DETERMINANTS OF DIET QUALITY IN QUÉBEC YOUNG CHILDREN

Lise Dubois, Université Laval, Canada

Purpose: A diet of good quality is essential to children's health and development. The purpose of this research is to identify the main factors of influence on children's diet. The main research question is: How social circumstances create nutritional and health inequalities in preschool years? This study has its public health relevance for two main reasons: the first one is the increasing prevalence of overweight and obesity in Canadian children, and the second one is the rise of poverty and food insecurity in Canadian family with young children. Methods: We studied the social determinants of diet quality in a birth cohort of more than 2000 children. The children, seen every year, constitute a representative sample of the children born in 1998 in the province of Québec (population: more than 7 Million individuals). Data on birth weight, breastfeeding, eating behaviours, food consumption and body weight were analysed in line with different determinants such as parents' level of education, type of work, family income and family type. Results: Strong social disparities in diet quality can be traced from birth. Mothers' level of education is the more important factor for diet quality in preschool years. We also observed that social disparities have consequences on children health status and body weight in young children. Conclusion: Public health interventions should target at risk groups. Nevertheless, nutrition information and intervention should be developed for the whole population as social inequalities are not affecting only poor children, but are seen all over the social stratum.

126P

BEHAVIORAL PREDICTORS OF HEALTHY WEIGHT MAINTENANCE

Davison, K.K., Birch L.L, The Pennsylvania State University, University Park, USA

In the context of continued worldwide increases in the prevalence of obesity, it is informative to focus research on the minority of individuals who maintain a healthy weight across time. Therefore, this study examined behavioral predictors of healthy weight maintenance across a 5-year period among 163 White married couples (ages 24 to 70 years). Multiple measures of dietary intake and physical activity were obtained and combined to create summary intake and activity scores for each individual. In addition, height and weight were measured at three occasions each spaced 2 years apart. Participants were classified as healthy maintainers if they maintained a body weight within 5% of their baseline body weight and had a body mass index < 25 at the final assessment. Female (N=36) and male (N=21) healthy maintainers had a mean BMI at time 3 of 21.7 + 1.3 and 23.7 + 1.1 respectively. In comparison to the rest of the sample, healthy maintainers were less overweight during childhood, reported less extreme weight fluctuations during adulthood, and dieted less frequently. In addition, female healthy maintainers were more likely to be physically active and to have active husbands and male healthy maintainers reported healthier dietary practices including lower fat and caloric intake and higher fruit and vegetable intake. In summary, results indicate that healthy weight maintenance is linked to lower weight status during childhood and eschewing dieting in favor of healthy eating and activity patterns during adulthood.

127P

LOW LEVEL OF DIETARY AND PHYSICAL ACTIVITY COUNSELLING BY PHYSICIANS AND NURSES IN QUEBEC

Leaune V, Paradis G, Renaud L, La Tour S, Chevalier S. Institut national de santé publique du Québec, Direction de Santé Publique de Montréal-Centre, Québec, Canada

Little is known about the frequency and type of patient counseling given by health professionals about diet and physical activity. As part of the baseline assessment for a community-based trial, we conducted telephone interviews with 3 802 patients aged 18 to 74 years (response rate (RR): 70%) from 20 local community clinics in Quebec. Self-administered questionnaires were completed by 177 nurses (RR: 75%) and 83 physicians (RR: 58%). Only 26% and 18% of patients had ever received dietary and physical activity (PA) counseling respectively. Those proportions were 30% and 22% for patients with at least one cardiovascular disease (CVD) risk factor. Written educational material was used more frequently for dietary than physical activity counseling (62% vs 29%, p<0,05). Although 82% of subjects who ever received dietary counseling reported subsequently changing their eating habits, only 34% of patients who ever received PA counseling subsequently increased their level of PA. Only 44 % of physicians and 29% of nurses regularly gave dietary counseling to patients without risk factors during visits with appointment. Those proportions were 71% and 27% respectively for PA counseling. Only 1/3 of physicians and nurses gave written educational material on diet and less than 10% on PA. Furthermore, significant proportions of physicians (39%) and nurses (37%) felt they had little or no

preparation for dietary counseling. Those proportions were 29% and 42% for PA respectively. The low frequency of dietary and PA counseling even among patients with risk factors underline the need to increase prevention practices among health professionals.

