

Authors Year and country of publication; Evidence level	Dietary compounds Kind of intervention	Kind of population/animal model/ in-vitro study	Effects on fibroids (Conclusions)	Comments
Carotenoids; Vitamins				
Sahin et al 2004 Japan; L 5	Lycopene - supplementation with 100 mg or 200 mg Lycopene per kilogram of diet	Animal model- Japanese quail No 120	*Dietary supplementation with lycopene ↓ the incidence of spontaneously occurring leiomyomas of the oviduct	*Higher doses of lycopene than in normal human diet
Broaddus et al. 2004 United States; L 5	doses for 4-HPR (synthetic retinoid analogue) and DFMO (alpha- difluoromethylornithine) were 1 μmol/L and 1 mmol/L, respectively	in-vitro study - primary cultures of human uterine leiomyomas	* 4-HPR and DFMO cause ↓ leiomyoma growth (by the modulation of ECM, the induction of p53, p21, and p16) * DFMO and 4-HPR ↑ an apoptosis	
Sahin et al 2007 Japan; L 5	Lycopene - diet supplemented with 25 g or 50 g of tomato powder per kg of diet (0.8 mg lycopene per g of tomato powder).	Animal model- Japanese quail No 150	* Dietary supplementation with tomato powder ↓ the incidence and size of leiomyoma of the oviduct	
Terry et al. 2008 (10 years follow up) United States Nurses' Health Study II; L 2	food frequency questionnaire (FFQ) regarding lycopene and beta- carotene intake	8212 premenopausal women (ages 26–46)	* Lycopene intake not associated with the UFs risk * High intake of beta-carotene slightly ↑ the risk of UFs (only in current smokers)	*Fibroids confirmed by an USG or hysterectomy (based on questionnaires)
Bläuer et al. 2009 Finland; L 5	different concentrations of 1,25(OH)₂D₃ (0.1 nM; 1 nM, 10 nM, 100 nM, 500 nM, 1000 nM)	in-vitro study-the human leiomyoma cell culture	* 1,25(OH) ₂ D ₃ ↓ the growth of leiomyoma cells in a concentration-dependent manner (after the 1000 nM ↓ approximately 50%) * Suppression of leiomyoma cells already detected in the physiologic vitamin D levels * Hypovitaminosis D plays an important role in the etiology and growth of leiomyoma	*VDR was present in all leiomyoma specimens (immunohistochemical analysis)
Sharan et al. 2011 United States; L 5	1,25(OH)₂D₃ treatment with different doses (1 nM, 10 nM, 100 nM, and 1,000 nM)	in-vitro study-the human leiomyoma cell line	* 1,25(OH) ₂ D ₃ ↓ growth of HuLM cells (↓ the expression of PCNA and CDK1; ↓ anti-apoptotic BCL-2 and BCL-w) * 1,25(OH) ₂ D ₃ ↓ <i>COMT</i> mRNA and protein expression and enzyme activity in HuLM cells	
Martin et al. 2011 (2003-2004) United States National Health and Nutrition Examination Survey (NHANES); L 2	B- carotene, folate, vitamin A (retinols), vitamin B6, vitamin B12, vitamin C, vitamin E.	887 premenopausal women (aged 20–49)	* Statistically significant dose-response positive relationship between vitamin A and uterine fibroids risk * Dose-responsive positive relationship between vitamin C, vitamin E and uterine fibroids (statistically insignificant) * Statistically insignificant, positive relationship between b-carotene and uterine fibroids	*Micronutrient levels measured in serum samples women with uterine fibroids *Fibroids self-reported during the in-home interview (on the base of previous doctor's diagnosis)

Halder et al. 2011 United States; L 5	different concentrations of 1,25(OH)₂D₃ (0.1 or 1 μM)	in-vitro study-the human leiomyoma cell line	* 1,25(OH) ₂ D ₃ is an antifibrotic factor in human leiomyoma cells (↓ TGF-β3 induced fibronectin, plasminogen activator inhibitor-1 and collagen type 1 protein expression) * 1,25(OH) ₂ D ₃ ↓ TGF-β3 and TGF-β3-mediated effects	
