e/ou creme vegetal e bolacha de água e sal). O pão é o alimento fornecido em maior quantidade.

CONCLUSÕES: Os alimentos oferecidos são frequentemente nutricionalmente pobres e desadequados nesta faixa etária.

FINANCIAMENTO: O projeto Creche com Sabor e Saúde (C2S) foi cofinanciado pela Associação Cultural e Recreativa de Cabreiros e pela Direção-Geral da Saúde.

CO18. DESAFIOS E ALTERAÇÕES PROPOSTAS PELOS CONSUMIDORES PARA A ALIMENTAÇÃO COLETIVA EM PORTUGAL

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INTRODUÇÃO: A área da Alimentação Coletiva tem vindo a sofrer profundas alterações na sua atividade, decorrentes também das alterações nas necessidades e expectativas tanto dos clientes como dos consumidores.

OBJETIVOS: Identificar a perceção atual dos consumidores sobre os problemas e / ou desafios da Alimentação Coletiva em Portugal e respetivas alterações necessárias, em geral e especificamente para os seus produtos e serviços.

METODOLOGIA: Foi aplicado um inquérito por questionário, em papel e *online*, em determinados períodos dos anos de 2020 e 2021. A população em estudo foi a portuguesa, maior de idade e com experiência em serviços de AC em Portugal.

RESULTADOS: As três áreas mais referidas pelos consumidores foram: os produtos ou serviços, novos produtos ou serviços e os recursos humanos. Na área dos produtos ou serviços, os parâmetros mais referidos, tanto nos problemas ou desafios como nas sugestões de melhoria, foram a qualidade e a variedade. O terceiro parâmetro mais mencionado como um problema ou desafio para as empresas de AC foi a sustentabilidade alimentar, enquanto nas propostas de alterações foi o ambiente físico. As principais propostas como tendências para o futuro, relativamente aos produtos e / refeições, foram: os produtos frescos, as refeições nutricionalmente equilibradas, os produtos regionais ou locais, mais sustentáveis e biológicos. As principais propostas para os serviços foram os espaços amigos do ambiente, com refeições na proporção das necessidades dos consumidores, os serviços feitos ao momento, os serviços de conveniência e os serviços de *takeaway*.

CONCLUSÕES: As três áreas que os consumidores indicaram como sendo as com mais problemas ou desafios para as empresas de AC foram as mesmas para as quais propuseram mais alterações ou sugestões. O conhecimento sobre as necessidades e expectativas dos consumidores deve ser uma inspiração para as atividades a serem realizadas no setor da AC em Portugal.

CO20. EFFECT OF DIFFERENT COOKING METHODS ON COOKING LOSS OF RABBIT MEAT

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INTRODUCTION: Rabbit meat is part of the gastronomic heritage of Mediterranean diet. It has interesting nutritional value and good consumer acceptability.

OBJECTIVES: Evaluate the effect of three different cooking methods (boiling, baking and frying), on the cooking loss (CL) of rabbit meat.

METHODOLOGY: Six male rabbits were slaughtered and the carcasses obtained were dissected. Six different pieces obtained in duplicate from each animal (hind leg, ribs, belly, saddle loin, saddle rump and front leg) were analyzed. The cooking methods performed were boiling in water, oven-roasting and frying, 12 samples each. Boiling: the samples were immersed in boiling water (90°C) in the cooking assistant (iVario 2-XS, Rational®), until reaching an internal temperature of 75°C. Oven-roasting: the samples were placed in a refractory and cooked at 180 ºC in a preheated oven with air circulation (iCombi, Rational®) until reaching an internal temperature of 75°C. Frying: frying was performed in a iVario 2-XS (Rational®) using 100% vegetable cooking oil at 180 °C. After cooking, the samples were cooled to room temperature for 30 minutes and then weighed to calculate the percentage of CL (difference between raw weight and cooked weight of the samples relative to the weight of raw samples).

RESULTS: The piece that presented the highest CL (%) was the belly (oven-roasting and frying methods >50% CL) and the ones that presented the lowest CL (<30%) were the saddle hindquarter and the front leg. The CL (%) was significantly higher in the frying method to hind legs (32.7±5.1%; p=0.003), saddle hindquarters (29.7±4.7%; p=0.001), ribs (40.1±5.0%; p<0.001), saddle loin (33.1±3.6%; p=0.004) and in the oven-roasting method for belly (53.3±11.5%; p<0.001).

CONCLUSIONS: Boiling seems to be the cooking method with lower CL (%) and frying seems to be the cooking method with the highest CL (%) in most pieces of rabbit meat.

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CO21. ASSOCIATION BETWEEN ANTHROPOMETRIC INDICATORS AND DEXA DERIVED APPENDICULAR LEAN MASS IN AN ADULT'S SAMPLE: A CROSS-SECTIONAL EXPLORATORY ANALYSIS

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INTRODUCTION: Assessment of muscle mass is essential for body composition evaluation and for the diagnosis or classification of conditions such as undernutrition or sarcopenia. Although Dual energy X-ray absorptiometry (DEXA) is a widely used method to estimate appendicular lean mass, simpler and affordable bedside methods are warranted.