128P

COMPARISON WITH OTHERS IN DIETARY INTAKE

Anke Oenema & Johannes Brug, Department of Public Health, Erasmus MC, Rotterdam, The Netherlands

Lack of awareness of personal intake of dietary fat may be associated with a low motivation to reduce dietary fat intake. An optimistic bias in the comparison of ones own fat intake to that of others is associated with this lack of awareness. Insight into the way people compare themselves with others may contribute to a better understanding of dietary intake and its determinants, and may provide suggestions for nutrition education interventions aimed at increasing awareness and intention to change. A study exploring interpersonal comparisons involved in evaluating personal dietary fat intake was conducted. One hundred and eighty-nine respondents participated in structured telephone interviews. Fat intake, behavioral determinants and aspects of interpersonal comparison were measured. The data were analyzed by means of frequencies and logistic regression analyses. Self-rated fat intake was a significant predictor of intention to change. Respondents reported to use comparison with others as a means to evaluate their personal fat intake. Close relatives and friends were the most frequently reported comparison persons. Respondents with a motivation to change and those of younger age were more likely to compare themselves with others. It is concluded that comparison with others related to dietary fat intake is prevalent and that it is possible to make these comparisons visible. The present study was a first attempt to gain a basic understanding of comparison with others related to dietary fat intake.

129P

INTEGRATING A PHYSICAL HEALTH CAMPAIGN INTO THE MENTAL HEALTH CONTINUUM: FORMATIVE RESEARCH IN A MENTAL HEALTH CARE SYSTEM

Early, J.L., University of Kansas School of Medicine, Johnston, J.A., Kansas State University, Wichita, KS, USA

It is well documented in the literature that weight gain commonly accompanies pharmacological management of schizophrenia, although the mechanism of that weight gain is not fully understood. The purpose of this formative research was to develop an obesity-prevention behavior change campaign and simple implementation protocol, then determine the feasibility of adoption by a mental health care system. Using grounded theory, the team conducted focus groups and individual interviews with the mental health care team to identify: 1) Perceptions of the relationship between pharmacotherapy and weight gain; 2) The feasibility of the mental health care system prompting adults with schizophrenia to attend to lifestyle behavior changes in addition to the management of their mental illness; and 3) Messages and places within the mental health care system to institute concept reminders related to lifestyle behaviors. Qualitative data informed the required characteristics of the message, physical prompts and overall advice. Data also identified barriers to adoption and campaign characteristics that might help overcome barriers. Mental health professionals recognize the importance of good physical activity and diet behaviors for themselves and their clients, but generally lack the tools and the systemic support to address these lifestyle behaviors. A nutrition and physical activity behavior change campaign that is simple, holistic, positive, visual, playful, and systematic can be successfully integrated into the mental health care system that helped develop it. Future research is needed to determine efficacy of the campaign to impact the weight and health of both the mental health care team and their clients.

130P

EATING BEHAVIOURS AMONG PATIENTS TREATED WITH ATYPICAL ANTIPSYCHOTICS

(1)Blouin, M. (2)Venables H., (3)Bouchard, R.H., (4)Roy, M.A., (1)Alm eras, N.