Halder et al. 2012 United States; L 5	1,25(OH)₂D₃ (0.5 μg/kg per day) subcutaneously for 3 weeks	Animal model- female Eker rats randomized into two groups: 1) the control group (No 6) 2) the treatment group (No 6) – treated with 1,25(OH) ₂ D ₃	* Treatment with 1,25(OH) ₂ D ₃ significantly ↓ leiomyoma tumor size * Treatment with 1,25(OH) ₂ D ₃ ↓ cell growth and proliferation-related genes (PCNA, cyclin D1, Myc, Cdk1, Cdk2, and Cdk4), antiapoptotic genes (<i>Bcl2</i> and <i>Bcl2l1</i>), and estrogen and progesterone receptors * 1,25(OH) ₂ D ₃ ↓ expression of PCNA and MKI67 (markers of proliferation) and ↑ expression of caspase 3	
Halder et al. 2013 United States; L 5	1,25(OH)₂D₃ treatment in various concentrations (1-1000 nM).	in vitro- uterine fibroid cell cultures (surgically removed fibroids used to generate primary uterine fibroid cells)	* 1,25(OH) ₂ D ₃ significantly ↓ mRNA levels of MMP-2 and MMP-9 in a concentration-dependent manner * 1,25(OH) ₂ D ₃ ↓ mRNA levels of MMP-1, MMP-3, MMP-13, MMP-14 in HuLM cells * 1,25(OH) ₂ D ₃ significantly ↓ MMP-2 and MMP-9 protein levels in a concentration-dependent manner in HuLM * 1,25(OH) ₂ D ₃ ↑ the mRNA levels of vitamin D receptor (VDR) and TIMP-2 in a concentration-dependent manner in HuLM cells	
Halder et al. 2013 United States; L 5	treatment with increasing concentrations of 1,25(OH)₂D₃ (0, 1, 10, 100, 1000 nM) for 48 h	in-vitro study- cultured immortalized human uterine fibroid cell line (HuLM)	* 1,25(OH) ₂ D ₃ can sensitize HuLM cells and induce VDR protein expression in HuLM cells * 1,25(OH) ₂ D ₃ ↓ the presence of disorganized collagen type 1, excessive fibronectin protein expression, PAI-1 protein expression and proteoglycans expression in HuLM cells * 1,25(OH) ₂ D ₃ in HuLM cells ↓ the synthesis and accumulation of disorganized actin fibers	
Halder et al. 2014 United States; L 5	paricalcitol and 1,25(OH)₂D₃	in-vitro study: Eker rat-derived uterine leiomyoma cell line Animal model- nude mice randomized into 3 groups:	* Paricalcitol ↓ proliferation of the immortalized human uterine fibroid cells * Paricalcitol and 1,25(OH) ₂ D ₃ significantly ↓ fibroid tumor size	

		Control; Paricalcitol (300 ng/kg/d for 4 weeks); Vit D3 group (500 ng/kg/d for 4 weeks)	* Fibroid shrinkage slightly higher in the paricalcitol-treated group	
Al-Hendy et al. 2015 United States; L 5	Treatment with increasing doses of 1,25(OH)₂D₃ (0, 10, 100, and 1000 nM)	in-vitro study - Human uterine leiomyoma (HuLM) cells	* 1,25(OH)₂D₃ significantly ↓ the estrogen-induced proliferation of HuLM cells * Treatment of 1,25(OH)₂D₃ ↓ the expression of nuclear ER-α, PR-A, PR-B, and the nuclear steroid receptor coactivator (SRC) family members in HuLM cells * 1,25(OH)₂D₃ induced its own VDR in a dose- and time-dependent manner in HuLM cells	*Higher levels of ER-α, PR-A, or PR-B and reduced levels of VDR found in human UFs
Al-Hendy et al. 2016 United States; L 5	Treatment with increasing concentrations of 1,25(OH)₂D₃	in-vitro study - Immortalized human UF cells (HuLM) and human primary UF (PUF) cells	* 1,25(OH)₂D₃ administration ↓ the levels of Wnt4 and β-catenin in both HuLM and PUF cells * 1,25(OH)₂D₃ ↓ the expression/activation of mTOR signaling in both cell types	*UF tumors with Med 12 mutations showed an up-regulation of Wnt4 and β-catenin (play a major role in fibroid pathogenesis)
Ciavattini et al. 2016 Italy; L 2	supplementation therapy with 50,000 IU of 1,25(OH)₂D₃ (oral solution) once per week for 8 weeks, followed by maintenance therapy of 2000 IU daily for a year.	108 women with uterine fibroids and hypovitaminosis D: study group: 53 patients with Vit D therapy control group: 55 women	* Negative correlation between the baseline 25(OH)D₃ concentration and the volume of the largest fibroid and the total volume of fibroids * No correlation between the baseline 25(OH)D₃ levels and the number of fibroids. * 1,25(OH)₂D₃ supplementation ↓ the progression of fibroids and related symptoms and ↓ the need of surgical or medical therapy	*Hypovitaminosis D defined as a 25(OH)D ₃ serum level < 30 ng/mL
