

Material suplementar

Tabela S1. Elegibility criteria for the systematic review according to PICOS framework.

	Search term
Population	Adults or elderly
Intervention	Olive oil
Control	Control or placebo or other vegetable oil or animal fat
Outcomes	Body composition assessment data from BMI, waist circumference, waist-to-hip ratio, percentage of body fat, kg of adipose tissue assessed by skinfolds, dual-energy x-ray absorptiometry (DEXA), bioelectrical impedance (BIA), magnetic resonance imaging and/or computed tomography
Study design	Randomized clinical trials

Table S2. Search strategy Applied on each database.

Database	Search strategy
PUBMED	("body composition"[MeSH Terms] OR ("body composition"[MeSH Terms] OR ("body"[All Fields] AND "composition"[All Fields]) OR "body composition"[All Fields]) OR ("body composition"[MeSH Terms] OR ("body"[All Fields] AND "composition"[All Fields]) OR "body composition"[All Fields] OR ("body"[All Fields] AND "compositions"[All Fields]) OR "body compositions"[All Fields]) OR ("body composition"[MeSH Terms] OR ("body"[All Fields] AND "composition"[All Fields]) OR "body composition"[All Fields] OR ("composition"[All Fields] AND "body"[All Fields]) OR "composition body"[All Fields]) OR ("body composition"[MeSH Terms] OR ("body"[All Fields] AND "composition"[All Fields]) OR "body composition"[All Fields] OR ("compositions"[All Fields] AND "body"[All Fields]) OR "compositions body"[All Fields]) OR (("percentage"[All Fields] OR "percentages"[All Fields]) AND ("fat body"[MeSH Terms] OR ("fat"[All Fields] AND "body"[All Fields]) OR "fat body"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields]) OR "body fat"[All Fields] OR "adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields]))) OR ("fat body"[MeSH Terms] OR ("fat"[All Fields] AND "body"[All Fields]) OR "fat body"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields]) OR "body fat"[All Fields] OR "adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields])) OR "body fat distribution"[MeSH Terms] OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields]) OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields] OR ("distribution"[All Fields] AND "body"[All Fields] AND "fat"[All Fields]) OR "distribution body fat"[All Fields]) OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields] OR ("fat"[All Fields] AND "distribution"[All Fields] AND "body"[All Fields]) OR "fat distribution body"[All Fields]) OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields] AND "patterning"[All Fields]) OR "body fat patterning"[All Fields]) OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields] OR ("fat"[All Fields] AND "patterning"[All Fields] AND "body"[All Fields])) OR ("body fat distribution"[MeSH Terms] OR ("body"[All Fields] AND "fat"[All Fields] AND "distribution"[All Fields]) OR "body fat distribution"[All Fields] OR ("patterning"[All Fields] AND "body"[All Fields] AND "fat"[All Fields])) OR "skinfold thickness"[MeSH Terms] OR ("skinfold thickness"[MeSH Terms] OR ("skinfold"[All Fields] AND "thickness"[All Fields]) OR "skinfold thickness"[All Fields]) OR ("skinfold thickness"[MeSH Terms] OR ("skinfold"[All Fields] AND "thickness"[All Fields]) OR "skinfold thickness"[All Fields] OR ("thickness"[All Fields] AND "skinfold"[All Fields]) OR "thickness skinfold"[All Fields]) OR ("skinfold thickness"[MeSH Terms] OR ("skinfold"[All Fields] AND "thickness"[All Fields]) OR "skinfold thickness"[All Fields] OR ("thicknesses"[All Fields] AND "skinfold"[All Fields])) OR ("waist circumference"[MeSH Terms] OR ("waist circumference"[MeSH Terms] OR ("waist"[All Fields] AND "circumference"[All Fields]) OR "waist circumference"[All

spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("nmr"[All Fields] AND "spectroscopy"[All Fields] AND "vivo"[All Fields]) OR "nmr spectroscopy in vivo"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("magnetic"[All Fields] AND "resonance"[All Fields]) OR "magnetic resonance"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("resonance"[All Fields] AND "magnetic"[All Fields]) OR "resonance magnetic"[All Fields]) OR (("spectroscopies"[All Fields] OR "spectroscopy s"[All Fields] OR "spectrum analysis"[MeSH Terms] OR ("spectrum"[All Fields] AND "analysis"[All Fields]) OR "spectrum analysis"[All Fields] OR "spectroscopy"[All Fields]) AND ("nuclear"[All Fields] OR "nuclears"[All Fields]) AND ("magnet s"[All Fields] OR "magnetical"[All Fields] OR "magnetically"[All Fields] OR "magnetics"[MeSH Terms] OR "magnetics"[All Fields] OR "magnetic"[All Fields] OR "magnetisation"[All Fields] OR "magnetisations"[All Fields] OR "magnetised"[All Fields] OR "magnetism"[All Fields] OR "magnetisms"[All Fields] OR "magnetization"[All Fields] OR "magnetizations"[All Fields] OR "magnetize"[All Fields] OR "magnetized"[All Fields] OR "magnetizing"[All Fields] OR "magnets"[MeSH Terms] OR "magnets"[All Fields] OR "magnet"[All Fields])) OR ("resonances"[All Fields] OR "resonant"[All Fields] OR "resonate"[All Fields] OR "resonated"[All Fields] OR "resonates"[All Fields] OR "resonating"[All Fields] OR "resonation"[All Fields] OR "resonator"[All Fields] OR "resonator s"[All Fields] OR "resonators"[All Fields] OR "vibration"[MeSH Terms] OR "vibration"[All Fields] OR "resonance"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("spectroscopy"[All Fields] AND "nmr"[All Fields]) OR "spectroscopy nmr"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("nmr"[All Fields] AND "spectroscopy"[All Fields]) OR "nmr spectroscopy"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("nmr"[All Fields] AND "spectroscopies"[All Fields]) OR "nmr spectroscopies"[All Fields]) OR ("magnetic resonance spectroscopy"[MeSH Terms] OR ("magnetic"[All Fields] AND "resonance"[All Fields] AND "spectroscopy"[All Fields]) OR "magnetic resonance spectroscopy"[All Fields] OR ("spectroscopies"[All Fields] AND "nmr"[All Fields]) OR "spectroscopies nmr"[All Fields])) OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("tissue"[All Fields] AND "adipose"[All Fields]) OR "tissue adipose"[All Fields]) OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("fatty"[All Fields] AND "tissue"[All Fields]) OR "fatty tissue"[All Fields]) OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("tissue"[All Fields] AND "fatty"[All Fields]) OR "tissue fatty"[All Fields]) OR ("adipose tissue"[MeSH Terms] OR

("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("fat"[All Fields] AND "pad"[All Fields]) OR "fat pad"[All Fields] OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("fat"[All Fields] AND "pads"[All Fields]) OR "fat pads"[All Fields] OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("pad"[All Fields] AND "fat"[All Fields]) OR "pad fat"[All Fields] OR ("adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("pads"[All Fields] AND "fat"[All Fields]) OR "pads fat"[All Fields]) OR ("fat body"[MeSH Terms] OR ("fat"[All Fields] AND "body"[All Fields]) OR "fat body"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields]) OR "body fat"[All Fields] OR "adipose tissue"[MeSH Terms] OR ("adipose"[All Fields] AND "tissue"[All Fields]) OR "adipose tissue"[All Fields] OR ("body"[All Fields] AND "fat"[All Fields])) OR "abdominal fat"[MeSH Terms] OR ("abdominal fat"[MeSH Terms] OR ("abdominal"[All Fields] AND "fat"[All Fields]) OR "abdominal fat"[All Fields] OR ("abdominal"[All Fields] AND "fats"[All Fields]) OR "abdominal fats"[All Fields] OR ("abdominal fat"[MeSH Terms] OR ("abdominal"[All Fields] AND "fat"[All Fields]) OR "abdominal fat"[All Fields] OR ("fats"[All Fields] AND "abdominal"[All Fields])) OR ("abdominal fat"[MeSH Terms] OR ("abdominal"[All Fields] AND "fat"[All Fields]) OR "abdominal fat"[All Fields] OR ("fat"[All Fields] AND "abdominal"[All Fields]) OR "fat abdominal"[All Fields] OR ("abdominal fat"[MeSH Terms] OR ("abdominal"[All Fields] AND "fat"[All Fields]) OR "abdominal fat"[All Fields] OR ("abdominal"[All Fields] AND "adipose"[All Fields] AND "tissue"[All Fields]) OR "abdominal adipose tissue"[All Fields]) OR ("abdominal fat"[MeSH Terms] OR ("abdominal"[All Fields] AND "fat"[All Fields]) OR "abdominal fat"[All Fields] OR ("adipose"[All Fields] AND "tissue"[All Fields] AND "abdominal"[All Fields]) OR "adipose tissue abdominal"[All Fields]) OR "subcutaneous fat"[MeSH Terms] OR ("subcutaneous fat"[MeSH Terms] OR ("subcutaneous"[All Fields] AND "fat"[All Fields]) OR "subcutaneous fat"[All Fields] OR ("fats"[All Fields] AND "subcutaneous"[All Fields]) OR "fats subcutaneous"[All Fields]) OR ("subcutaneous fat"[MeSH Terms] OR ("subcutaneous"[All Fields] AND "fat"[All Fields]) OR "subcutaneous fat"[All Fields] OR ("subcutaneous"[All Fields] AND "fats"[All Fields]) OR "subcutaneous fats"[All Fields]) OR ("subcutaneous fat"[MeSH Terms] OR ("subcutaneous"[All Fields] AND "fat"[All Fields]) OR "subcutaneous fat"[All Fields] OR ("adipose"[All Fields] AND "tissue"[All Fields] AND "subcutaneous"[All Fields]) OR "adipose tissue subcutaneous"[All Fields]) OR ("subcutaneous fat"[MeSH Terms] OR ("subcutaneous"[All Fields] AND "fat"[All Fields]) OR "subcutaneous fat"[All Fields] OR ("fat"[All Fields] AND "subcutaneous"[All Fields]) OR "fat subcutaneous"[All Fields]) OR ("subcutaneous fat"[MeSH Terms] OR ("subcutaneous"[All Fields] AND "fat"[All Fields]) OR "subcutaneous fat"[All Fields] OR ("subcutaneous"[All Fields] AND "adipose"[All Fields] AND "tissue"[All Fields]) OR "subcutaneous adipose tissue"[All Fields])) OR ("tomography, x ray computed"[MeSH Terms] OR ("tomography, x ray computed"[MeSH Terms] OR ("tomography"[All Fields] AND "x ray"[All Fields] AND "computed"[All Fields]) OR "x-ray computed tomography"[All Fields] OR "tomography x ray computed"[All Fields]) OR ("tomography, x ray computed"[MeSH Terms] OR ("tomography"[All Fields] AND "x ray"[All Fields] AND "computed"[All Fields]) OR "x-ray computed tomography"[All Fields] OR "x ray computed tomography"[All Fields]) OR ("tomography, x ray computed"[MeSH Terms] OR ("tomography"[All Fields] AND "x ray"[All Fields] AND "computed"[All Fields]) OR "x-ray computed tomography"[All Fields]) OR