1. Centre de recherche de l'H pital Laval ; 2. Laboratoire des sciences de l'activit  physique de l'Universit  Laval ; 3. Corporation de recherche en neuro-psycho-pharmacologie de Qu bec ; 4. Centre de recherche Universit  Laval Robert-Giffard; Qu bec, Canada

It is documented that atypical antipsychotics induce substantial weight gain, although endocrine mechanisms responsible for this phenomenon remain speculative. From a clinical point of view, some patients report a modification of their food intake behaviours since the initiation of their atypical therapy, a factor which may obviously contribute to their increased body weight. Purpose: The main objective of this study was to document eating behaviours of atypical antipsychotic treated-patients in relation with some anthropometric indices. Methods: After an overnight fast, patients had to eat a standardized breakfast (835 kcal). At lunch time, patients were offered an ad libitum buffet type meal in order to evaluate their food preferences. Between the meals, a 24-hour food intake recall and a questionnaire on binge eating behaviour were performed (Hawkins & Clement, 1980). Results: Results were obtained on 18 men been treated with the same atypical antipsychotic for at least three months (age: 30.5 ± 7.9 years). Reported energy intake was 2795 ± 1412 kcal/24 hours. Macronutritional composition was similar between the 24-hour recall and the ad libitum food intake (proteins: $15.4 \pm 6.1\%$ vs. $18.9 \pm 4.3\%$, carbohydrates: $48.6 \pm 15.4\%$ vs. $47.7 \pm 5.4\%$, lipids: $34.5 \pm 11.8\%$ vs. $33.4 \pm 4.7\%$; respectively); and not at variance with the typical intake of the Canadian population. However, 66.6% of patients reported binge eating tendencies and those patients presented higher anthropometric indices as compared to the none binger (weight: $p=0.08$, waist girth: $p=0.07$, BMI: $p=0.08$). Conclusion: These preliminary results suggest that, despite presenting a standard diet, the reported binge eating behaviour among atypical antipsychotic treated-patients seems to influence weight gain induce by medication.

131P

EXAMINATION OF THE AUSTRALIAN FOOD INDUSTRY'S USE AND VIEWS OF PLANT-BASED FOOD PRODUCTS

Lea, E.J., Deakin University, Melbourne, Australia

PURPOSE: The research aim was to examine the use and views of plant-based food products by the food industry and media in Australia. The food industry has a strong influence on consumer eating behaviours and thus an examination of the attitudes of the food industry to plant-based foods has important implications for consumer behaviour and for food and

nutrition policy. **METHODS:** This qualitative study involved 32 semi-structured interviews about plant foods with growers and their representatives (vegetables, fruits, pulses, rice, nuts), horticulture/nutrition researchers (government and non-government organisations, universities), food processors (large companies with an emphasis on plant-based products), food retailers (major chain and small independent retailers), food service representatives (vegetarian and non-vegetarian outlets), and food journalists. Selection was non-random. Interviews were audio-taped, transcribed and coded. **RESULTS:** As expected, participants believed strongly in the benefits of consuming plant foods, particularly health benefits. The perceived barriers to increased production/retail of plant foods were identified, including lack of grower control over the marketing of their products and environmental problems. The promotional activities implemented by the industry or otherwise deemed important (e.g. farmers markets, educational programs) and the factors considered by participants to be important for future industry growth (e.g. specific consumer research) were identified. **CONCLUSIONS:** Given the important health and environmental benefits of eating a plant-based diet, increased plant food consumption is vital. It is essential to understand the preparedness of food industry sectors to meet consumer demands, and, further, to stimulate demand by the provision of good quality, tasty, healthy plant-food products.

132P

PREDICTION OF LOW IN FAT AND CHOLESTEROL DIET INTENTIONS AND BEHAVIORS

Gaston Godin, Université Laval, Qc, Canada; Michèle Aubin, Université Laval, Qc, Gagné Camille, Université Laval, Qc, Canada; Jean Maziade, C.L.S.C Haute-Ville, Qc, Canada; Lucie Vézina, HôpitalLaval, Qc, Canada

PURPOSE: The aim of this study was to identify the psychosocial factors predicting low-fat and low-cholesterol diet intentions and behavior. Ajzen's theory of planned behavior was adopted in conjunction with three additional variables (role beliefs, past behavior and gender). **METHODS:** The subjects were 81 patients recruited in two hospital-based family medicine centres. The theoretical variables and other social cognitive variables were assessed by means of a self-administered questionnaire. Behavior (fat intake) was assessed three months after baseline data collection.

