**Supplemental files:**

Probiotic, Yogurt Consumption and Hepatic Steatosis: Results from the NHANES 2011-2016 and Mendelian randomization study

Yancheng Song1,2†, Wencong Guo3,4†, Junke Wang5, Shuguang Liu1, Zhaopeng Li1, Yu Li1

1Department of Gastrointestinal Surgery, The Affiliated Hospital of Qingdao University, Qingdao, Shandong, China;

2Department of Colorectal Surgery, The Sixth Affiliated Hospital of Sun Yat-sen University, Guangzhou, Guangdong, China.

3Institute of Nephrology, Zhong Da Hospital, Southeast University School of Medicine, Nanjing, Jiangsu, China;

4Laboratory of Nephrology & department of Nephrology, The Affiliated Qingdao Municipal Hospital of Qingdao University, Qingdao, Shandong, China;

5Department of Cardiology, Qingdao Hiser Hospital Affiliated to Qingdao University, Qingdao, China

**Supplementary Table S1. Probiotic supplements included.**

**Supplementary Table S2. Univariate logistic regression models of hepatic steatosis.**

**Table S1. – Probiotic supplements included.**

|  |
| --- |
| 21ST CENTURY HIGH POTENCY ACIDOPHILUS |
| 365 PROBIOTIC COMPLEX WITH ACIDOPHILUS DOUBLE STRENGTH |
| 4X PROBIOTIC UP&UP CONTAINS 4 STRAINS OF NATURAL, BENEFICIAL BACTERIA WITH B. INFANTIS10 MG |
| ACCUFLORA ADVANCED CD PROBIOTIC 5 PROBIOTIC STRAINS ADVANCED CD: CONTROLLED DELIVERY |
| ADVANCED NATURALS FLORAMAX ADVANCED PROBIOTIC FORMULA 12 BILLION CELLS OF 7 STRAINS OF MICROFLORA WITH ACIDOPHILUS, BIFI |
| ALIGN PROBIOTIC |
| ALIGN PROBIOTIC B. INFANTIS 35624 WITH: UNIQUE B. INFANTIS 35624 |
| ALLERGY RESEARCH GROUP BIFIDOBIOTICS WITH L. SPOROGENES |
| ALLERGY RESEARCH GROUP GI FLORA L.ACIDOPHILUS, L.CASEI, L. RHAMNOSUS, B. LONGUM HYPOALLERGENIC |
| AMERICAN HEALTH CHEWABLE ACIDOPHILUS WITH BIFIDUS MILK FREE |
| AMERICAN HEALTH CHEWABLE MILK FREE ACIDOPHILUS AND BIFIDUM ONE BILLION ORGANISMS VEGETARIAN FORMULA |
| BACID PROBIOTIC CONTAINS A BLEND OF BENEFICIAL BACTERIA INCLUDING LACTOBACILLUS ACIDOPHILUS |
| BASIC'S NATURAL ACIDOPHILUS BASIC VITAMINS |
| BIOGAIA PROBIOTICS GERBER SOOTHE COLIC DROPS PROBIOTIC |
| BIORAY CYTOFLORA PROBIOTIC IMMUNITY TONIC DAILY |
| BIOSPEC PROBIOTIC PLUS HIGH POTENCY, MULTI-STRAIN PROBIOTIC |
| BLUEBONNET MILK-FREE ACIDOPHILUS PLUS FOS L. ACIDOPHILUS, L. BULGARICUS, BIFIDUS |
| BREAKTHROUGH FORMULATIONS MEGA-FLORA DIGESTIVE TRACT FLORA |
| CELL NUTRITIONALS PROBIOTICS AR ACID RESISTENT 16 STRAIN FORMULA COMPREHENSIVE, DAIRY FREE FORMULA PROVIDING 12 BILLION VIABLE CELLS PER CAPSULE AT TIME OF MANUFACTURE |
| COUNTRY LIFE DAIRY-FREE ACIDOPHILUS WITH PECTIN |
| COUNTRY LIFE POWER-DOPHILUS WITH FOS HYPOALLERGENIC MILK FREE |
| CULTURELLE DIGESTIVE HEALTH PROBIOTIC PROBIOTIC WITH NATURALLY SOURCED DAIRY-FREE LACTOBACILLUS GG ONCE DAILY CAPSULES 10 BILLION ACTIVE CULTURES |
| CULTURELLE KIDS! PACKETS PROBIOTIC PROBIOTIC WITH NATURALLY SOURCED LACTOBACILLUS GG |
| CULTURELLE WITH LACTOBACILLUS GG |
| CVS PHARMACY EXTRA STRENGTH ACIDOPHILUS |
| DDS-100 ACIDOPHILUS WITH FOS CHEWABLE TABLETS (2 BILLION CFU/G) UAS LABORATORIES |
| DEFAULT LACTOBACILLUS ACIDOPHILUS |
| DEFAULT PROBIOTIC |
| DESIGNS FOR HEALTH PROBIOTIC SYNERGY POWDER 20 BILLION ORGANISMS PER SERVING |