	<p>Terms] OR ("olive"[All Fields] AND "oil"[All Fields]) OR "olive oil"[All Fields]) AND "or"[All Fields]) AND ("olive oil"[MeSH Terms] OR ("olive"[All Fields] AND "oil"[All Fields]) OR "olive oil"[All Fields] OR ("oil"[All Fields] AND "olive"[All Fields]) OR "oil olive"[All Fields])) OR ("olive oil"[MeSH Terms] OR ("olive"[All Fields] AND "oil"[All Fields]) OR "olive oil"[All Fields] OR ("oils"[All Fields] AND "olive"[All Fields]) OR "oils olive"[All Fields]) OR ("olive oil"[MeSH Terms] OR ("olive"[All Fields] AND "oil"[All Fields]) OR "olive oil"[All Fields] OR ("olive"[All Fields] AND "oils"[All Fields]) OR "olive oils"[All Fields])) AND (("extra"[All Fields] OR "extras"[All Fields]) AND ("virgin"[All Fields] OR "virgins"[All Fields]) AND ("olive oil"[MeSH Terms] OR ("olive"[All Fields] AND "oil"[All Fields]) OR "olive oil"[All Fields]))))</p>
<p>SCOPUS</p>	<p>(((TITLE-ABS-KEY ((tissue AND adipose) OR (fatty AND tissue) OR (tissue AND fatty) OR (fat AND pad) OR (fat AND pads) OR (pad AND fat) OR (pads AND fat) OR (body AND fat) OR "Abdominal Fat" OR (abdominal AND fats) OR (fats AND abdominal) OR (fat AND abdominal) OR (abdominal AND adipose AND tissue) OR (adipose AND tissue AND abdominal) OR "Subcutaneous Fat" OR (fats AND subcutaneous) OR (subcutaneous AND fats) OR (adipose AND tissue AND subcutaneous) OR (fat AND subcutaneous) OR (subcutaneous AND adipose AND tissue))) OR (TITLE-ABS-KEY ((tomography AND x-ray AND computed) OR (x-ray AND computed AND tomography) OR (tomography AND x-ray AND computerized) OR (tomography AND x AND ray AND computerized) OR (computed AND x AND ray AND tomography) OR (x-ray AND computer AND assisted AND tomography) OR (x AND ray AND computer AND assisted AND tomography) OR (tomography AND x-ray AND computer AND assisted) OR (tomography AND x AND ray AND computer AND assisted) OR (computerized AND tomography AND x AND ray) OR (computerized AND tomography AND x-ray) OR (x-ray AND computerized AND tomography) OR (ct AND x AND ray) OR (ct AND x AND rays) OR (x AND ray AND ct) OR (x AND rays AND ct) OR (tomodensitometry) OR (tomography AND x AND ray AND computed) OR (x AND ray AND tomography AND computed) OR (x-ray AND tomography AND computed) OR (computed AND x-ray AND tomography) OR (tomographies AND computed AND x-ray) OR (tomography AND computed AND x-ray) OR (tomography AND xray AND computed) OR (computed AND tomography AND xray) OR (xray AND computed AND tomography) OR (cat AND scan AND x AND ray) OR (cat AND scan AND x-ray) OR (cat AND scans AND x-ray) OR (scan AND x-ray AND cat) OR (scans AND x-ray AND cat) OR (x-ray AND cat AND scan) OR (x-ray AND cat AND scans) OR (tomography AND transmission AND computed) OR (computed AND tomography AND transmission) OR (transmission AND computed AND tomography) OR (ct AND scan AND x-ray) OR (ct AND scan AND x AND ray) OR (ct AND scans AND x-ray) OR (scan AND x-ray AND ct) OR (scans AND x-ray AND ct) OR (x-ray AND ct AND scan</p>

) OR (x-ray AND ct AND scans) OR (computed AND tomography AND x-ray) OR (computed AND tomography AND x AND ray) OR (x AND ray AND computerized AND tomography) OR (cine-ct) OR (cine AND ct) OR (electron AND beam AND computed AND tomography) OR (electron AND beam AND tomography) OR (beam AND tomography AND electron) OR (tomography AND electron AND beam) OR (tomography AND x-ray AND computerized AND axial) OR (tomography AND x AND ray AND computerized AND axial) OR (x-ray AND computerized AND axial AND tomography) OR (x AND ray AND computerized AND axial AND tomography))) OR (TITLE-ABS-KEY((magnetic AND resonance AND spectroscopies) OR (resonance AND spectroscopy AND magnetic) OR (mr AND spectroscopy) OR (spectroscopy AND mr) OR (spectroscopy AND magnetic AND resonance) OR (nuclear AND magnetic AND resonance) OR (magnetic AND resonance AND nuclear) OR (resonance AND nuclear AND magnetic) OR (in AND vivo AND nmr AND spectroscopy) OR (nmr AND spectroscopy AND in AND vivo) OR (magnetic AND resonance) OR (resonance AND magnetic) OR (spectroscopy AND nuclear AND magnetic) OR (resonance) OR (spectroscopy AND nmr) OR (nmr AND spectroscopy) OR (nmr AND spectroscopies) OR (spectroscopies AND nmr))) OR (TITLE-ABS-KEY((impedance AND electric) OR (electrical AND impedance) OR (impedance AND electrical) OR (impedance) OR (ohmic AND resistance) OR (ohmic AND resistances) OR (resistance AND ohmic) OR (resistances AND ohmic) OR (bioelectrical AND impedance) OR (impedance AND bioelectrical) OR (bioelectric AND impedance) OR (impedance AND bioelectric) OR (electric AND resistance) OR (resistance AND electric) OR (electrical AND resistance) OR (resistance AND electrical))) OR (TITLE-ABS-KEY((absorptiometry AND photon) OR (photon AND absorptiometry) OR (densitometry AND x-ray) OR (densitometry AND x AND ray) OR (x-ray AND densitometry) OR (photodensitometry AND x-ray) OR (photodensitometry AND x AND ray) OR (x-ray AND photodensitometry) OR (x AND ray AND photodensitometry) OR (densitometry AND xray) OR (xray AND densitometry) OR (single-photon AND absorptiometry) OR (absorptiometry AND single-photon) OR (single AND photon AND absorptiometry) OR (dual-energy AND x-ray AND absorptiometry AND scan) OR (dual AND energy AND x AND ray AND absorptiometry AND scan) OR (dxa AND scan) OR (dxa AND scans) OR (scan AND dxa) OR (scans AND dxa) OR (dxa AND scan) OR (dxa AND scans) OR (scan AND dxa) OR (scans AND dxa) OR (dual-photon AND absorptiometry) OR (absorptiometry AND dual-photon) OR (dual AND photon AND absorptiometry) OR (radiographic AND absorptiometry AND dual-energy) OR (radiographic AND absorptiometry AND dual AND energy) OR (absorptiometry AND

	<p>dual-energy AND radiographic) OR (absorptiometry AND dual AND energy AND radiographic) OR (dual-energy AND radiographic AND absorptiometry) OR (dual AND energy AND radiographic AND absorptiometry) OR (absorptiometry AND x-ray) OR (absorptiometry AND x AND ray) OR (x-ray AND absorptiometry) OR (x AND ray AND absorptiometry) OR (dual-energy AND x-ray AND absorptiometry) OR (dual AND energy AND x AND ray AND absorptiometry) OR (x-ray AND absorptiometry AND dual-energy) OR (x AND ray AND absorptiometry AND dual AND energy) OR (dpx AND absorptiometry) OR (absorptiometries AND dpx) OR (absorptiometry AND dpx) OR (absorptiometry AND dual AND x-ray) OR (absorptiometry AND dual AND x AND ray) OR (x-ray AND absorptiometry AND dual) OR (absorptiometry AND dual-energy AND x-ray) OR (absorptiometry AND dual AND energy AND x AND ray) OR (dual AND x-ray AND absorptiometry) OR (dual AND x AND ray AND absorptiometry)) OR (TITLE-ABS-KEY ((index AND body AND mass) OR (quetelet AND index) OR (index AND quetelet) OR (quetelet's AND index) OR (quetelets AND index))) OR (TITLE-ABS-KEY ((circumference AND waist) OR (circumferences AND waist) OR (waist AND circumferences))) OR (TITLE-ABS-KEY ((body AND composition) OR (body AND compositions) OR (composition AND body) OR (compositions AND body) OR (percentage AND body AND fat) OR (body AND fat) OR "Body Fat Distribution" OR (body AND fat AND distribution) OR (distribution AND body AND fat) OR (fat AND distribution AND body) OR (body AND fat AND patterning) OR (fat AND patterning AND body) OR (patterning AND body AND fat) OR "Skinfold Thickness" OR (skinfold AND thickness) OR (thickness AND skinfold) OR (thicknesses AND skinfold))))) AND (TITLE-ABS-KEY ((olive AND oil) OR (oil, AND olive) OR (oils, AND olive) OR (olive AND oils) (extra AND virgin AND olive AND oil)))</p>
<p>Web of Science</p>	<p>TS=((Body Composition) OR (Body Compositions) OR (Composition Body) OR (Compositions Body) OR (percentage body fat) OR (body fat) OR "Body Fat"[Mesh] OR (Body Fat Distribution) OR (Distribution Body Fat) OR (Fat Distribution Body) OR (Body Fat Patterning) OR (Fat Patterning Body) OR (Patterning Body Fat) OR "Skinfold Thickness"[Mesh] OR (Skinfold Thickness) OR (Thickness Skinfold) OR (Thicknesses Skinfold) OR (Circumference Waist) OR (Circumferences Waist) OR (Waist Circumferences) OR (Index Body Mass) OR (Quetelet Index) OR (Index Quetelet) OR (Quetelet's Index) OR (Quetelets Index) OR (Absorptiometry Photon) OR (Photon Absorptiometry) OR (Densitometry X- Ray) OR (Densitometry X Ray) OR (X-Ray Densitometry) OR (Photodensitometry X- Ray) OR (Photodensitometry X Ray) OR (X-Ray Photodensitometry) OR (X Ray Photodensitometry) OR (Densitometry Xray) OR (Xray Densitometry) OR (Single-Photon Absorptiometry) OR (Absorptiometry Single-Photon) OR (Single Photon Absorptiometry) OR (Dual-Energy X-Ray Absorptiometry Scan) OR (Dual Energy X Ray Absorptiometry Scan) OR (DXA Scan) OR (DXA Scans) OR (Scan DXA) OR (Scans DXA) OR (DEXA Scan) OR (DEXA Scans) OR (Scan DEXA) OR (Scans DEXA) OR (Dual-Photon Absorptiometry) OR (Absorptiometry Dual-Photon) OR (Dual Photon</p>