RESULTS: Overall, 45% ($p = .0001$) in the variability of intention was explained by self-efficacy ($\beta = .55, p = .0001$) and perceived behavioral control ($\beta = .23, p = .02$). Regression of self-perception of fat intake yielded an R^2 of 20% ($p = .0001$), with intention ($\beta = .40, p = .0001$), and past behavior ($\beta = -.24, p < .02$) being the significant determinants. The same factors explained 27% of the variance of fat intake, as assessed with the Block Fat Screener ($\beta_{\text{int}} = -.24, p = .01; \beta_{\text{past}} \text{ behavior} = .48, p = .0001$). **CONCLUSIONS:** It is suggested that, within a clinical setting, programs promoting the adoption of a low in fat and cholesterol diet should consider the influence of past behavior as well as individuals' capacity to cope with perceived barriers.

133P

FORWARD STAGE TRANSITION DETERMINANTS OF FRUIT CONSUMPTION

De Vet, E., De Nooijer, J., Department of Health Education and Promotion, Maastricht University, Maastricht, The Netherlands; Brug, J. Department of Public Health, Erasmus Medical Center, Rotterdam, The Netherlands

Purpose: In order to develop stage-matched interventions we examined forward stage of change transition (FST) determinants for precontemplation and contemplation related to fruit consumption. **Methods:** fruit consumption, stage of change, processes of change and potential other determinants of FST were assessed longitudinally in 735 respondents by means of electronic questionnaires. Stepwise logistic regression analyses were used to identify significant predictors of FST. **Results:** at baseline 242 and 157 respondents were in precontemplation and contemplation respectively. Between T0 and T1 59 and 47 respondents had FST from precontemplation and contemplation respectively. The two first logistic regression analyses showed that experiential processes of change predict FST from precontemplation ($OR = 1.65, p < .068$) as well as contemplation ($OR = 1.78, p < .054$). In the following logistic regression analyses pros and cons, attitudes, self efficacy measures, subjective norms and self-rated fruit intake were added as potential further determinants of FST. **Results** showed that pros ($OR = 2.23, p < .010$) and self efficacy ($OR = 1.48, p < .033$) predicted FST from precontemplation. Attitudes ($OR = 2.82, p < .006$) and experiential processes of change ($OR = 1.98, p < .018$) predicted FST from contemplation. **Conclusions:** our results partly support the Transtheoretical model, in that experiential processes were predictive for FST from pre-action stages and that some evidence was found for stage-specific FST determinants. However, some of the specific predictors of FST identified in the present study do differ from results from earlier studies.

134P

AWARENESS OF PERSONAL WEIGHT STATUS

Johannes Brug & Anke Oenema, Department of Public Health, Erasmus Medical Center, Rotterdam, The Netherlands; Stef Kremers, Department of Health Education, Universiteit Maastricht, The Netherlands

Overweight, caused by an imbalance between energy intake and expenditure, is an important risk factor for ill health. Behaviour change theory posits that awareness of risk status is important for motivation to change. Two data sets from cross-sectional surveys were analysed to explore the prevalence, predictors and consequences of awareness of personal weight status. Respondents were categorised based on a comparison between their BMI and their self-rated weight. Respondents with $BMI > 25$ who rated their weight as not too high were classified as optimists; respondents with $BMI \leq 25$ who rated their weight as too high were classified as pessimists. All other respondents were classified as realists. In Study 1, conducted among adolescents ($n = 1711$), 29.7% were not aware of their personal weight status, 28.2% were pessimists, only 1.5% were optimists. Girls and respondents who rated their weight as higher than their peers were more likely to be too pessimistic about weight status. In Study 2, conducted among adults ($n = 616$) 13.0% of the respondents were classified as optimists, 11.9% were pessimists. Self-rated weight and perceived weight compared to peers were stronger predictors of intention to lose weight than BMI. Women, higher educated respondents and respondents who rated their weight as higher than their peers were more likely to be pessimists. Men, older respondents, and respondents who rated their weight as lower than their peers were more likely to be optimists. It is concluded that awareness of personal weight status should be taken into account in healthy weight promoting programs.