|  |
| --- |
| DIGESTIVE ADVANTAGE LACTOSE DEFENSE FORMULA DUAL-ACTION! ENZYME PLUS PROBIOTICS TAKE EVERY DAY |
| DIGESTIVE ENZYMES & PROBIOTICS WITH ENZYGUARD-D 4LIFE |
| DIGESTZEN PB ASSIST+ PROBIOTIC DEFENSE FORMULA DOTERRA |
| ECOQUEST / INFINITY ESSENTIALS FOR LIFE 2 ENZYME, FLORA AND CHROMIUM COMPLEX |
| ENERGETIX FLORA SYNERGY |
| ENZYMATIC THERAPY NATURAL MEDICINES ACIDOPHILUS PEARLS WITH L. ACIDOPHILUS AND B. LONGUM |
| ENZYMATIC THERAPY PROBIOTIC PEARLS HIGH POTENCY ADVANCED 3-LAYER SOFTGEL ONCE DAILY LACTOBACILLI & BIFIDOBACTERIA |
| FINEST NUTRITION ACIDOPHILUS L. ACIDOPHILUS 1 BILLION CFUS (LIVE ORGANISMS) PER TABLET ONE PER DAY |
| FLORA BILBERRY EXTRACT 25% STANDARDIZED ANTHOCYANIDINS WITH FREEZE-DRIED BLUEBERRY POWDER |
| FLORA CERTIFIED ORGANIC FLAX OIL COLD-PRESSED & UNREFINED |
| FLORA FLOR-ESSENCE |
| FLORA UDO'S CHOICE OIL BLEND CERTIFIED ORGANIC BLEND OF FLAX AND OTHER NUTRITIONALLY SUPERIOR OILS |
| FLORA UDO'S CHOICE UDO'S OIL DHA 3-6-9 BLEND BASED ON THE IDEAL 2:1:1 RATIO OF OMEGA FATTY ACIDS |
| FLORA WHITE WILLOW BARK 55 MG STANDARDIZED SALICIN |
| FLORABABY ADVANCED PROBIOTIC FORMULA FOR INFANTS & TODDLERS 5 STRAINS OF BENEFICIAL PROBIOTICS 4 BILLION LIVE CULTURES PER SERVING PROBIOTIC RENEW LIFE |
| FLORADIX CALCIUM-MAGNESIUM WITH ZINC, VITAMIN D AND HERBS |
| FLORADIX FLORAVITAL IRON + HERBS LIQUID EXTRACT FORMULA RICH IN IRON AND B-VITAMINS VEGETARIAN LIQUID FORMULA |
| FLORADIX IRON + HERB TABLETS HIGH POTENCY IRON WITH VITAMINS, YEAST AND HERB EXTRACTS |
| FLORADIX KINDER LOVE CHILDREN'S MULTIVITAMIN LIQUID EXTRACT FORMULA VITAMINS A, B, C, D AND E WITH CALCIUM, HERBAL EXTRA |
| FLORADIX TABLETS WITH IRON, VITAMINS, YEAST AND HERB EXTRACTS |
| FLORAJEN3 HIGH POTENCY PROBIOTIC ACIDOPHILUS BIFIDUM LONGUM 15 BILLION LIVE CULTURES PER CAPSULE |
| FRIENDLY FLORA PREBIOTIC AND PROBIOTIC COMPLEX FOS AND LACTOBACILLUS 5 BILLION CFU PROCAPS LABORATORIES |
| FUSION PLUS IRON / FOLIC ACID / VITAMIN / PROBIOTIC CAPSULES |
| FUTUREBIOTICS COLON GREEN GENTLE, ALL-NATURAL FIBER WITH PROBIOTICS AND ENZYMES NOW WITH SUPER-STABLE PROBIOTICS |
| GARDEN OF LIFE PRIMAL DEFENSE HSO PROBIOTIC FORMULA |
| GARDEN OF LIFE PRIMAL DEFENSE ULTRA ULTIMATE PROBIOTIC FORMULA 15 BILLION CELLS DAILY 13 BENEFICIAL CULTURES WITH HSOS W |