Absorptiometry) OR (Radiographic Absorptiometry Dual- Energy) OR (Radiographic Absorptiometry Dual Energy) OR (Absorptiometry Dual-Energy Radiographic) OR (Absorptiometry Dual Energy Radiographic) OR (Dual-Energy Radiographic Absorptiometry) OR (Dual Energy Radiographic Absorptiometry) OR (Absorptiometry X-Ray) OR (Absorptiometry X Ray) OR (X-Ray Absorptiometry) OR (X Ray Absorptiometry) OR (Dual-Energy X-Ray Absorptiometry) OR (Dual Energy X Ray Absorptiometry) OR (X-Ray Absorptiometry Dual-Energy) OR (X Ray Absorptiometry Dual Energy) OR (DPX Absorptiometry) OR (Absorptiometries DPX) OR (Absorptiometry DPX) OR (Absorptiometry Dual X- Ray) OR (Absorptiometry Dual X Ray) OR (X-Ray Absorptiometry Dual) OR (Absorptiometry Dual-Energy X- Ray) OR (Absorptiometry Dual Energy X Ray) OR (Dual X-Ray Absorptiometry) OR (Dual X Ray Absorptiometry) OR (Impedance Electric) OR (Electrical Impedance) OR (Impedance Electrical) OR (Impedance) OR (Ohmic Resistance) OR (Ohmic Resistances) OR (Resistance Ohmic) OR (Resistances Ohmic) OR (Bioelectrical Impedance) OR (Impedance Bioelectrical) OR (Bioelectric Impedance) OR (Impedance Bioelectric) OR (Electric Resistance) OR (Resistance Electric) OR (Electrical Resistance) OR (Resistance Electrical) OR (Magnetic Resonance Spectroscopies) OR (Resonance Spectroscopy Magnetic) OR (MR Spectroscopy) OR (Spectroscopy MR) OR (Spectroscopy Magnetic Resonance) OR (Nuclear Magnetic Resonance) OR (Magnetic Resonance Nuclear) OR (Resonance Nuclear Magnetic) OR (In Vivo NMR Spectroscopy) OR (NMR Spectroscopy In Vivo) OR (Magnetic Resonance) OR (Resonance Magnetic) OR (Spectroscopy Nuclear Magnetic) OR (Resonance) OR (Spectroscopy NMR) OR (NMR Spectroscopy) OR (NMR Spectroscopies) OR (Spectroscopies NMR) OR (Tomography X-Ray Computed) OR (X-Ray Computed Tomography) OR (Tomography X-Ray Computerized) OR (Tomography X Ray Computerized) OR (Computed X Ray Tomography) OR (X-Ray Computer Assisted Tomography) OR (X Ray Computer Assisted Tomography) OR (Tomography X-Ray Computer Assisted) OR (Tomography X Ray Computer Assisted) OR (Computerized Tomography X Ray) OR (Computerized Tomography X-Ray) OR (X-Ray Computerized Tomography) OR (CT X Ray) OR (CT X Rays) OR (X Ray CT) OR (X Rays CT) OR (Tomodensitometry) OR (Tomography X Ray Computed) OR (X Ray Tomography Computed) OR (X-Ray Tomography Computed) OR (Computed X-Ray Tomography) OR (Tomographies Computed X- Ray) OR (Tomography Computed X-Ray) OR (Tomography Xray Computed) OR (Computed Tomography Xray) OR (Xray Computed Tomography) OR (CAT Scan X Ray) OR (CAT Scan X-Ray) OR (CAT Scans X-Ray) OR (Scan X-Ray CAT) OR (Scans X-Ray CAT) OR (X-Ray CAT Scan) OR (X-Ray CAT Scans) OR (Tomography Transmission Computed) OR (Computed Tomography Transmission) OR (Transmission Computed Tomography) OR (CT Scan X-Ray) OR (CT Scan X Ray) OR (CT Scans X-Ray) OR (Scan X-Ray CT) OR (Scans X- Ray CT) OR (X-Ray CT Scan) OR (X-Ray CT Scans) OR (Computed Tomography X-Ray) OR (Computed Tomography X Ray) OR (X Ray Computerized Tomography) OR (Cine-CT) OR (Cine CT) OR (Electron Beam Computed Tomography) OR (Electron Beam Tomography) OR (Beam Tomography Electron) OR (Tomography Electron Beam) OR (Tomography X-Ray Computerized Axial) OR (Tomography X Ray Computerized Axial) OR (X-Ray Computerized Axial Tomography) OR (X Ray Computerized Axial Tomography) OR (Tissue Adipose) OR (Fatty Tissue) OR (Tissue Fatty) OR (Fat Pad) OR (Fat Pads) OR (Pad Fat) OR (Pads Fat) OR (Body Fat) OR

	<p>"Abdominal Fat"[Mesh] OR (Abdominal Fats) OR (Fats Abdominal) OR (Fat Abdominal) OR (Abdominal Adipose Tissue) OR (Adipose Tissue Abdominal) OR "Subcutaneous Fat"[Mesh] OR (Fats Subcutaneous) OR (Subcutaneous Fats) OR (Adipose Tissue Subcutaneous) OR (Fat Subcutaneous) OR (Subcutaneous Adipose Tissue))</p> <p>Índices=SCI-EXPANDED, SSCI, A&H, ESCI Tempo estipulado=Todos os anos</p> <p>TS=((olive AND oil) OR (oil, AND olive) OR (oils, AND olive) OR (olive AND oils) (extra AND virgin AND olive AND oil))</p> <p>Índices=SCI-EXPANDED, SSCI, A&H, ESCI Tempo estipulado=Todos os anos</p>
EMBASE	<p>#1 ('olive oil'/syn OR 'extra virgin olive oil'/syn) AND ([embase]/lim OR [medline]/lim OR [pubmed-not-medline]/lim)</p> <p>#2 ('body composition'/syn OR 'body distribution'/syn OR 'body fat distribution'/syn OR 'body fat'/syn OR 'skinfold thickness'/syn OR 'waist circumference'/syn OR 'adipose tissue thickness'/syn OR 'body mass'/syn OR 'dual energy x ray absorptiometry'/syn OR 'dual photon absorptiometry'/syn OR 'impedance'/syn OR 'nuclear magnetic resonance spectroscopy'/syn OR 'x-ray computed tomography'/syn OR 'adipose tissue'/syn OR 'subcutaneous fat'/syn OR 'abdominal fat'/syn OR 'intra-abdominal fat'/syn) AND ([embase]/lim OR [medline]/lim OR [pubmed-not-medline]/lim)</p> <p>#3 #1 AND #2</p>
CENTRAL	<p>((Olive Oil) Or (Oil, Olive) OR (Oils, Olive) OR (Olive Oils) (Extra virgin olive oil)) AND ((Body Composition) OR (Body Compositions) OR (Composition Body) OR (Compositions Body) OR (percentage body fat) OR (body fat) OR (Body Fat Distribution) OR (Distribution Body Fat) OR (Fat Distribution Body) OR (Body Fat Patterning) OR (Fat Patterning Body) OR (Patterning Body Fat) OR (Skinfold Thickness) OR (Thickness Skinfold) OR (Thicknesses Skinfold) OR (Circumference Waist) OR (Circumferences Waist) OR (Waist Circumferences) OR (Index Body Mass) OR (Quetelet Index) OR (Index Quetelet) OR (Quetelet's Index) OR (Quetelets Index) OR (Absorptiometry Photon) OR (Photon Absorptiometry) OR (Densitometry X-Ray) OR (Densitometry X Ray) OR (X-Ray Densitometry) OR (Photodensitometry X-Ray) OR (Photodensitometry X Ray) OR (X-Ray Photodensitometry) OR (X Ray Photodensitometry) OR (Densitometry Xray) OR (Xray Densitometry) OR (Single-Photon Absorptiometry) OR (Absorptiometry Single-Photon) OR (Single Photon Absorptiometry) OR (Dual-Energy X-Ray Absorptiometry Scan) OR (Dual Energy X Ray Absorptiometry Scan) OR (DXA Scan) OR (DXA Scans) OR (Scan DXA) OR (Scans DXA) OR (DEXA Scan) OR (DEXA Scans) OR (Scan DEXA) OR (Scans DEXA) OR (Dual-Photon Absorptiometry) OR (Absorptiometry Dual-Photon) OR (Dual Photon Absorptiometry) OR (Radiographic Absorptiometry Dual-Energy) OR (Radiographic Absorptiometry Dual Energy) OR (Absorptiometry Dual-Energy Radiographic) OR (Absorptiometry Dual Energy Radiographic) OR (Dual-Energy Radiographic Absorptiometry) OR (Dual Energy</p>