Elhusseini et al. 2018 United States; L 5	vitamin D-deficient diet	Animal model: mouse model Female mice divided into two groups: control (n = 10) fed on normal diet containing vit D; vitamin D-deficient diet group (n = 10)- totally lacking vit D for 8 weeks.	Vitamin D deficiency: * ↑ expression of sex steroid receptors in murine myometrium * ↑ expression of proliferation related genes * promotes the fibrosis * ↑ inflammation in murine myometrium * ↑ DNA damage in murine myometrium	
Corachán et al. 2019 Spain; L 5	1,25(OH)₂D₃ in various concentrations (10 nM, 100 nM, and 1,000 nM)	Human uterine leiomyomas (No 22)	* 1,25(OH)₂D₃ therapy effective in stabilizing leiomyoma size and preventing its growth (induced cell growth arrest and ↓ proliferation in HuLM cells; VitD ↓ Wnt-pathway expression in UL cells at gene and protein levels) * 1,25(OH)₂D₃ did not induce apoptosis expression	*Uterine leiomyomas collected from premenopausal women aged 35–52 years undergoing surgery

Ali et al. 2019 United States; L 5	treatment with 1,25(OH)₂D₃ 100 nM for 3 d or not treated	cultured HuLM cells (human fibroid obtained from women of reproductive age (aged 22–55 years) undergoing hysterectomy or myomectomy)	*Vitamin D receptor (VDR) expression is decreased in HuLM cells and induces DNA damage accumulation and DNA damage response defects in HuLM cells * 1,25(OH)₂D₃ treatment suppresses DNA damage and restores the DNA damage response via induction of VDR in HuLM cells * 1,25(OH)₂D₃ treatment ↓UF formation through the amelioration of pathogenic DNA damage	*Vitamin D ₃ /VDR axis is functionally linked to DNA damage and instability status in UF cells
Hajhashemi et al. 2019 Iran; L 1	oral administration of 1,25(OH)₂D₃ (50,000 IU every 2 weeks for 10 weeks) or placebo (randomly selected)	69 participants with uterine leiomyomas and vitamin D deficiency (age 35 - 49 years): Study group (n=35) - vitamin D Placebo group (n=34)- placebo	* Leiomyomas size in vitamin D₃ group was significantly ↓ as compared to placebo * No toxicity observed after 1,25(OH)₂D₃	*In USG: 1-2 uterine leiomyomas, size 20-80 mm *Serum levels of 25(OH)D₃ <20 ng/ml
Xess et al. 2020 India; L 2	therapy with 60,000 IU of 1,25(OH)₂D₃ (oral solution) once per week for 12 weeks, followed by maintenance therapy of 2000 IU weekly for a year.	110 premenopausal women (mean age 45 years) with fibroids Study group (n=60) Control group (n=50)	* After 1,25(OH)₂D₃ treatment no increase or decrease in size or number of UF tumors * Without supplementation slight but significant ↑ in size of UFs and need for subsequent medical or surgical therapy	*Fibroids diagnosed with TV- US (>1 uterine fibroid; mean diameter 1-5 cm)
Arjeh et al. 2020 Iran; L 1	50,000 IU oral 1,25(OH)₂D₃ tablets or placebo (lactose sugar) tablets for 12 weeks (patients randomly assigned)	60 women (aged 22–40 years) with UFs and vitamin D deficiency: Study group (n = 30)- vitamin D Control group (n = 30)- placebo	* 1,25(OH)₂D₃ therapy ↓ growth of uterine fibroids * Statistically insignificant ↓ in the volume of fibroids observed after 1,25(OH)₂D₃ therapy * Significant ↑ in the fibroids' size observed in the placebo group after 12 weeks	*Vitamin D deficiency: 25(OH)D₃ <30 ng/mL *UFs confirmed in abdominal or transvaginal USG