|  |
| --- |
| GARDEN OF LIFE RAW BEYOND VITAMINS & MINERALS VITAMIN CODE 50 & WISER MEN RAW WHOLE FOOD MULTI LIVE PROBIOTICS & ENZYMES RAW FOOD-CREATED NUTRIENTS WITH CODEFACTORS RAW FOOD |
| GARDEN OF LIFE RAW PROBIOTICS WOMEN 50 & WISER 85 BILLION LIVE CULTURES 33 PROBIOTICSTRAINS PROBIOTIC-CREATED VITAMINS, MINERALS, ENZYMES & PREBIOTICS CONTAINS TARGETED PROBIOTICS RAW WHOLE FOOD |
| GARDEN OF LIFE RAW VITAMIN CODE 50 & WISER WOMEN RAW WHOLE FOOD MULTI LIVE PROBIOTICS & ENZYMES RAW FOOD-CREATED NUTRIEN |
| GENERIC20 GR8-DOPHILUS 8 STRAINS & 4 BILLION POTENCY WITH FOS |
| GENERIC36 ACIDOPHILUS PROBIOTIC BLEND |
| GENERIC7 PROBIOTIC ACIDOPHILUS |
| GENERIC8 ACIDOPHILUS & PROBIOTIC COMPLEX |
| GNC NATURAL BRAND ACIDOPHILUS 2 BILLION CFU |
| GNC NATURAL BRAND ACIDOPHILUS 4 BILLION CFU |
| GNC NATURAL BRAND MEGA ACIDOPHILUS |
| GNC NATURAL BRAND POTENT ACIDOPHILUS |
| GNC NATURAL BRAND ULTRA ACIDOPHILUS 350 MG |
| GNC PROBIOTIC COMPLEX CHEWABLE TABLET 1.5 BILLION CFUS |
| GNC PROBIOTICS PROBIOTIC COMPLEX 4 4 BILLION CFUS |
| GNC PROBIOTICS ULTRA 25 BILLION CFUS PROBIOTIC COMPLEX |
| GNC ULTRA 50 BILLION CFUS PROBIOTIC COMPLEX GUARANTEED POTENCY 50 |
| GNC WOMEN'S ULTRA MEGA WITH PROBIOTICS MULTIVITAMIN DELIVERS 1 BILLION LIVE, ACTIVE CULTURES WITH 1,600 IU OF VITAMIN D-3 |
| HEALTH PLUS INC. SUPER COLON CLEANSE WITH HERBS & ACIDOPHILUS |
| HEALTHWAY MEDICAL, P.C. PRO-C 750 MG VITAMIN C WITH PROBIOTICS VEGETARIAN |
| HEALTHY ORIGINS NATURAL PROBIOTIC 30 BILLION CFU'S 8 STRAINS AND 30 BILLION COLONY FORMING UNITS FLORAFIT |
| HERBALIFE FLORAFIBER LACTOBACILLUS ACIDOPHILUS AND FIBER |
| JARROW FORMULAS BABY JARRO-DOPHILUS +FOS WITH CLINICALLY DOCUMENTED STRAINS 3 BILLION PROBIOTIC |
| JARROW FORMULAS BABY'S JARRO-DOPHILUS WITH CLINICALLY DOCUMENTED STRAINS 3 BILLION PER GRAM HYPOALLERGENIC NON-DAIRY PRO |
| JARROW FORMULAS ENHANCED PROBIOTIC SYSTEM JARRO-DOPHILUS EPS ENTERIC COATED |
| JARROW FORMULAS JARRO-DOPHILUS + FOS 6 BENEFICIAL PROBIOTIC STRAINS WITH CLINICALLY DOCUMENTED STRAINS 3.4 BILLION PER CAPSULE PROBIOTIC |
| JARROW FORMULAS JARRO-DOPHILUS ORIGINAL WITH CLINICALLY DOCUMENTED STRAINS 6 BENEFICIAL PROBIOTIC STRAINS 3.4 BILLION PER CAPSULE PROBIOTIC |
| JUICE FOR LIFE POWER FRUIT FORMULA WHOLE FOOD CONCENTRATES WITH ENZYMES, PROBIOTICS & ANTIOXIDANTS |
| JUICEFESTIV FRUITFESTIV 23 FRUITS, ANTIOXIDANTS, PROBIOTICS & DIGESTIVE ENZYMES FEATURES: ACAI, POMEGRANATE, BLUEBERRY AND NONI NATROL |