OBJECTIVES: To quantify the association between anthropometric indicators of muscle mass and DEXA derived total and regional appendicular lean mass in adults.

METHODOLOGY: Anthropometric measurements were performed according to standardised procedures and included tricipital and leg skinfold thicknesses and mid-upper arm (MUAG) and leg (LG) girths. Mid-upper arm (MAMC) and leg (LMC)

muscle circumferences were calculated using Jelliffe equation. DEXA was used to assess total appendicular lean mass as well as regional right arm and leg lean mass. Linear regression models were used to estimate the association between each anthropometric indicator of muscle mass and total appendicular lean mass and with regional lean mass, stratified by sex and adjusted for age and height.

RESULTS: 67 adults (67.2% women, 18-63 years) were included in this analysis. Results are presented in standardised coefficients with 95% confidence intervals (β, 95%CI). All anthropometric measurements were associated with total appendicular lean mass, both in women (MAMC:0.60, 0.35-0.85; MUAG:0.55, 0.28-0.81; LMC:0.76, 0.54-0.98 and LG:0.67, 0.42-0.91) and in men (MAMC:0.87, 0.64-1.11; MUAG:0.90, 0.70-1.11; LMC:0.85, 0.53-1.17 and LG:0.87, 0.63-1.12). Considering single limbs, the strongest association was between LG and leg lean mass in men (0.86, 0.68-1.04), followed by LMC, also in men (0.79, 0.52-1.07). All other measurements had positive and significant association with DEXA derived total and regional lean mass measurements, except for MAMC and arm muscle mass in women.

CONCLUSIONS: These preliminary results reveal a stronger association between anthropometric indicators and total appendicular lean mass than for regional lean mass. Leg anthropometry indicators were the most consistent proxy of lean mass.

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CO22. URINARY LEVELS OF ESSENTIAL TRACE ELEMENTS IN PREGNANCY AND MATERNAL AND NEONATAL OUTCOMES: A PROSPECTIVE STUDY FROM THE IOMUM COHORT

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INTRODUCTION: Essential trace elements (ETEs) are cofactors of several enzymes, and inadequate levels of ETEs have been associated with poor pregnancy and neonatal outcomes.

OBJECTIVES: The aim of the present study was to characterize urinary levels of ETEs in Portuguese pregnant women and to study their association with maternal and neonatal health outcomes.

METHODOLOGY: This prospective study (trial registration #NCT04010708, ethical approval #292/17) was conducted at Porto and Lisbon regions, from April 2018 to December 2021. Pregnant women were invited to participate during routine 1st trimester ultrasound scan when they provided a random spot urine sample and sociodemographic and lifestyle data. Clinical data were provided by clinical records. Women with twin pregnancies, gestational age at recruitment < 10 or ≥ 14 weeks, and who didn't deliver urine samples were excluded.

RESULTS: Urinary Cobalt (Co), Copper (Cu), Manganese (Mn), Molybdenum (Mo) and Zinc (Zn) urinary levels were measured by inductively coupled plasma-mass spectrometry. The mean ± SD age at recruitment of the 614 pregnant women was 33 ± 5 years. The overall median (P25; P75) ETEs urinary concentrations were, in µg/L: Co, 0.31 (0.12-0.53); Cu, 11.20 (6.89-18.21); Mn, 1.70 (0.74-3.09); Mo, 38.54 (21.57-62.35); and Zn, 255.67 (145.86-455.75). Lower Mn urinary levels were associated with the occurrence of pregnancy complications, and Mn levels above the 50th percentile (> 1.70 µg/L) associated with increased risk of birth weight small for gestational age (SGA) (crude OR [95%CI] = 2.811 [1.155-6.841]; p = 0.023). Zn urinary levels below the 50th percentile (< 255.67 µg/L) associated with an increased risk of SGA birth head circumference (crude OR [95%CI] = 2.525 [1.015-6.232]; p = 0.046).

CONCLUSIONS: Our results reinforce the nutritive properties of ETEs during pregnancy while also highlighting that, depending on the concentration, some of the ETEs may present toxicity during this critical period of life.

CO23. COMPARAÇÃO DA OFERTA ALIMENTAR DO ALMOÇO EM CONTEXTO DE CRECHE COM AS RECOMENDAÇÕES PARA CRIANÇAS DOS 0 AOS 3 ANOS: RESULTADOS DO PROJETO CRECHE COM SABOR E SAÚDE – C2S

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INTRODUÇÃO: Os hábitos alimentares na infância são essenciais na modulação das preferências alimentares. Sendo a Creche o local onde as crianças passam a maioria do dia, torna-se relevante avaliar a sua oferta alimentar.

OBJETIVOS: Comparar a oferta alimentar do almoço em creche (0-3 anos), com as respetivas recomendações.

METODOLOGIA: Para quantificar os alimentos oferecidos ao almoço em 6 instituições envolvidas no projeto C2S, realizaram-se visitas, durante 5 dias consecutivos, na hora de almoço (outubro 2022-janeiro 2023). Para reduzir o viés associado à variação da capitação servida, cada componente da refeição foi pesada três vezes aleatoriamente (6-8, 9-11, 12-23 e 24-36 meses),