Radiographic Absorptiometry) OR (Absorptiometry X-Ray) OR (Absorptiometry X Ray) OR (X-Ray Absorptiometry) OR (X Ray Absorptiometry) OR (Dual-Energy X-Ray Absorptiometry) OR (Dual Energy X Ray Absorptiometry) OR (X-Ray Absorptiometry Dual-Energy) OR (X Ray Absorptiometry Dual Energy) OR (DPX Absorptiometry) OR (Absorptiometries DPX) OR (Absorptiometry DPX) OR (Absorptiometry Dual X-Ray) OR (Absorptiometry Dual X Ray) OR (X-Ray Absorptiometry Dual) OR (Absorptiometry Dual-Energy X-Ray) OR (Absorptiometry Dual Energy X Ray) OR (Dual X-Ray Absorptiometry) OR (Dual X Ray Absorptiometry) OR (Impedance Electric) OR (Electrical Impedance) OR (Impedance Electrical) OR (Impedance) OR (Ohmic Resistance) OR (Ohmic Resistances) OR (Resistance Ohmic) OR (Resistances Ohmic) OR (Bioelectrical Impedance) OR (Impedance Bioelectrical) OR (Bioelectric Impedance) OR (Impedance Bioelectric) OR (Electric Resistance) OR (Resistance Electric) OR (Electrical Resistance) OR (Resistance Electrical) OR (Magnetic Resonance Spectroscopies) OR (Resonance Spectroscopy Magnetic) OR (MR Spectroscopy) OR (Spectroscopy MR) OR (Spectroscopy Magnetic Resonance) OR (Nuclear Magnetic Resonance) OR (Magnetic Resonance Nuclear) OR (Resonance Nuclear Magnetic) OR (In Vivo NMR Spectroscopy) OR (NMR Spectroscopy In Vivo) OR (Magnetic Resonance) OR (Resonance Magnetic) OR (Spectroscopy Nuclear Magnetic) OR (Resonance) OR (Spectroscopy NMR) OR (NMR Spectroscopy) OR (NMR Spectroscopies) OR (Spectroscopies NMR) OR (Tomography X-Ray Computed) OR (X-Ray Computed Tomography) OR (Tomography X-Ray Computerized) OR (Tomography X Ray Computerized) OR (Computed X Ray Tomography) OR (X-Ray Computer Assisted Tomography) OR (X Ray Computer Assisted Tomography) OR (Tomography X-Ray Computer Assisted) OR (Tomography X Ray Computer Assisted) OR (Computerized Tomography X Ray) OR (Computerized Tomography X-Ray) OR (X-Ray Computerized Tomography) OR (CT X Ray) OR (CT X Rays) OR (X Ray CT) OR (X Rays CT) OR (Tomodensitometry) OR (Tomography X Ray Computed) OR (X Ray Tomography Computed) OR (X-Ray Tomography Computed) OR (Computed X-Ray Tomography) OR (Tomographies Computed X-Ray) OR (Tomography Computed X-Ray) OR (Tomography Xray Computed) OR (Computed Tomography Xray) OR (Xray Computed Tomography) OR (CAT Scan X Ray) OR (CAT Scan X-Ray) OR (CAT Scans X-Ray) OR (Scan X-Ray CAT) OR (Scans X-Ray CAT) OR (X-Ray CAT Scan) OR (X-Ray CAT Scans) OR (Tomography Transmission Computed) OR (Computed Tomography Transmission) OR (Transmission Computed Tomography) OR (CT Scan X-Ray) OR (CT Scan X Ray) OR (CT Scans X-Ray) OR (Scan X-Ray CT) OR (Scans X-Ray CT) OR (X-Ray CT Scan) OR (X-Ray CT Scans) OR (Computed Tomography X-Ray) OR (Computed Tomography X Ray) OR (X Ray Computerized Tomography) OR (Cine-CT) OR (Cine CT) OR (Electron Beam Computed Tomography) OR (Electron Beam Tomography) OR (Beam Tomography Electron) OR (Tomography Electron Beam) OR

	(Tomography X-Ray Computerized Axial) OR (Tomography X Ray Computerized Axial) OR (X-Ray Computerized Axial Tomography) OR (X Ray Computerized Axial Tomography) OR (Tissue Adipose) OR (Fatty Tissue) OR (Tissue Fatty) OR (Fat Pad) OR (Fat Pads) OR (Pad Fat) OR (Pads Fat) OR (Body Fat) OR (Abdominal Fats) OR (Fats Abdominal) OR (Fat Abdominal) OR (Abdominal Adipose Tissue) OR (Adipose Tissue Abdominal) OR (Fats Subcutaneous) OR (Subcutaneous Fats) OR (Adipose Tissue Subcutaneous) OR (Fat Subcutaneous) OR (Subcutaneous Adipose Tissue))
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Tabela S3. Risk of bias assessment in the included studies.

Author, year	Randomization process	Deviations from intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported result	Overall Bias
Parallel						
Arpon, 2018	Low	Low	Low	Low	Low	Low
Atefi, 2018	Low	Low	Low	Low	Low	Low
Berven, 2000	Low	Low	Low	Low	Low	Low
Blankson, 2000	Low	Low	Low	Low	High	High
Cândido, 2017	Low	Low	Low	Low	Low	Low
Cicccone, 2014	Low	Low	Low	Low	Low	Low
Derouiche, 2012	Some concerns	Some concerns	Some concerns	Low	Low	Some concerns
Estruch, 2006	Low	Low	Low	Low	Low	Low
Félix-Soriano et al, 2021	Low	Low	Low	Low	Low	Low
Foshati et al, 2021	Low	Low	Low	Low	Low	Low
Gammelmark, 2012	Low	Low	Low	Low	Low	Low
Gaullier, 2004	Low	Low	Low	Low	Low	Low
Green, 2020	Some concerns	Low	Low	High	Low	High
Guesdon, 2018	Low	Low	Low	Low	Low	Low
Jannas-Vela, 2020	Low	Low	Low	Low	Low	Low
Khani, 2021	Low	Low	Low	Low	Low	Low
Khaw, 2018	Low	Low	Low	Low	High	High
Kreider, 2002	Low	Low	Low	Low	Low	Low
Kruse, 2020	Low	Low	Low	High	Low	High
Larsen, 2006	Some concerns	Low	Low	Low	Low	Some concerns

Logan, 2015	Low	Low	Low	Low	Low	Low
Lopez-Plaza , 2013	Low	Low	Low	Low	Low	Low
Lucci, 2016	Low	Low	Low	High	Low	High
Nigam, 2014	High	Low	Low	High	Low	High
Noroozi, 2012	Some concerns	Low	Low	High	Low	High
Oliveira, 2017	High	Low	Low	Low	Low	High
Ornella, 2019	Low	Low	High	High	Low	High
Park, 2008	Low	Low	Low	Low	Low	Low
Parker, 2019	Low	Low	Low	Low	Low	Low
Perez, 2016	Low	Low	Low	Low	Low	Low
Pintó, 2019	Low	Low	Low	High	Low	High
Prater et al, 2022	Low	Low	Low	High	Low	Low
Raff, 2009	Low	Low	Low	Low	Low	Low
Rezaei, 2019	Low	Low	Low	Low	High	High
Risérus, 2004	Low	Low	Low	Low	Low	Low
Sales, 2005	Low	Low	Low	High	Low	High
Schirmer, 2006	Low	Low	Some concerns	Low	Low	Some concerns
Smedman, 2001	Low	Low	Low	Low	Low	Low
Shen, 2018	Low	Low	Low	Low	Low	Low
Silveira, 2020	Low	Low	Low	Low	Low	Low
Starvinou, 2020	Low	Low	Low	Low	Low	Low
St-Onge, 2008	Low	Low	Some concerns	Low	Low	Some concerns
Syvertsen, 2007	Low	Low	Low	Low	Low	Low
Tapsell, 2013	Low	Low	High	Low	Low	High
Taylor et al, 2006	Low	Low	Low	Low	Low	Low
Crossover						
Gonzalez-Ramila et al, 2022	Low	Low	Low	Low	Low	Low

Kabiri et al, 2017	Some concerns	Low	Low	High	Low	High
Kontogianni et al, 2013	Some concerns	Low	Low	High	Low	High
Lee et al, 2018	Low	Low	Low	Low	Low	Low
Loganathan et al,	Low	Low	Low	High	Low	Low
Roynette et al, 2008	Low	Low	Low	Low	Low	Low
Sun et al, 2016	Low	Low	Low	Low	Low	Low
Tuccinardi et al, 2021	Low	Low	Low	Low	Low	Low

Table S4 – GRADE assessment.

Participants (studies)	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Overall certainty of evidence	Impact
Body mass index							
2842 (41 RCTs)	serious	not serious	not serious	serious	none	⊕⊕○○ LOW	MD 0.06 Kg/m ² less (0.24 less to 0.12 more)
Waist circumference							
2533 (33 RCTs)	serious	not serious	not serious	serious	none	⊕⊕○○ LOW	MD 0.30 cm more (0.19 less to 0.78 more)
Hip circumference							
470 (9 RCT)	not serious	serious	not serious	Very serious	none	⊕○○○ VERY LOW	MD 1.31 cm more (0.24 less to 2.86 more)
Waist-to-hip ratio							
634 (12 RCTs)	serious	Not serious	not serious	not serious	none	⊕⊕⊕○ MODERATE	MD 0.0 (0.01 less to 0.02 more)
Body fat (Kg)							
1264 (18 RCTs)	serious	serious	not serious	serious	none	⊕○○○ VERY LOW	MD 0.24 Kg less (0.85 less to 0.37 more)
Body fat (%)							
1417 (22 RCTs)	serious	not serious	not serious	not serious	none	⊕⊕⊕○ MODERATE	MD 0.02 % more (0.57 less to 0.61 more)
Lean mass							
1338 (20 RCTs)	serious	serious	not serious	not serious	none	⊕⊕○○ LOW	MD 0.27 Kg less (0.58 less to 0.05 more)