|  |
| --- |
| KID'S KYO-DOPHILUS PROBIOTIC ONE PER DAY |
| KLAIRE LABS THER-BIOTIC INFANT FORMULA 10+ BILLION CFUS MULTI-SPECIES PROBIOTIC |
| KYO-DOPHILUS |
| KYO-DOPHILUS PROBIOTICS PLUS CRANBERRY EXTRACT |
| L'IL CRITTERS PROBIOTIC ACIDOPHILUS DAILY |
| L.A. FARMACIA NATURAL MICROENCAPSULATED ACIDOPHILUS |
| LIFETIME LIQUID ACIDOPHILUS SOY BASE MILK FREE |
| MASON NATURAL CHEWABLE SOLUBLE FIBER WITH PROBIOTICS ADULTS & KIDS |
| MEGAFLORA OPTIMAL POTENCY PROBIOTIC FORMULA 100% WHOLE FOOD MEGAFOOD |
| METAGENICS LACTO VIDEN ID DAIRY FREE, STRAIN MODIFIED LACTOBACILLUS BLEND |
| METAGENICS ULTRA FLORA PLUS DF CAPSULES |
| METAGENICS ULTRAFLORA IMMUNE HEALTH PROBIOTIC |
| MILK, COW'S, FLUID, ACIDOPHILUS, 1% FAT |
| MILK, COW'S, FLUID, ACIDOPHILUS, 2% FAT |
| NATREN'S MEGA DOPHILUS DAIRY CAPSULES |
| NATREN'S MEGA DOPHILUS DAIRY POWDER |
| NATROL ACIDOPHILUS PROBIOTIC |
| NATURAL FACTORS MULTI ACIDOPHILUS WITH FOS CAPSULES 4 BILLION ACTIVE CELLS |
| NATURE CITY TRUELIFE PB PROBIOTIC AND PREBIOTIC BLEND PROFESSIONAL STRENGTH! 30 BILLION LIVE 'GOOD BACTERIA' CELLS PER DOSE PROVIDES 6 HEALTH BOOSTING PROBIOTICSTRAINS |
| NATURE MADE ACIDOPHILUS 500 MILLION LIVE CELLS PER TABLET |
| NATURE MADE ACIDOPHILUS PROBIOTICS 1 BILLION LIVE CELLS PER SERVING |
| NATURE MADE TRIPLE PROBIOTIC |
| NATURE'S BLEND HIGH POTENCY CHEWABLE ACIDOPHILUS |
| NATURE'S BLEND PROBIOTIC BLEND |
| NATURE'S BOUNTY ACIDOPHILUS |
| NATURE'S BOUNTY ACIDOPHILUS PROBIOTIC 100 MILLION ORGANISMS LACTOBACILLUS ACIDOPHILUS 1 PER DAY TABLET |
| NATURE'S BOUNTY CHEWABLE PROBIOTIC ACIDOPHILUS 1 BILLION ORGANISMS WITH BIFIDUM CHEWABLE MILK FREE WAFER |
| NATURE'S BOUNTY PROBIOTIC ACIDOPHILUS |
| NATURE'S BOUNTY PROBIOTIC ACIDOPHILUS 100 MILLION ORGANISMS LACTOBACILLUS ACIDOPHILUS 1 PER DAY CAPSULE |
| NATURE'S BOUNTY PROBIOTIC ACIDOPHILUS CAPSULES |
| NATURE'S BOUNTY ULTRA STRENGTH ADVANCED PROBIOTIC 10 10 PROBIOTIC ORGANISMS WITH ACTIVE CULTURE SUPPORT 20 BILLION LIVE PROBIOTIC CULTURES |
| NATURE'S LIFE LACTOBACILLUS ACIDOPHILUS APPLE PECTIN LIVE, ACTIVE ORGANISMS PROBIOTIC CAPSULES |
| NATURE'S PLUS ADULT'S EAR, NOSE & THROAT LOZENGES WITH K12 PROBIOTICS |