Corachán et al. 2020 Spain; L 5	two doses (0.5 µg/kg/d and 1 µg/kg/d) of short-term (21 days) and long-term (60 days) 1,25(OH)₂D₃ treatment.	Animal model- human leiomyomas collected from patients were implanted in ovariectomized NOD-SCID mice.	* High-dose and long-term treatment with 1,25(OH)₂D₃ induced a significant ↓ in leiomyoma size * Cell proliferation significantly ↓ after long term and high dose treatment with 1,25(OH)₂D₃ (not decreased after short term treatment) * Collagen-I and plasminogen activator inhibitor 1 significantly ↓ by long-term high-dose 1,25(OH)₂D₃ treatment * Long-term, high-dose 1,25(OH)₂D₃ significantly ↓ TGF-β3 expression * Apoptosis significantly ↑ with short- and long-term high-dose 1,25(OH)₂D₃ treatment	

Corachán et al. 2021 Spain; L 5	1,25(OH)₂D₃ treatment	human leiomyomas (collected from patients)	* 1,25(OH) ₂ D ₃ treatment ↓ Wnt/β-catenin and TGFβ pathways in HULP cells in MED12-mutated leiomyomas and wild-type leiomyomas * 1,25(OH) ₂ D ₃ treatment ↓ proliferation and ECM formation in different molecular subtypes of uterine leiomyomas	
Davari Tanha et al. 2021 Iran; L 1	treatment with 1,25(OH)₂D₃ 50,000 IU for two months.	Study group- 110 patients treated with vit D Control group (No 110) - no treatment	* 1,25(OH) ₂ D ₃ in women with hypovitaminosis D ↓ the leiomyoma growth	*≥1 uterine fibroid (myoma size measured by ultrasound) and *25(OH)D ₃ level: 20-30 ng/ml.
Suneja et al. 2021 India; L 1	1,25(OH)₂D₃ in dose of 60,000 IU weekly for 8 weeks followed by 60,000 IU every 2 weeks for 8 weeks.	30 premenopausal women with uterine leiomyoma and concomitant hypovitaminosis D (<30 ng/ml)	* Significant negative correlation between the baseline 25(OH)D ₃ and leiomyoma volume * Significant ↓ of leiomyoma-related symptoms observed at 16 weeks of therapy * 1,25(OH) ₂ D ₃ therapy effective in stabilizing uterine and leiomyoma volume (insignificant ↓ the mean uterine and leiomyoma volume)	
Elkafas et al. 2021 Egypt/United States; L 5	1,25(OH)₂D₃ treatment in various concentrations (100 and 500 nM)	Animal model- the Eker rat model	* 1,25(OH) ₂ D ₃ treatment significantly ↓ the DNA damage levels in myometrial stem cells (MMSCs) * the levels of MRN complex (key DNA damage repair members) ↑ in MMSCs after 1,25(OH) ₂ D ₃ * 1,25(OH) ₂ D ₃ acts on DNA repair via the MRN complex/ATM axis, restores the DNA repair signaling network and enhances DNA damage response (DDR)	*1,25(OH) ₂ D ₃ treatment useful in reversing the action of EDCs
Wise et al. 2021 (5-year study) United States; L 1	Lycopene and other carotenoids, Vitamin A only from diet	African American women Age 23-35; No 1230	*Lycopene, carotenoids and vitamin A from diet had no effect on UFs	*Only presence -not estimated size, growth and location
Dairy products, Fruits and vegetables				
Wise et al. 2010 United States; L 2	food frequency questionnaire (FFQ) regarding dairy consumption (milk, cream, ice cream yogurt, cheese and butter).	5 871 participants (aged 21–69 years) from premenopausal US Black Women's Health Study	*High dairy intake inversely associated with uterine leiomyomata risk among black women	*UFs diagnosed by ultrasound or surgery
Wise et al. 2011 (1997-2009) United States; L 2	Fruit; vegetables (<u>Yellow-orange vegetables</u> : carrots, tomatoes or tomato juice, sweet potatoes; <u>cruciferous vegetables</u> : broccoli, collard and mustard greens, cabbage; <u>green leafy vegetables</u> :	22 583 African American premenopausal women (aged 21–69 years)	* Fruit and vegetable intake inversely associated with UFs (association stronger for fruit than for vegetables) * Inverse association between dietary vitamin A intake and the risk of UFs	*UFs diagnosed in 6627 cases: by ultrasonography (<i>n</i> = 4346) or surgery (<i>n</i> = 2281)