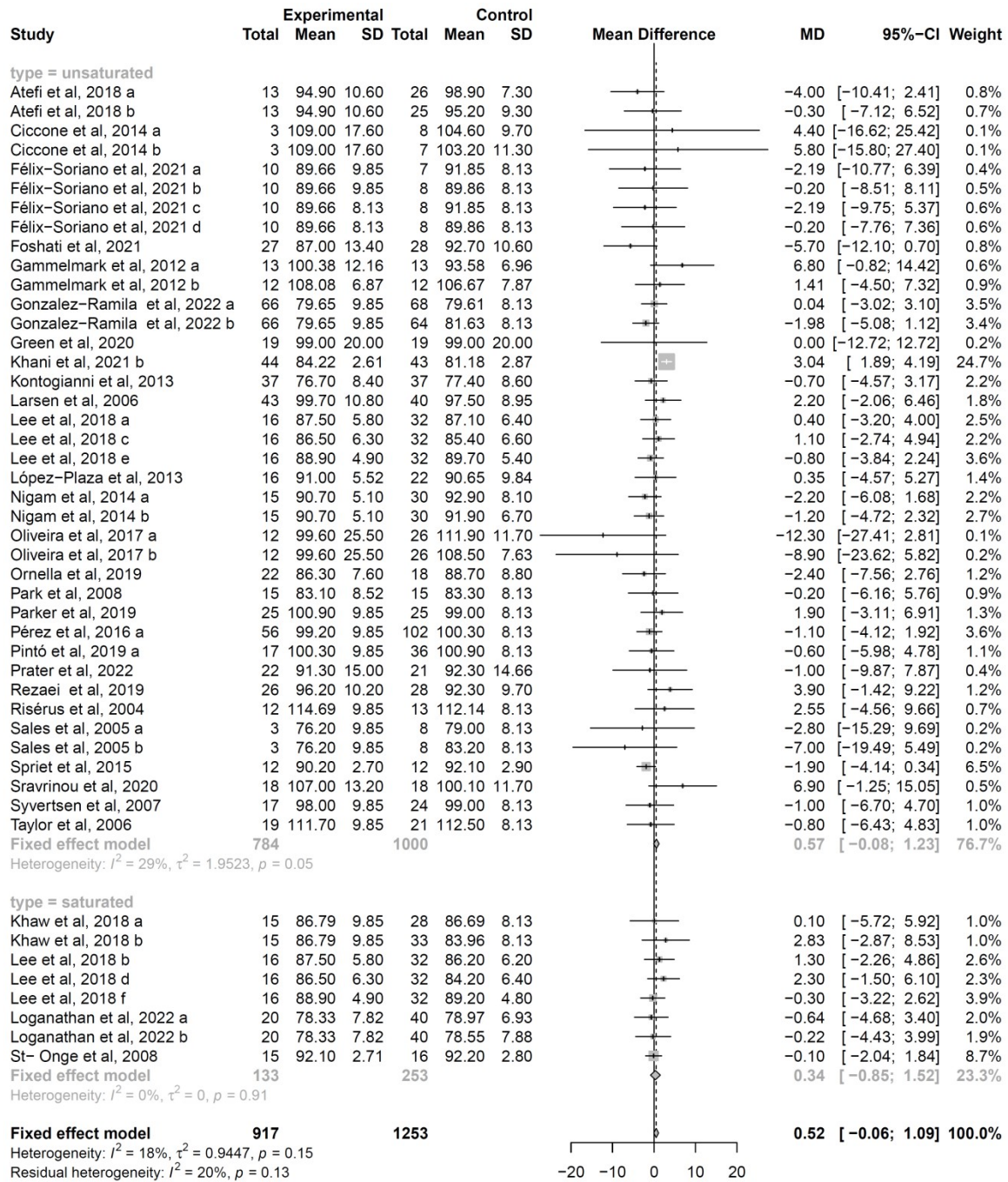


Figure S1 – Forest plot with mean difference and 95% CIs for fully adjusted fixed-effects models of olive oil intervention in relation to waist circumference by type of oil or fat used in the comparison group (saturated versus unsaturated).

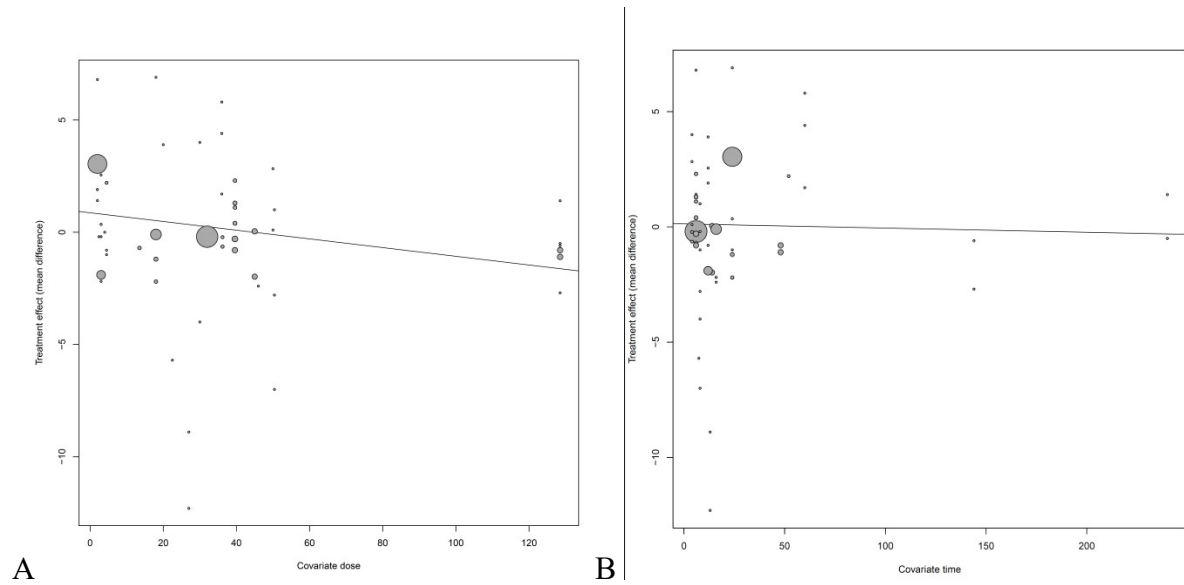


Fig. S2 – Bubble plot showing the dose-effect (A) relationship between olive oil dose and mean difference in waist circumference (slope = 0.6750, 95% CI [-0.1107, 1.4608], $p = 0.0922$; $I^2 = 6.52\%$). Bubble plot showing the dose-effect (B) relationship between olive oil time of intervention and mean difference in waist circumference (slope = 0.0282, 95% CI [-0.7666, 0.8230], $p = 0.9446$; $I^2 = 16.9\%$).

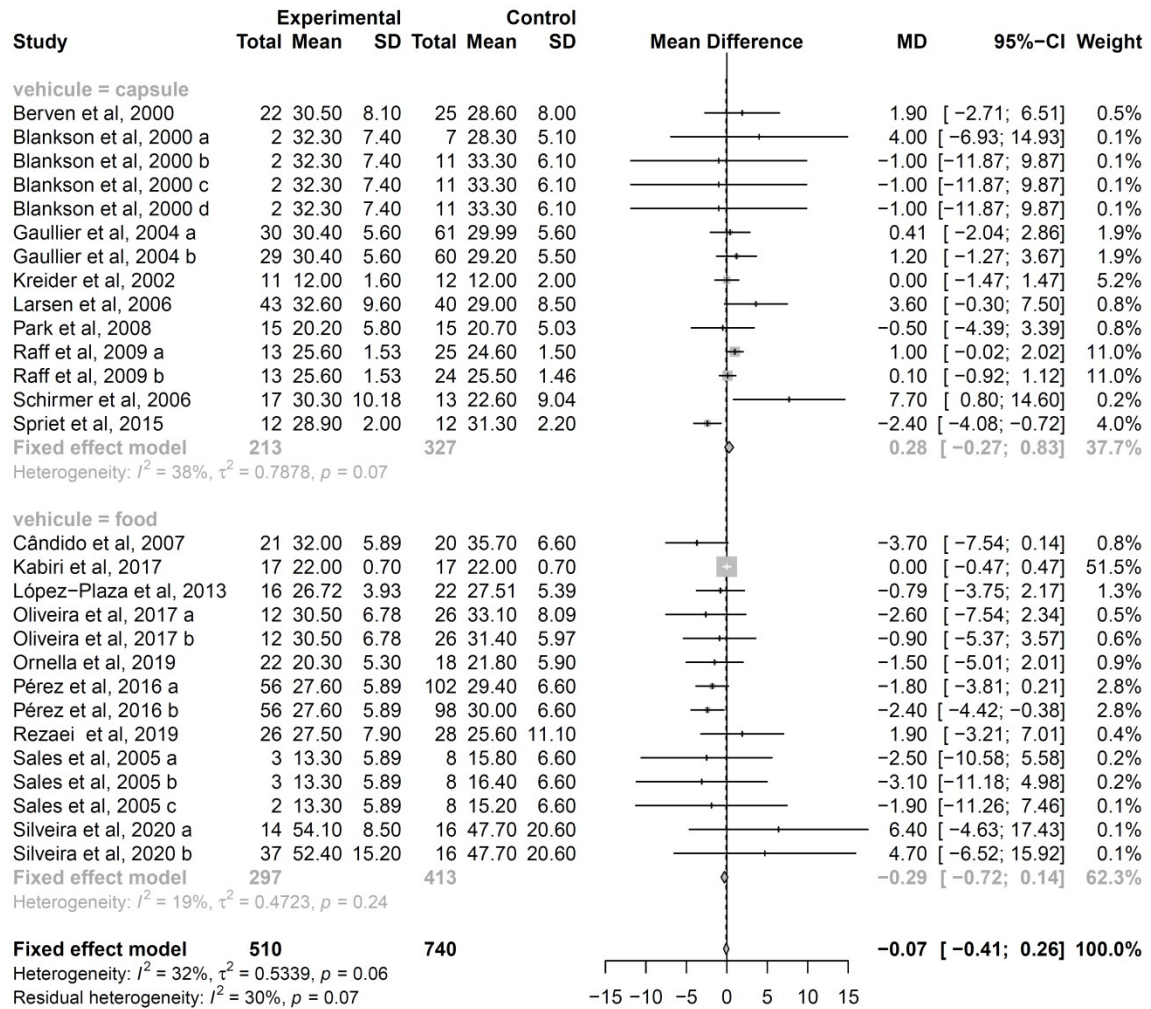


Figure S3 – Forest plot with mean difference and 95% CIs for fully adjusted fixed-effects models of olive oil intervention in relation to body fat (Kg) by vehicle of olive oil intake (capsules or cooking use).

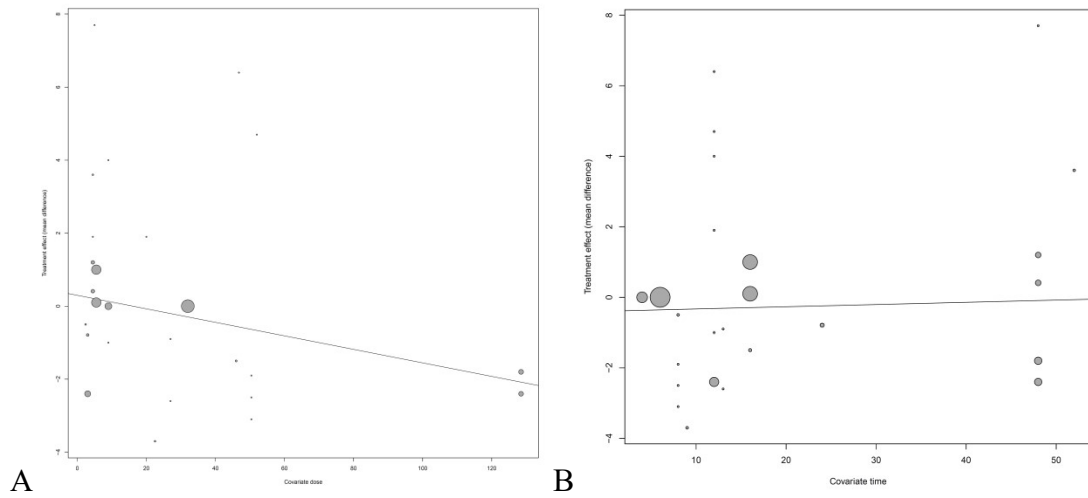


Figure S4– Bubble plot of the difference in mean total body fat (Kg) with olive oil intake compared to the control group, according to the dose of olive oil (A) and time of intervention (B).