|  |
| --- |
| NATURE'S PLUS SOURCE OF LIFE ANIMAL PARADE ACIDOPHIKIDZ WITH PROBIOTICS, FOS & RHODODENDRON CHILDREN'S CHEWABLE WITH WHO |
| NATURE'S SUNSHINE BIFIDOPHILUS FLORA FORCE BIFIDOBACTERIUM LONGUM & LACTOBACILLUS ACIDOPHILUS 470 MG |
| NATURE'S SUNSHINE BIFIDOPHILUS FLORA FORCE PROBIOTIC 4 BILLION TOTAL MICROORGANISMS PER CAPSULE |
| NATURE'S SUNSHINE PROBIOTIC ELEVEN |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS CHILDREN POWDER WITH FOS TRUE IDENTITY BIFIDOBACTERIA & LACTOBACILLI TRUE POTENCY |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS CHILDREN POWDER WITH SCFOS TRUE IDENTITY BIFIDOBACTERIA & LACTOBACILLI TRUE POTENCY 3 BILLION CFU |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS FOR CHILDREN |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS JUNIOR TRUE IDENTITY LACTOBACILLI & BIFIDOBACTERIA TRUE POTENCY 3 BILLION CFU TRUE |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS KIDS TRUE POTENCY 3 BILLION CFU TRUE IDENTITY LACTOBACILLI & BIFIDOBACTERIA ORANGE |
| NATURE'S WAY ONCE DAILY PRIMADOPHILUS KIDS TRUE POTENCY 3 BILLION CFU TRUE IDENTITY LACTOBACILLI & BIFIDOBACTERIA ORANGE AGES 2-12 |
| NATURE'S WAY PRIMADOPHILUS BIFIDUS ONCE DAILY TRUE POTENCY 5 BILLION CFU TRUE IDENTITY BIFIDOBACTERIA & LACTOBACILLI TRU |
| NATURE'S WAY PRIMADOPHILUS ORIGINAL ONCE DAILY TRUE POTENCY 5 BILLION CFU TRUE IDENTITY ACIDOPHILUS & RHAMNOSUS TRUE RELEASE TARGETED DELIVERY ENTERIC-COATEDFOR ALL AGES |
| NATURE'S WAY PRIMADOPHILUS REUTERI SUPERIOR PROBIOTIC MULTI STRAIN PLUS SCFOS TRUE POTENCY 5 BILLION CFU ENTERIC-COATED ONCE DAILY |
| NEW CHAPTER EVERY MAN II WHOLE-FOOD PROBIOTIC MULTI-NUTRIENT, MINERAL & HERBAL COMPLEX |
| NEW CHAPTER EVERY WOMAN WHOLE-FOOD PROBIOTIC MULTI-VITAMIN, MINERAL & HERBAL COMPLEX |
| NEW CHAPTER EVERY WOMAN'S ONE DAILY WHOLE-FOOD PROBIOTIC MULTI-VITAMIN, MINERAL & HERBAL COMPLEX |
| NEW CHAPTER ORGANICS PROBIOTIC NUTRIENTS EVERY MAN II FOR MEN OVER 40 MADE WITH ORGANIC INGREDIENTS |
| NEW CHAPTER ORGANICS PROBIOTIC NUTRIENTS PERFECT PRENATAL |
| NEW CHAPTER VITAMIN B COMPLEX WHOLE-FOOD HERBAL PROBIOTIC NUTRIENT COMPLEX |
| NEW VITALITY RUBY REDS NEW & IMPROVED FORMULA POMEGRANATE, ACAI & MAQUI A DELICIOUS FRUIT AND VEGETABLE WITH POTENT VITAMINS, MINERALS, ENZYMES, HERBS, NUTRIENTS AND PROBIOTICS 100% DAILY VALUE 7 VITA |
| NOW BERRY DOPHILUS 4 PROBIOTIC STRAINS 2.5 BILLION INPUT NATURAL BERRY FLAVOR XYLITOL SWEETENED CHEWABLES |

|  |
| --- |
| NSI NUTRACEUTICAL SCIENCES INSTITUTE PROBIOTIC 15-35 15 STRAINS / 35 BILLION MICROORGANISMS PER SERVING |
| NUTRI-HEALTH FLORA SOURCE MULTI-PROBIOTIC BLEND OF 16 STRAINS / 16 BILLION CELLS CAPSULES |
| NUTRICOLOGY PROGREENS WITH ADVANCED PROBIOTIC FORMULA |
| NUTRILITE INTESTIFLORA-7 STICK PACKS |
| NUTRITION NOW PB8 PRO-BIOTIC ACIDOPHILUS FOR LIFE ORIGINAL FORMULA 14 BILLION GOOD BACTERIA |
| NUTRITION NOW PROBIOTIC ACIDOPHILUS |
| NUTRITION NOW RHINO CHEWABLE FOS & ACIDOPHILUS CHEWABLE TABLETS 100% DAILY VALUE OF VITAMIN C |
| O'DONNELL FORMULAS, INC. FLORA-BALANCE BACILLUS LATEROSPORUS BOD STRAIN CAPSULES |
| OPTIMUM FREEZE DRIED ACIDOPHILUS LACTOBACILLI |
| ORIGIN ACIDOPHILUS EASY TO SWALLOW |
| PB8 PRO-BIOTIC ACIDOPHILUS FOR LIFE |
| PHILLIPS' COLON HEALTH PROBIOTIC CAPS BAYER |
| PHILLIPS' COLON HEALTH PROBIOTIC CAPS DAILY PROBIOTIC ONE DAILY BAYER |
| PREMIER RESEARCH LABS GALLBLADDER-ND PROBIOTIC-DERIVED FORMULA FEATURING ND TECHNOLOGY |
| PRO-BIOTICS ACIDOPHILUS |
| PROBIOTIC PEARLS WITH L. ACIDOPHILUS AND B. LONGUM |
| PROBIOTICA LACTOBACILLUS REUTERI CHEWABLE TABLETS |
| PROCAPS LABORATORIES FIBERMUCIL U.S.P. PSYLLIUM BULK AND WATER SOLUBLE FIBER FRIENDLY FLORA LACTOBACILLUS |
| PROJOBA INTERNATIONAL PROBACILLUS PLUS |
| PURE RESEARCH PRODUCTS, LLC DEL-IMMUNE V LACTOBACILLUS RHAMNOSUS LYSED POWDER |
| PURITAN'S PRIDE ACIDOPHILUS |
| PURITAN'S PRIDE POTENT ACIDOPHILUS WITH PECTIN |
| PURITAN'S PRIDE VITA-FRESH LIFE'S GREENS WITH ADVANCED PROBIOTIC FORMULA 29,205 TOTAL ORAC VALUE VEGETARIAN |
| RAINBOW LIGHT 50+ MINI-TAB AGE-DEFENSE FORMULA FOOD-BASED MULTIVITAMIN WITH COQ10 1,000 IU VITAMIN D3 PROBIOTICS & DIGES |
| RAINBOW LIGHT ACTIVE HEALTH TEEN FOOD-BASED MULTIVITAMIN TARGETED TEEN NUTRITION 75 MILLION LIVE ACTIVE PROBIOTICS |
| RAINBOW LIGHT JUST 1 ONCE NATURALS WOMEN'S ONE MULTIVITAMIN/MINERAL NOW WITH PROBIOTICS |
| RAINBOW LIGHT KIDS ONE MULTISTARS CHEWABLE MULTIVITAMIN / MINERAL WHOLESOME VEGETABLE CONCENTRATES 15 MILLION ACTIVE PRO |
| RAINBOW LIGHT MEN'S ONE JUST 1 ONCE FOOD-BASED MULTIVITAMIN ENERGY B-COMPLEX & PROBIOTICS |