	spinach, green salad), carotenoids, folate, fiber, and vitamins A, C, and E		(predominantly preformed vitamin A from animal sources (liver, breakfast cereals and milk), not provitamin A from fruit and vegetable sources) * UF risk not associated with dietary intake of vitamins C and E, folate, fiber and carotenoids, including lycopene	
He et al. 2013 (2-year study) China; L 3	fruit and vegetable intake: low (never/<1 day/week), intermediate (1-2 days/week), high (≥3 days/week)	premenopausal and postmenopausal women No 283 (n=73 study group and n=210 controls)	* Vegetable and fruit intake significantly ↓ the risk of UFs in premenopausal women * Insignificant UFs risk reduction in postmenopausal women after vegetable and fruit intake	*UFs confirmed by USG or hysterectomy *Only presence (not estimated size, growth and location)
Wise et al. 2013 United States; L 2	Dairy items (milk, cream, ice cream yogurt, cheese and butter) consumption frequencies ranging from “never or <1 per month” to “≥6 per day” (self-administered questionnaires)	Black Women's Health Study 59 000 African-American women (aged 21–69 year)	* Inverse association between high dairy intake and UFs among African Americans	*Questionnaire- uterine fibroids, confirmed by ultrasound or surgery *Dairy intake is lower among black than white Americans
Shen et al. 2016 (2-year study) China; L 3	fruit and vegetables	1200 Chinese women age 23-35 (600 women with uterine fibroids in study group and 600 patients without fibroids in control group).	* Fresh fruits and cruciferous vegetables may reduce the incidence of UFs * Drinking green tea was unrelated to risk of UFs * Dairy consumption have preventative effects	*Study group- Uterine myomas confirmed by histopathologic examination *Control group - Uterine myomas excluded by ultrasounds
Zhou et al. 2020 (1-year study) China; L 2	grain cereals, legumes, vegetables, fruits (i.e. apple orange, peach, mandarin,grape, banana, kiwi fruit, melon watermelon), nuts, dairy products (liquid milk and yoghurt), meats, fish and eggs	urban premenopausal women (age 20-45) No 248	* UFs risk ↓ significantly with increased intake of vegetables and nuts * Meat/fish and fruits: no correlation with UFs * Carrot, kiwi fruit, and seaweed: inversely associated with the risk of UFs * Yoghurt: inverse association with the risk of UFs	*Uterine myomas confirmed by ultrasounds, pelvic exam or during surgery
Orta et al. 2020 (18- year study) United States; L 2	The frequency of dairy consumption: (≤4/week- >4/day) Yogurt consumption: (≤4/week- 2+/day)	No 81 590 premenopausal women (aged 25-42 at baseline)	* Dairy consumption not associated with UFs risk (except calcium from foods and yoghurt) * High consumption of yoghurt and calcium from foods: inverse association with UFs risk	*Uterine myomas confirmed by ultrasounds or hysterectomy
Plant-derived compounds and microelements				

Ozerkan et al. 2008 Turkey; L 5	supplementation with 200 or 400 mg of epigallocatechin gallate (EGCG)/kg of diet	Animal model- Japanese quail No 180	* EGCG supplementation ↓ the incidence, number and size of spontaneously occurring leiomyoma * Serum malondialdehyde and TNF-α concentrations ↓ after EGCG supplementation	
Malik et al. 2009 United States; L 5	Curcumin in various concentrations	Immortalized leiomyoma cells exposed to concentrations of curcumin ranging from 5 to 40 μM	* Curcumin showed an antiproliferative effect on leiomyoma cell lines * Curcumin regulated leiomyocyte apoptosis via stimulation caspase-3 and caspase-9 expression and inhibition extracellular signal-regulated kinase 1 (ERK 1), ERK 2, and nuclear factor kappa B (NF-κB) * Curcumin inhibited expression of fibronectin (ECM component) in leiomyoma cells	