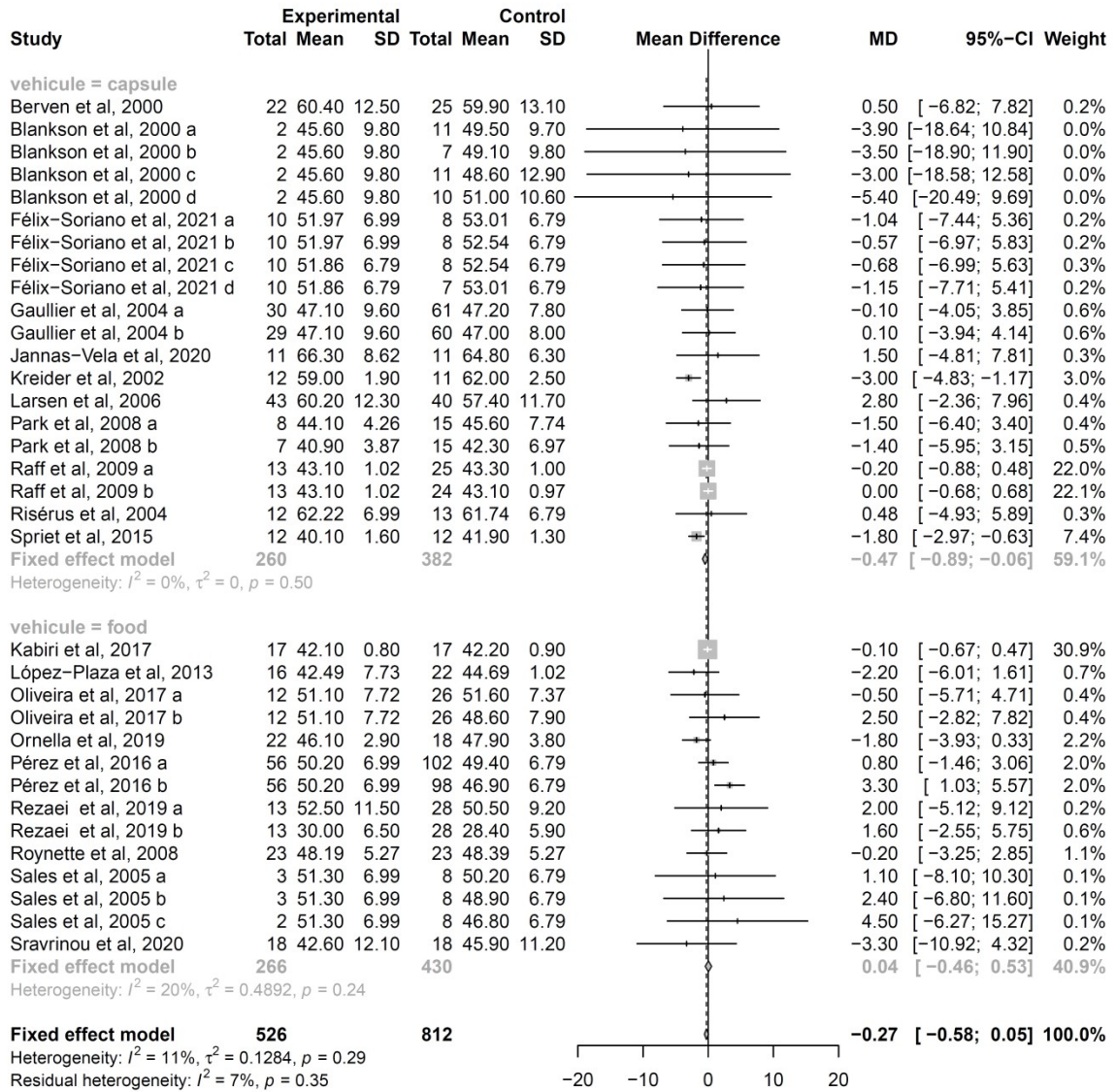


Figure S5 – Forest plot with mean difference and 95% CIs for fully adjusted fixed-effects models of olive oil intervention in relation to lean mass by vehicle of olive oil intake (capsules or cooking use).

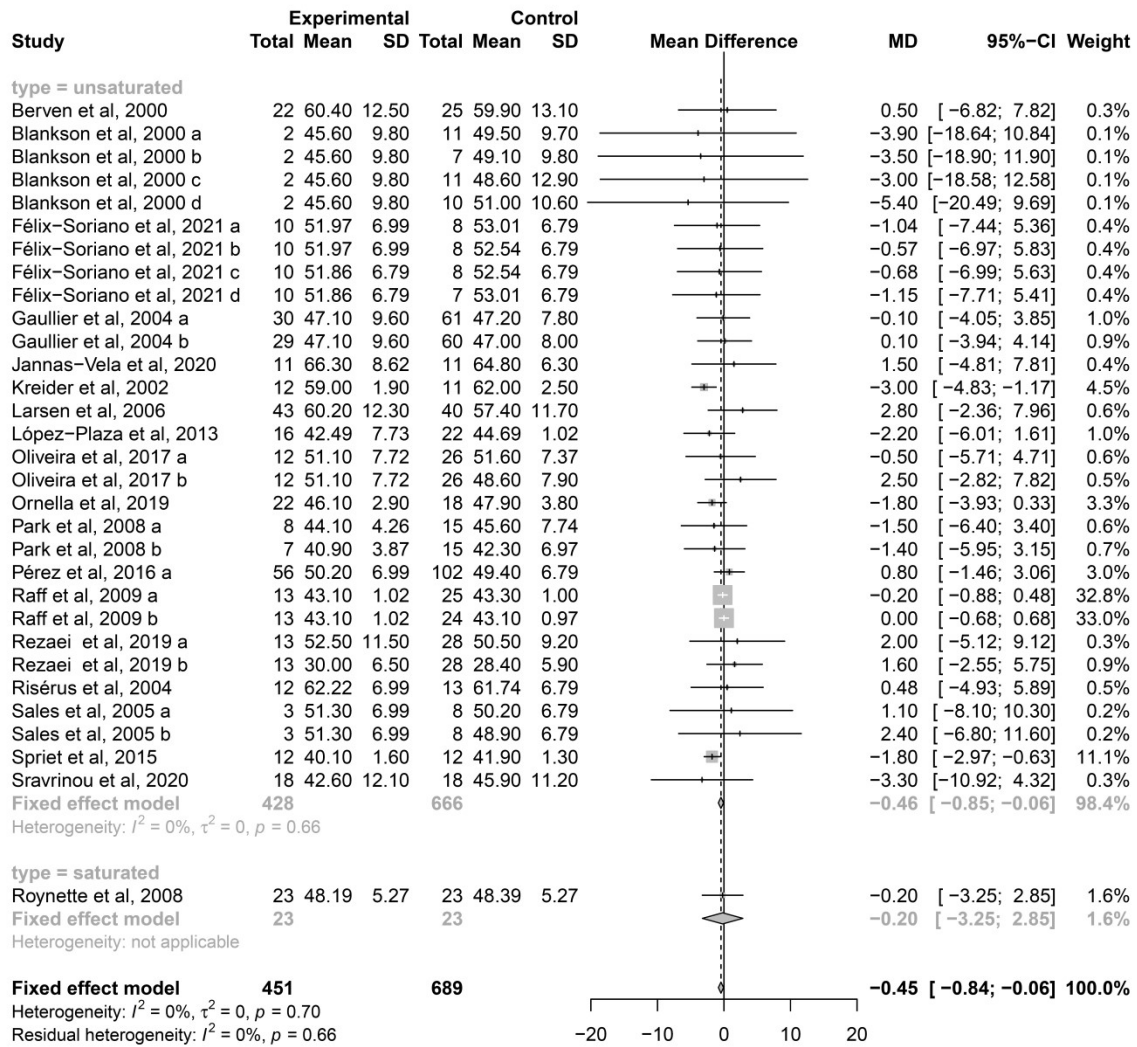


Figure S6 – Forest plot with mean difference and 95% CIs for fully adjusted fixed-effects models of olive oil intervention in relation to lean mass by vehicle of olive oil intake (capsules or cooking use).