|  |
| --- |
| RAINBOW LIGHT WOMEN'S ONE JUST 1 ONCE FOOD-BASED MULTIVITAMIN 800 IU VITAMIN D3 & PROBIOTICS |
| RBC DIGESTION FORMULA WITH ENZYMES, PROBIOTICS AND NANOCLUSTERS |
| RENEW LIFE FLORABEAR FOR KIDS |
| REPHRESH PRO-B PROBIOTIC FEMININE |
| REXALL NATURALS GESTAZYME MULTI-ENZYME PROBIOTIC FORMULA ACIDOPHILUS PROBIOTIC FORMULA 1 BILLION ACTIVE CULTURES PER SER |
| REXALL NATURALS ULTIMATE PROBIOTIC FORMULA ACIDOPHILUS MADE WITH BIO FLORA 2 BILLION ACTIVE CULTURES |
| RITE AID PHARMACY NATURAL ACIDOPHILUS PROBIOTIC COMPLEX MILK FREE 300 MG |
| RITE AID PHARMACY PROBIOTIC COLON CARE LACTOBACILLUS ACIDOPHILUS, BIFIDOBACTERIUM LONGUM, B. BIFIDUM PROBIOTIC ONE DAILY |
| SALUS FLORADIX CALCIUM LIQUID MINERAL NO ADDED SUGAR HERBAL |
| SAV-ON OSCO CENTRAL-VITE SELECT MULTIVITAMIN/MULTIMINERAL FOR MATURE ADULTS WITH FLORAGLO LUTEIN |
| SAV-ON OSCO ONE CHOICE THE MOST COMPLETE MULTIVITAMIN WITH HERBS WITH FLORAGLO LUTEIN |
| SCHIFF DIGESTIVE ADVANTAGE PROBIOTIC GUMMIES |
| SCHIFF SUSTENEX PROBIOTIC GUMMIES |
| SHAKLEE BIFIDUS & ACIDOPHILUS OPTIFLORA PROBIOTIC COMPLEX |
| SHAKLEE OPTIFLORA FOS, INULIN, & MORE PREBIOTIC DIETARY SUPPLEMENT |
| SHAKLEE OPTIFLORA PREBIOTIC COMPLEX FOS, INULIN, & MORE |
| SOLARAY MULTIDOPHILUS 12 OVER 20 BILLION MICROORGANISMS 12 PROBIOTIC STRAINS |
| SOLGAR ADVANCED 40+ ACIDOPHILUS NON-DAIRY LACTOSE FREE |
| SOLGAR ADVANCED ACIDOPHILUS PLUS 500 MILLION MICROORGANISMS PER USE |
| SPRING VALLEY 1 PER DAY DOSE ALL NATURAL CRANBERRY WITH VITAMIN C & PROBIOTICS NEW IMPROVED FORMULA |
| SPRING VALLEY ACIDOPHILUS |
| SPRING VALLEY PROBIOTIC ACIDOPHILUS 1 BILLION ACTIVE CULTURES |
| SPRING VALLEY PROBIOTIC MULTI-ENZYME DIGESTIVE FORMULA 1 BILLION ACTIVE CULTURES PER SERVING |
| SPRING VALLEY PROBIOTIC MULTI-ENZYME DIGESTIVE FORMULA WITH ACTIVE ACIDOPHILUS CULTURES |
| SPRING VALLEY SUPER STRENGTH PROBIOTIC ACIDOPHILUS 2 BILLION ACTIVE CULTURES |
| STOCKBRIDGE NATURALS TRI-DOPHILUS |
| SUNDOWN ACIDOPHILUS XTRA |
| SUNDOWN NATURALS CHEWABLE ACIDOPHILUS WITH BIFIDUM 1 BILLION ACTIVE CULTURES PER WAFER VEGETARIAN FORMULA |
| SUNDOWN NATURALS PROBIOTIC ACIDOPHILUS XTRA 40 MILLION LIVE CELLS PER SERVING VEGETARIAN FORMULA |