135P

POSSIBLE DETERMINANTS OF WILLINGNESS TO PREVENT WEIGHT GAIN

B.M.Wammes: Erasmus Medical Center Rotterdam, Department of Public Health; Dutch Food and Nutrition Center, The Hague, The Netherlands; B.Breedveld: Dutch Food and Nutrition Center, The Hague, The Netherlands; J.Brug: Erasmus Medical Center Rotterdam, Department of Public Health, The Netherlands

PURPOSE: To identify intermediate intervention goals for prevention of overweight by investigating: 1) people's willingness to prevent weight gain and 2) psychosocial and demographic factors in a random sample of Dutch adults. **MEASURE:** A cross-sectional survey among a sample of 979 non-obese Dutch adults aged 25-35. We obtained measures on intention, attitude, subjective norms, self efficacy, risk perceptions, Body Mass Index (BMI), stages of change and demographic variables using telephone interviews. Associations between potential predictors of intention to prevent weight gain were assessed with step-wise multiple regression analysis. Differences in psychosocial factors and BMI between the stages of change were analysed using one-way analysis of variance with Scheffé's multiple-comparison test. **RESULTS:** 75% percent of respondents were realistic about their body weight and 6% underestimated it. While 84.7% of the respondents had a positive intention to prevent weight gain. Intention was significantly associated with BMI, attitude and risk perception. Significant differences were found between precaution adoption stages of change in BMI, self-evaluations of weight, attitudes, subjective norm, social pressure and self efficacy towards weight gain prevention. Attitudes were most positive in the pre-action and acting stages and least positive in the unawareness stage. BMI was higher and self efficacy was lowest in the pre-action stage. **CONCLUSION:** Most respondents make realistic assessments of their body weight. The results suggest that messages to influence attitude, risk perception and self efficacy might be most likely increase intention to prevent weight gain.

136P

THE IMPORTANCE OF SUBJECTIVE NORMS FOR PEOPLE WHO CARE WHAT OTHERS THINK

Latimer, A.E. & Martin Ginis, K.A., McMaster University, Hamilton, Canada

Within the context of exercise, subjective norms (SN) have only a very weak, peripheral influence on exercise intentions (Hagger et al., 2002). For many health behaviors (e.g., sunbathing), it has been demonstrated that the small but consistent relationship between SN and intentions is in part due to individual differences in the extent to which people are attuned to social pressure (Terry & Hogg, 1996). This possibility has not been examined in relation to exercise. Thus, using the Theory of Planned Behavior (TPB) as a framework, the current study examined whether individuals' dispositional tendency to be attuned to other people's judgments of them moderates the SN-intention to exercise relationship. One hundred and seventeen male and 208 female undergraduate students ($M_{age}=20.5\pm 2.80$) completed the Brief Fear of Negative Evaluation Scale (FNE) and a questionnaire assessing TPB constructs (SN, attitude, perceived behavioral control, intention). Using hierarchical linear regression analyses, FNE was examined as a moderator of the SN-intention relationship. The overall model was significant, ($R^2_{adj} = .36$, $F[6, 314] = 30.97$, $p < .001$) with the interaction term explaining small, albeit significant variance in intentions ($R^2_{\Delta} = .010$, $p = .047$). Post hoc analyses of the interaction term revealed that SN was a stronger predictor of intentions to exercise for people with high FNE than for people low in this trait. These findings highlight important considerations for the measurement of the SN construct and begin to provide an understanding of factors underlying the usefulness of SN for predicting intention among certain individuals but not others.

137P

ARE VISUAL ANALOGUE SCALES USED TO ASSESS APPETITE SENSATIONS USEFUL IN CLINICAL CONTEXT?