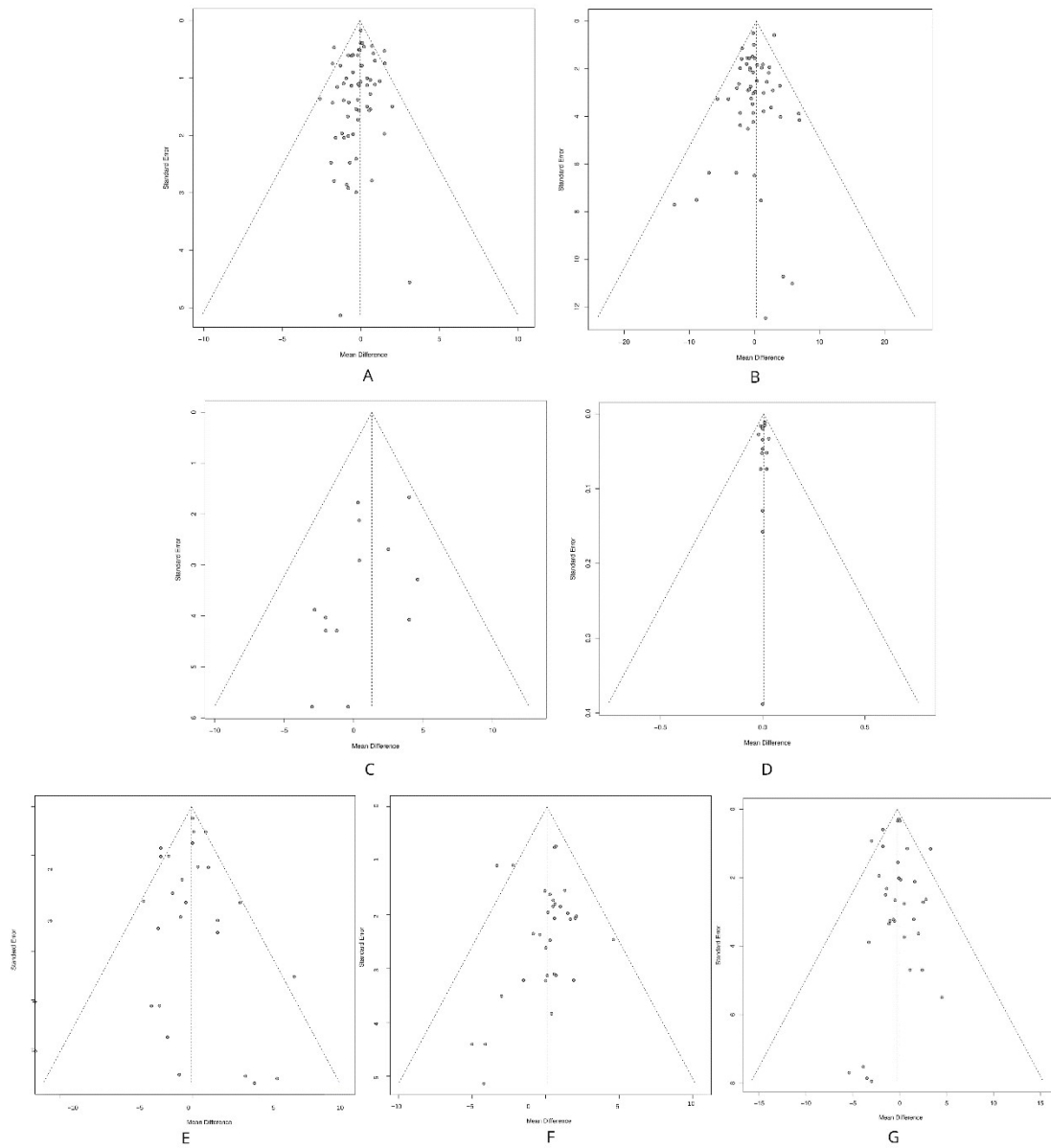


Figure S7. Funnel plot to identify publication bias for BMI (A), waist circumference (B), hip circumference (C), waist to hip ratio (D), body fat (Kg) (E), body fat (%) (F) and muscle mass (G).

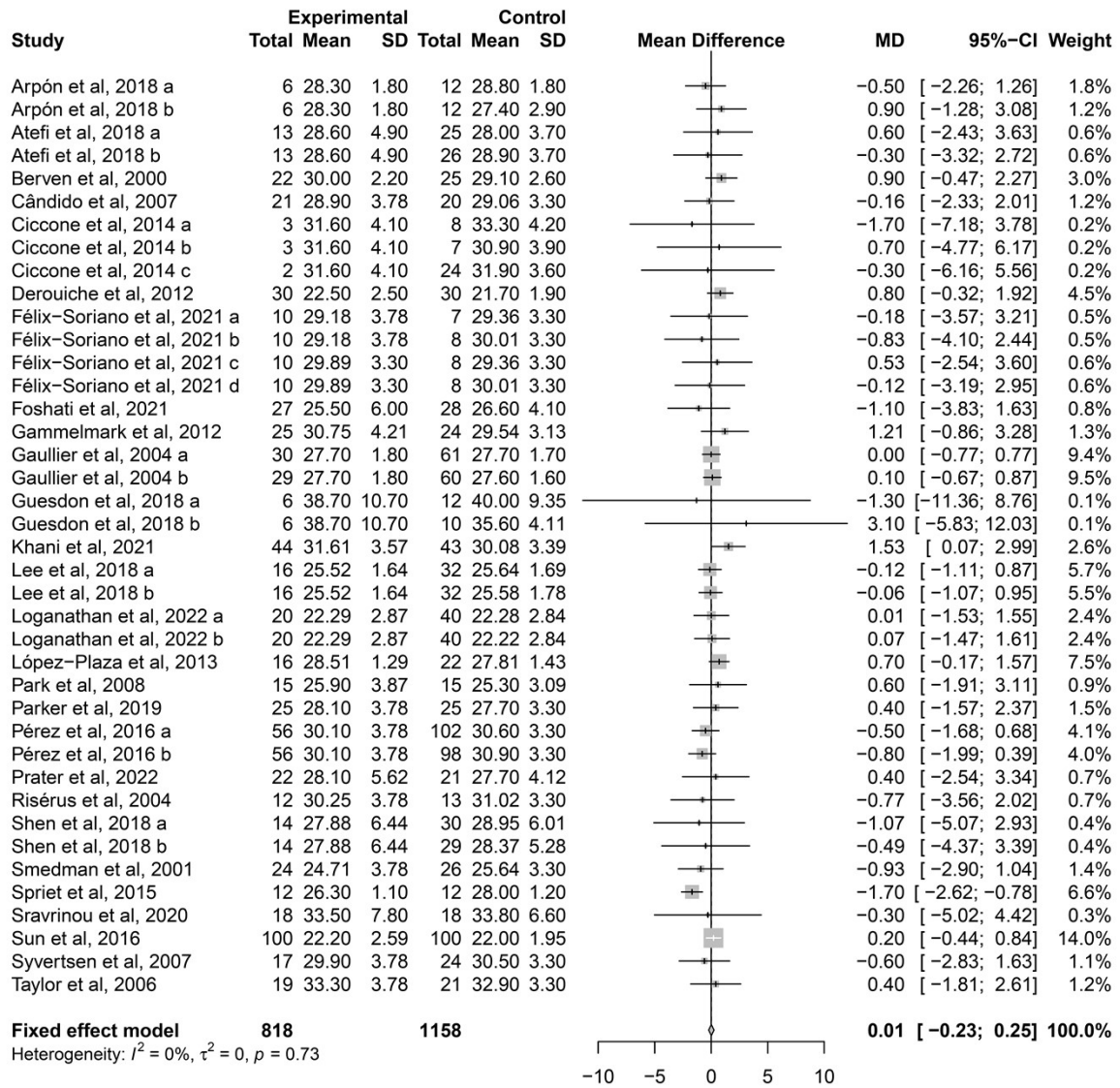


Figure S8 – Sensitivity analysis with forest plot of the difference in mean body mass index (BMI) (Kg/m²) with olive oil intake compared to the control group excluding the studies with high risk of bias.

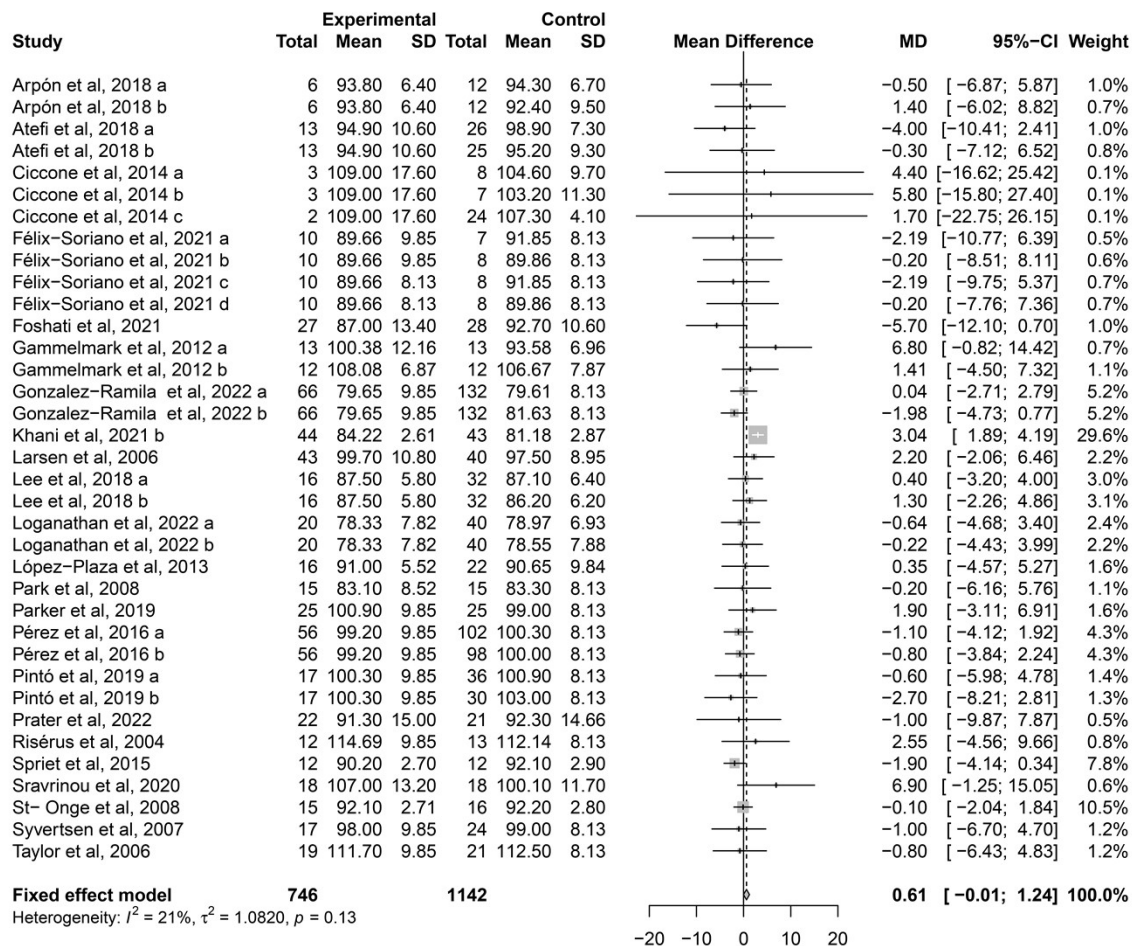


Figure S9 – Sensitivity analysis with forest plot of the difference in mean waist circumference with olive oil intake compared to the control group excluding the studies with high risk of bias.

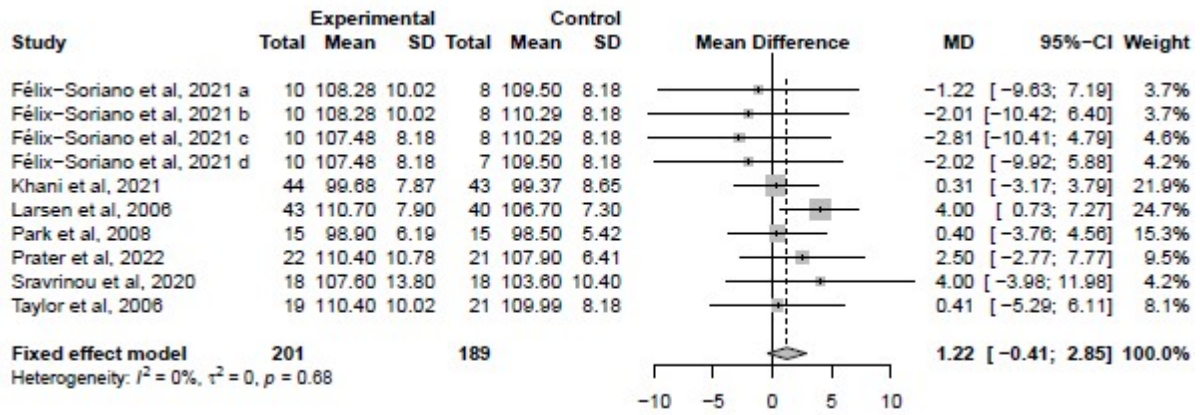


Figure S10 – Sensitivity analysis with forest plot of the difference in mean hip circumference with olive oil intake compared to the control group excluding the studies with high risk of bias.