|  |
| --- |
| SUNDOWN NATURALS ULTIMATE PROBIOTIC FORMULA ACIDOPHILUS 2 BILLION ACTIVE CULTURES VEGETARIAN FORMULA 1 PER DAY |
| SUSTENEX DAILY PROBIOTIC 2 BILLION CELLS OF GANEDENBC30 |
| SWANSON ULTRA FLORAGLO LUTEIN 10 MG SOFTGELS |
| SWANSON ULTRA PROBIOTIC COMPLEX |
| THE HONEST CO. BABY & TODDLER MULTI POWDER COMPLETE MULTI-VITAMIN + MINERALS + SUPERFOODS + ANTIOXIDANTS + AMINO ACIDS + PROBIOTICS WHOLE-FOOD BASED ULTRA PUREGENTLE & ENRICHING HYPOALLERGENIC 100% N |
| THE VITAMIN SHOPPE ACIDOPHILUS WITH PECTIN |
| THE VITAMIN SHOPPE PSYLLIUM HUSK WITH ACIDOPHILUS |
| THE VITAMIN SHOPPE ULTIMATE '10' PROBIOTIC 13 BILLION ORGANISMS WITH FRUCTO- OLIGOSACCHARIDES ENTERIC COATED |
| THERALAC PROBIOTIC MASTER 5 HUMAN STRAINS 2 PREBIOTICS 5 + 2 30 BILLION CFU PER CAPSULE WITH LACTOSTIM |
| TOTAL PROBIOTICS NUTRI-WEST |
| TRADER JOE'S ACIDOPHILUS & PROBIOTIC COMPLEX 2 BILLION ORGANISMS PER TABLET |
| TRADER JOE'S ACTIVE 50+ ONCE DAILY MULTIVITAMIN & MINERAL PLUS PROBIOTICS 1000 IU VITAMIN D |
| TRUBIOTICS DAILY PROBIOTIC FROM THE MAKERS OF ONE A DAY BAYER |
| TRUNATURE DIGESTIVE PROBIOTIC 10 BILLION ACTIVE CULTURES |
| TWINLAB ALLERDOPHILUS ACIDOPHILUS CAPSULES HIGH POTENCY 182 MG |
| ULTIMATE FLORA CRITICAL CARE 50 BILLION EXTRA-STRENGTH PROBIOTIC 10 PROBIOTIC STRAINS RENEW LIFE |
| ULTIMATE FLORA EXTRA CARE DAILY PROBIOTIC 30 BILLION LIVE CULTURES PER CAPSULE 10 PROBIOTIC STRAINS ONE CAPSULE ONCE A DAY PROBIOTIC RENEW LIFE |
| ULTIMATE FLORA KIDS PROBIOTIC 3 BILLION LIVE CULTURES PER TABLET PROBIOTIC RENEW LIFE |
| VIBRANT HEALTH GREEN VIBRANCE 25 BILLION PROBIOTICS PER DOSE FROM 12 STRAINS ORGANIC GREENS & FREEZE DRIED GRASS JUICES |
| VITAMIN WORLD ACIDOPHILUS & PSYLLIUM HUSK 4 BILLION ACTIVE CULTURES 4,000 MG PSYLLIUM HUSK PER SERVING |
| VITAMIN WORLD CHEWABLE ACIDOPHILUS WITH BIFIDUS NATURAL STRAWBERRY FLAVOR |
| WALGREENS ACIDOPHILUS 10 MG |
| WALGREENS ACIDOPHILUS PLUS CITRUS PECTIN FREEZE DRIED |
| WINDMILL NATURAL ACIDOPHILUS PRO-BIOTIC BLEND WITH PECTIN |
| Y.S. ORGANIC BEE FARMS 100% PURE BEE POLLEN CAPSULES MULTI FLORAL, WILD CRAFTED |
| NEW CHAPTER ORGANICS PROBIOTIC NUTRIENTS CAL MAG BONE HEALTH CALCIUM AND SYNERGISTIC NUTRIENTS IN THEIR MOST ACTIVE FORM |
| WHOLE FOODS PREMIER FORMULA PROBIOTIC COMPLEX PLUS |
| NUTRITION NOW PB8 PRO-BIOTIC ACIDOPHILUS FOR LIFE |
| CVS/PHARMACY ADULT PROBIOTIC 3 BILLION LIVE BACTERIA CELLS PER CAPSULE WITH 8 NATURAL PROBIOTIC STRAINS, INCLUDING 2 BIFIDOBACTERIA STRAINS ONE-A-DAY |