Zhang et al. 2010 United States; L 5	green tea extract-epigallocatechin gallate (EGCG)	in-vitro study- leiomyoma cells culture treated with EGCG in various concentrations (0, 0.1, 1.0, 10, 50, 100 and 200μM)	* EGCG ↓ the proliferation (in a dose- and time-dependent manner) * EGCG induced apoptosis in cultured human leiomyoma cells (at ≥50μM significantly ↓ the expression of PCNA, CDK4 and BCL-2 as well as ↑ the expression of the proapoptotic BAX (dose-dependent manner)	
Zhang et al. 2010 United States; L 5	epigallocatechin gallate (EGCG) in various concentrations (0, 1.0, 50, 100 and 200μm) or 1.25mg EGCG/day	in-vitro study- the Eker rat tumor-derived uterine leiomyoma cells treated with various concentrations of EGCG Animal model- Female athymic nude Harlan Sprague Dawley mice: control group (n = 10) and experimental group (n = 10) fed with 1.25mg EGCG /mouse/day	* EGCG significantly inhibited cell proliferation in UFs (at ≥50μM EGCG significantly ↓ PCNA and Cdk4 protein levels) * EGCG treatment with ≥ 50 μM significantly ↑ cell apoptosis in UFs in vitro and in vivo (determined by TUNEL technique) * EGCG treatment dramatically ↓ volume and weight of tumors at 4 and 8 weeks post-treatment.	
Tuzcu et al. 2010 Japan; L 5	diet containing 0.048 mg selenium (Se) /kg or the diet supplemented with 0.2 mg or 0.4 mg of Se /kg of diet.	Animal model- Japanese quail No 180	* Dietary supplementation with selenium ↓ the size of spontaneously occurring leiomyoma of the oviduct with no effects on number of tumors	
Tsuiji et al. 2011 Japan; L 5	Curcumin	Eker rat-derived uterine leiomyoma cell lines (ELT-3 cells)	*Curcumin: inhibitory effects on UF cell proliferation through activation of peroxisome proliferator-activated receptor-gamma (PPARγ)	
Roshdy et al. 2013 (2010-2011) Egypt; L 1	green tea extract (epigallocatechin gallate [EGCG]) – 800 mg/day (2 capsules) vs placebo	39 reproductive-age women (age 18–50 years) placebo group (n = 11),	* Green tea extract intake significantly ↓ UF volume * EGCG significantly ↓ fibroid-specific symptoms	*UF volume assessed by ultrasonography

		study group (n = 22)	* EGCG significantly improved health-related quality of life (HRQL) * No adverse effects of treatment with EGCG	
Zhang et al. 2014 United States; L 5	0 or 100 µM of EGCG	in-vitro study - wild-type human leiomyoma (WT-HuLM)	*Green tea extract inhibited proliferation of human leiomyoma cells (mediated via catechol-O-methyltransferase)	
Ahmed et al. 2016 United States; L 5	prodrug of EGCG and prodrugs of EGCG analogs (pro-EGCG analogs)	in-vitro study-the human leiomyoma cell line (HuLM)	*Pro-EGCG analogs in comparison with Pro-EGCG have enhanced antiproliferative, anti-angiogenic (inhibited expression of vascular endothelial growth factor receptor 2- VEGF-R and vascular endothelial growth factor C- VEGF-C), and antifibrotic properties in HuLM	*Prodrug of EGCG (Pro-EGCG) and prodrugs of EGCG analogs (pro-EGCG analogs) show increased stability
Yu et al. 2019 China; L 5	Combination of herbs (<i>Rhizoma Curcumae</i> and <i>Rhizoma Sparganii</i>) (6.67 g/kg)	Animal model- Sprague Dawley rats No 30 randomly divided into 3 groups: control, UL and UL and CRSR therapy	* UFs in rats significantly shrunk after CRSR therapy * CRSR regulated crucial signaling pathways in UFs formation (as PPAR, MAPK, TGF-beta/Smad, and Notch signaling pathways) * CRSR regulated the signaling pathways related to metabolism of cofactors and vitamins, nucleotide and amino acids metabolism * CSCR directly suppressed ECM metabolism * Serum P and E₂ levels significantly ↓ after CRSR	