V. Drapeau, F. Therrien, D. Richard and A. Tremblay, Université Laval, Québec, Canada

PURPOSE: The aim of this study was to evaluate the clinical utility of the visual analogue scales (VAS) used to measure appetite sensations in research settings. **METHODS:** A group of 25 men and 17 women was recruited to record their appetite sensations after an overnight fast and at 10 minute intervals during 1 hour after a standardized breakfast. All participants were invited on a different day to eat, after a standardized breakfast, an ad libitum lunch (buffet type) and dinner (meal + dessert) in order to evaluate energy intake. **RESULTS:** No gender differences were found for all appetite sensations measured in fasting state or after a standardized breakfast meal (area under the curve (AUC)). The one hour post breakfast AUC for desire to eat, hunger and prospective food consumption were positively associated with energy intake at lunch ($0.36 < r < 0.49$, $p < 0.05$) and for lunch + dinner ($0.35 < r < 0.45$, $p < 0.05$) whereas post breakfast AUC for fullness was negatively associated with energy intake at lunch ($r = -0.47$, $p < 0.01$) and for lunch + dinner ($r = -0.47$, $p < 0.01$). The same associations were observed between the half hour post breakfast AUC for appetite sensations and energy intake. No association was found between the fasting state appetite sensations and measured energy intake. **CONCLUSIONS:** This study indicates that PBAUC appetite sensations were associated with variations in energy intake. The measure of post meal appetite sensations during 30 minutes seemed to be sufficient to observe these associations. This suggests that VAS could be useful in a clinical context in order to characterize individuals who are more susceptible to overeat.

138P

ESTIMATION OF DAILY ENERGY NEEDS WITH TWO DIFFERENT PREDICTIVE PROCEDURES: COMPARISON TO WHOLE BODY INDIRECT CALORIMETRY MEASUREMENTS IN SEDENTARY AND ACTIVE ADULTS

Alfonzo, G.G., Université Laval, Québec, Canada; Doucet, E., University of Ottawa, Ontario, Canada; Alméras, N., Laval Hospital Research Center, Québec, Canada; Bouchard, C., Pennington Biomedical Research Center, Louisiana, USA; Tremblay, A., Université Laval, Québec, Canada

OBJECTIVE. To compare the estimated daily energy needs (EDEE) with the FAO/WHO/UNU 1985 and the estimated energy requirements (EER) with the recent dietary reference intake 2002 (DRI) to the daily energy expenditure measured in a calorimetric chamber in sedentary and active subjects. **METHODS.** We measured resting energy expenditure (REE) by indirect calorimetry in 45 sedentary subjects (26 men and 19 Women) and in 69 active subjects (43 men and 26 women). Measured daily energy expenditure (MDEE) in the sedentary group was assessed over 24 hours in a respiratory chamber

while in the active group, it was derived by multiplying REE by his/her physical activity level. Each MDEE value was compared with the EDEE and with the DRI. RESULTS. MDEE was significantly lower than EDEE in sedentary men and women and in active men, for the two age groups considered (18-30 and 30-60 years, $P < 0.05$). With the exception of MDEE in sedentary men and women, EER was significantly lower than EDEE and MDEE in both sedentary and active subjects of each subgroup. CONCLUSION. The procedures FAO/WHO/UNU 1985 may overestimate daily energy needs particularly in sedentary individuals. However, DRI 2002 are probably more adapted to estimate real daily energy needs in sedentary and active subjects in comparison to the FAO/WHO/UNU 1985 procedures.