|  |
| --- |
| CULTURELLE PROBIOTIC NATURAL HEALTH & WELLNESS ONCE DAILY CAPSULES ALL NATURAL PROBIOTIC WITH LACTOBACILLUS GG |
| RAINBOW LIGHT ACTIVE SENIOR JUST 1 ONCE FOOD-BASED MULTIVITAMIN B-COMPLEX 1,000 IU VITAMIN D3 & PROBIOTICS |
| NEW CHAPTER ORGANICS PROBIOTIC ALL-FLORA WHOLE FOOD LIVE PROBIOTICS |
| GARDEN OF LIFE RAW PROBIOTICS ULTIMATE CARE 100 BILLION GUARANTEED! 34 PROBIOTIC STRAINS ONCE DAILY INCLUDES THE CLINICALLY STUDIED REPLENISH BLEND RAW WHOLE FOOD PROBIOTIC |
| DEFAULT CHILDREN'S PROBIOTIC PACKET |
| METABIOTIC PROBIOTIC WITH BIO-ACTIVE 12 PROBIOTIC |
| SPRING VALLEY PROBIOTIC ACIDOPHILUS 2 BILLION ACTIVE CULTURES |
| DEFAULT GUMMY ADULT PROBIOTIC |
| NATURE'S SUNSHINE L. ACIDOPHILUS MODIFIED RELEASE PROBIOTIC FORMULA |
| DAVINCI LABORATORIES OF VERMONT NONDAIRY PROBIOTIC 50 VEGETARIAN / GLUTEN FREE |
| NATURE MADE DIGESTIVE HEALTH PROBIOTIC 10 BILLION LIVE CELLS ONCE DAILY |

**Table S2 Univariate logistic regression models of hepatic steatosis.**

|  |  |  |
| --- | --- | --- |
| Variables | OR (95%CI)  | P-value |
| Age (years) | 1.006(1.002,1.011) | 0.007 |
| Gender (versus female) |
|  Male | 0.960(0.857,1.075) | 0.471 |
| PIR | 0.899(0.858,0.942) | < 0.0001 |
| Race (versus Mexican American) |
|  Non-Hispanic Black |  0.896(0.710,1.132) | 0.35 |
|  Non-Hispanic White | 0.484(0.384,0.609) | < 0.0001 |
|  Other Hispanic | 0.802(0.585,1.099) | 0.165 |
|  Other Races | 0.346(0.259,0.462) | < 0.0001 |
| Education level (versus low) |
|  High  | 0.603(0.476,0.763) | < 0.0001 |
|  Medium  | 0.836(0.679,1.029) | 0.089 |
| Smoking status (versus Former) |
|  Never | 0.676(0.590,0.774) | < 0.0001 |
|  Now | 0.641(0.519,0.791) | < 0.001 |
| Physical activity level (versus low) |  |  |
|  High | 0.740(0.594,0.922) | 0.008 |
|  Intermediate | 0.745(0.605,0.917) | 0.006 |
|  Unknown | 1.498(1.223,1.836) | < 0.001 |
| Diabetes Mellitus (versus No) |  |  |
|  Yes | 5.063(4.187,6.121) | < 0.0001 |
| Hypertension (versus No) |  |  |
|  Yes | 2.327(2.016,2.685) | < 0.0001 |
| Hyperlipidemia (versus No) |  |  |
|  Yes | 2.770(2.331,3.290) | < 0.0001 |
| ALT (U/L) | 1.060(1.044,1.077) | < 0.0001 |
| AST (U/L) | 1.002(0.997,1.007) | 0.402 |
| Glycohemoglobin (%) | 2.542(2.189,2.951) | < 0.0001 |
| TC (mmol/L) | 1.118(1.042,1.200) | 0.003 |
| TG (mmol/L) | 1.766(1.614,1.934) | < 0.0001 |
| HDL-c (mmol/L) | 0.205(0.171,0.245) | < 0.0001 |
| SBP (mmHg) | 1.020(1.017,1.024) | < 0.0001 |
| DBP (mmHg) | 1.021(1.014,1.027) | < 0.0001 |

Note: For continuous variables and categorical variables, the unit and the reference group are presented beside the variables separately.

Abbreviations: OR, odds ratio; CI, confidence interval; PIR, poverty income ratio; PIR, poverty income ratio; BMI, body mass index; ALT, alanine aminotransferase; AST, aspartate aminotransferase; TC, total cholesterol; TG, triglycerides; HDL-c, high density lipoprotein-cholesterol; SBP, systolic blood pressure; DBP, diastolic blood pressure;