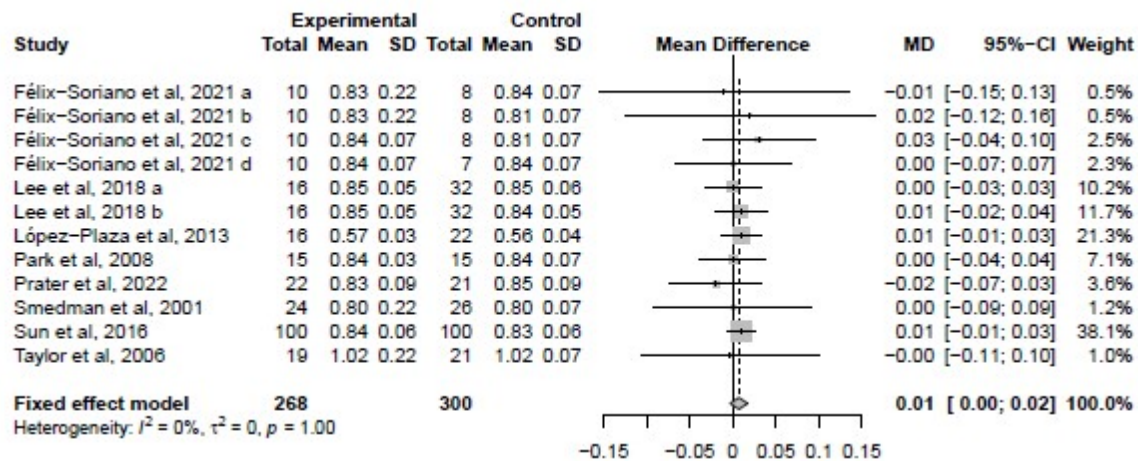


Figure S11 – Sensitivity analysis with forest plot of the difference in mean waist to hip ratio with olive oil intake compared to the control group excluding the studies with high risk of bias.

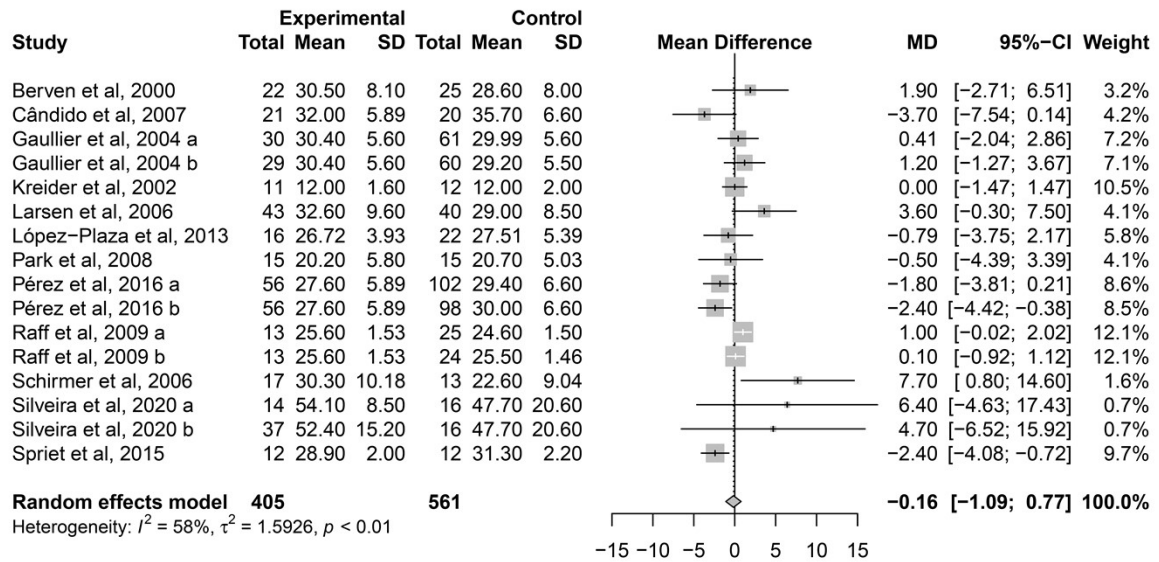


Figure S12 – Sensitivity analysis with forest plot of the difference in mean body fat (Kg) with olive oil intake compared to the control group excluding the studies with high risk of bias.

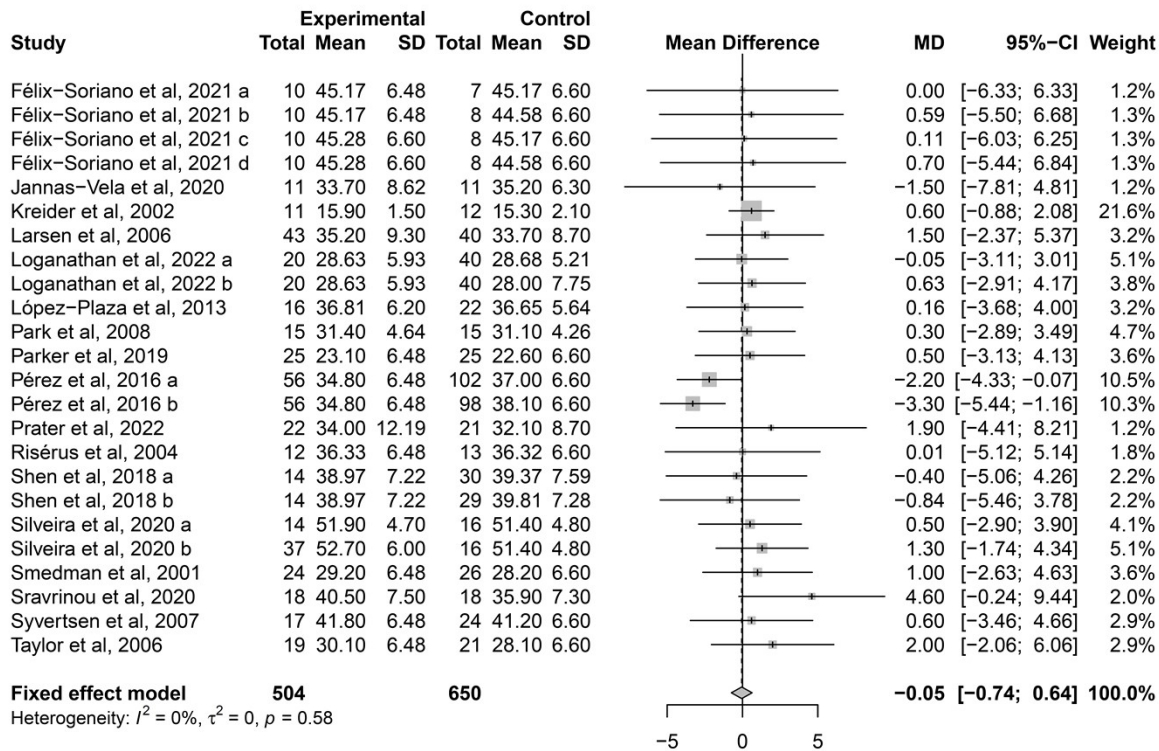


Figure S13 – Sensitivity analysis with forest plot of the difference in mean body fat (%) with olive oil intake compared to the control group excluding the studies with high risk of bias.

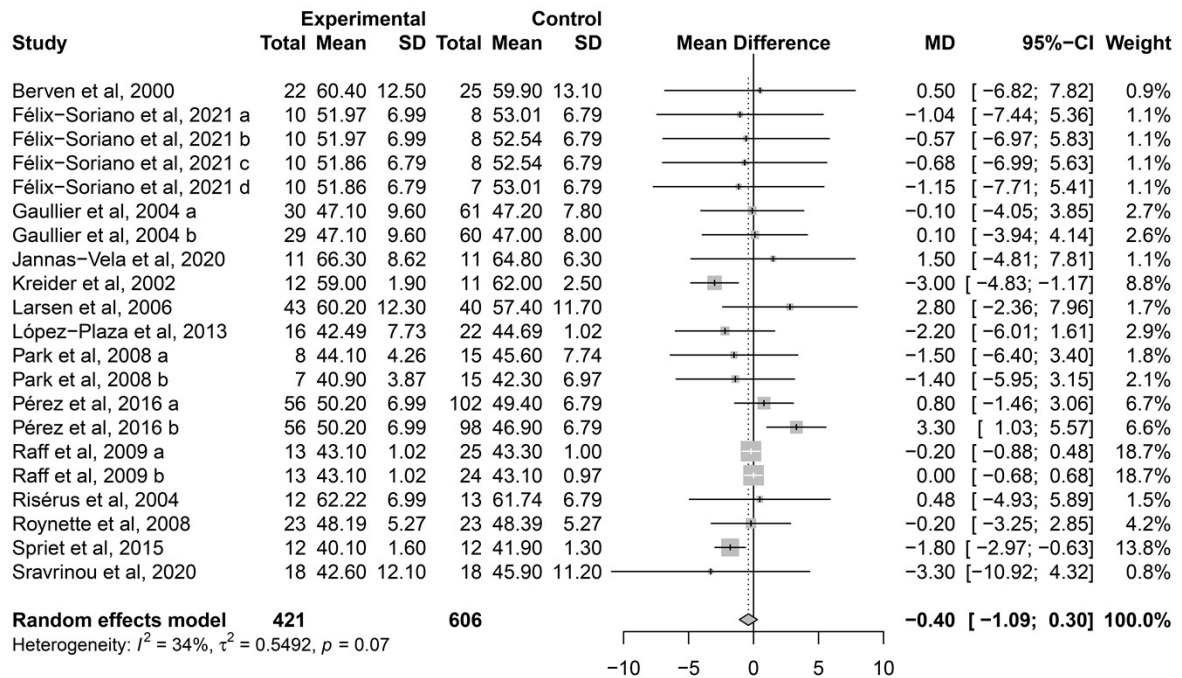


Figure S14 – Sensitivity analysis with forest plot of the difference in mean lean muscle mass with olive oil intake compared to the control group excluding the studies with high risk of bias.