139P

COMPARISON OF THE BLOCK® CHILD ACTIVITY SCREENER WITH AN OBJECTIVE MEASURE OF PHYSICAL ACTIVITY

Deanna N. Drahovzal, B.Sc.(1), Terri-Lyn M. Bennett, B.Hk.(1), Phil D. Campagna, Ph.D.(1), T. Michael Vallis, Ph.D.(2), Torin J.(3)

1. Dalhousie University, Halifax, Canada; 2. QEII Health Sciences Center, Halifax, Canada; 3. Block, Block Dietary Data Systems, California, USA

Accurately estimating children's energy expenditure through low-cost, self-reports of physical activity has been a challenge for health researchers. This study evaluates two versions of a newly developed, parent-assisted child activity screener (CAS) compared to data from an accelerometer. Participants were 120 children (grades 3, 7 and 11; 49.3% girls) and their parents from Halifax, Nova Scotia, Canada. Children wore an accelerometer for one week, and then completed one of two activity screeners at home on the 7th day. Version 1 of the CAS included 9 questions assessing the frequency with which the child engaged in a variety of activities of differing intensities during the past week, and applied an arbitrary duration for each activity. Version 2 (CAS-DUR) was similar, but also incorporated 9 questions about the duration of the activities. Daily estimates of total calories expended were calculated for each child using the CAS, CAS-DUR, and accelerometer. Using partial correlations that controlled for age and weight, the associations between estimates of energy expenditure using the accelerometer and the two screeners were found to be significant, with the CAS-DUR ($r = 0.56$, $p < .0001$, $N = 48$) performing better than the CAS ($r = 0.31$, $p < .0001$, $N = 119$). These data suggest that the CAS-DUR may be a valid tool to assess children's energy expenditure. As well, this study demonstrates that accounting for duration, in addition to frequency of physical activity, is important for parent-assisted, self-report measures of child activity.

140P

DEVELOPMENT OF A QUESTIONNAIRE TO ASSESS MULTI-LEVEL INFLUENCES OF PHYSICAL ACTIVITY INVOLVEMENT AMONG KANIEŃKÉHA:KA (MOHAWK) PARENTS

Duplantie, J. M.Sc. (candidate), (1,2,a), Lévesque, L. Ph.D., (1,3,b), Macaulay, A.C. MD, (1,4,a), Kirby, R.(1,c), Rice, J., (1,c), Potvin, L. Ph.D., (1,2 ,a), Canada.

1. Kahnawake Schools Diabetes Prevention Project; 2. Université de Montréal; 3. Queens University; 4. McGill University; (a. Montreal; b. Kingston; c. Kahnawake)

Social-ecological models of physical activity (PA) involvement stipulate that intrapersonal, interpersonal, and environmental factors interact to facilitate or inhibit PA involvement. Understanding the ecological factors that influence different population subgroups can enhance PA intervention tailoring. The purpose of the present study was to develop a culturally relevant questionnaire to investigate ecological influences (i.e., barriers and facilitators) of PA involvement of parents participating in an ancillary study of the Kahnawake Schools Diabetes Prevention Project, a Kanien'kehaka (Mohawk) community-based participatory research project to prevent type 2 diabetes. Seventy-nine parents (77% mothers; mean age=37.8 years; SD=7.1) completed a questionnaire developed to assess multi-level influences of PA involvement. Six subscales showed high reliability: intrapersonal (13 items; $\alpha=0.90$), interpersonal (6 items; $\alpha=0.82$), and environmental (3 items; $\alpha=0.79$) facilitators; and intrapersonal (17 items; $\alpha=0.88$), interpersonal (5 items; $\alpha=0.69$), and environmental (10 items; $\alpha=0.81$) barriers. Parents were then categorized according to activity level. A preliminary comparison of active (3 or more weekly sessions of moderate and/or strenuous activity) and less active (less than 3 weekly sessions of moderate and/or strenuous activity) parents showed that nine facilitators (knowing the benefits of exercise, self-esteem, accomplishments, being an active person, being a role model, physical appearance, family support, relaxation and history of being active) and one barrier (time) distinguished these two groups from each other (χ^2 , $p < .05$). Given that the most frequently cited PA barriers and facilitators included intrapersonal, interpersonal and environmental factors, we conclude that this supports the necessity of developing instruments to investigate ecological dimensions in population subgroups.