Porcaro et al. 2020 Italy; L 1	Treatment with two tablets of 150 mg EGCG + 25 µg vitamin D + 5 mg vitamin B6 daily, for 4 months	30 symptomatic women with myomas (aged 28- 46 years) divided in two groups: Study group (n=15)- treated with EGCG and Vit D tablets Control group (n=15)- received no treatment.	* Total myoma volume significantly ↓ after combination of EGCG, vit D and vit B6 treatment * Total myoma volume significantly ↑ in the control group * Improvement in quality of life (QoL) along with reduction of myoma-related symptoms observed in women treated with EGCG, vit D and vit B6	
Greco et al. 2020 Italy; L 5	quercetin and indole-3-carbinol (I3C)	in-vitro study-leiomyoma cells treated with quercetin or indole-3-carbinol at different concentrations (10 µg/ml; 50 µg/ml; 100 µg/ml; and 250 µg/ml) for 48 h	* Quercetin and I3C have anti-fibrotic properties due to the influence on mRNA and protein expressions of ECM (↓collagen 1A1 and fibronectin) * Quercetin and I3C treatment significantly ↓ migration of leiomyoma cells * Leiomyoma cell proliferation not affected by quercetin and I3C	

Grandi et al. 2021 Italy; L 1	tablets containing EGCG 150 mg, Vitamin B6 5 mg and Vit D 25 µg - 2 tablets per day for 3 months (total dose: EGCG 300 mg, Vitamin B6 10 mg and VD 50mg/day)	16 premenopausal women (age 43-52 years)	* Treatment with EGCG and Vitamin B6 and Vitamin D induced significant ↓ in UF size and menstrual flow length in women in late reproductive life * No significant changes observed in health-related QoL (SF-36 questionnaire) and quality of sexual life (FSFI questionnaire)	*UFs diagnosed by TVS (diameter 3-10 cm).
Biro et al. 2021 Germany; L 1	3 capsules daily of green tea extract (GTE) containing: EGCG 390 mg, Vitamin C 60 mg, Piperine 15 mg and Caffeine 3 mg	25 Caucasian race participants (age 33-49 years)	*No significant changes in myoma size after GTE * Significant improvement in physical cumulative score; no effect on mental QoL score after GTE * No significant improvement in global QoL score * No significant changes in symptoms after GTE * No relevant adverse side effects after GTE	*Quality of life (QoL) assessed by SF-12 questionnaire *Size of the myomas evaluated by TVS
Miriello et al. 2021 Italy; L 3	Treatment with tablets containing 150 mg EGCG + 25 µg vitamin D + 5 mg vitamin B6 (two tablets daily for 4 months)	95 women of reproductive age with ≥ 1 myoma Two groups: Study (No 41)- treated with EGCG + vit D + vit B6 for 4 months; Control (No 54) received no treatment.	*Combined supplementation of EGCG, vit D and vit B6 significantly ↓ myoma volume (by 37.9%) * Significant ↓ of peripheral myoma vascularization after treatment * Statistically significant improvement of myoma-related symptoms after treatment * Significant improvement in patients' quality of life and health noted after treatment * No side effects noted after treatment	*Volume and vascularization of myomas analyzed by USG *Quality of life and health evaluated by questionnaires: SF-36 and PGI-I
Feng et al. 2021 China; L 5	The herbs (Rhizoma Curcumae (RC): Rhizoma Sparganii (RS) = 1:1)	Animal model- Sprague Dawley (SD) rats No 72 groups: control group, RCRS-treated groups (66.7- 6,67 g/kg/day; 33.3- 3.33 g/kg/day; 16.7%- 1.67 g/kg/day), RC-treated group, RS-treated group.	* Treatment with RCRS effective in rats (prevention and treatment of UFs) * RCRS significantly ↓ expression of ECM component collagen I, fibroblast activation protein, and transforming growth factor beta (TGF-β) and ↓ expression levels of signal factors (AKT, ERK, and MEK) in cell proliferation-related pathway	

Table S1. Influence the dietary compounds on the uterine fibroids.