

Food List for Epigenetic Regulation

Foods for DNA Methylation Support

Key nutrients: Folate, B vitamins (B6, B12), choline, betaine, methionine

Proteins & Animal Products:

- Eggs (choline, B12)
- Salmon (B12, methionine)
- Liver (B vitamins, folate, choline)
- Chicken (B6, methionine)
- Sardines (B12, omega-3s)

Vegetables:

- Spinach (folate)
- Kale (folate)
- Asparagus (folate)
- Beets (betaine)
- Broccoli (folate)
- Brussels sprouts (folate)
- Carrots (B6)
- Mushrooms (B vitamins)

Fruits:

- Avocado (folate, B vitamins)
- Bananas (B6)
- Oranges (folate, vitamin C)
- Papaya (folate, digestive enzymes)
- Mango (B6, vitamin A)
- Kiwi (B vitamins, antioxidants)
- Pineapple (B6, bromelain for inflammation)

Legumes & Grains:

- Lentils (folate)
- Chickpeas (folate, B6)
- Quinoa (betaine)
- Brown rice (B vitamins)
- Whole Wheat

Nuts & Seeds:

- Pistachios (Best for methylation: high in B6, folate, and choline)
- Cashews (Rich in B6, magnesium, and folate)
- Almonds (B vitamins, folate, zinc, and magnesium support methylation enzymes)
- Brazil Nuts (Selenium and methionine help with methylation balance)
- Macadamia Nuts (Healthy fats support methylation enzymes)
- Flaxseeds (Folate, choline, and omega-3s support methylation pathways)
- Sunflower Seeds (High in B6, folate, and zinc, essential for methylation)
- Chia Seeds (Omega-3s and magnesium for methylation enzyme function)
- Pumpkin Seeds (Zinc and magnesium aid DNA methylation balance)

Dairy & Fermented Foods:

- Kefir (B vitamins, gut support)
- Yogurt (B vitamins)
- Herbs & Spices:
 - Turmeric (curcumin, supports methylation enzymes)
 - Garlic (sulfur compounds, methyl donor support)
 - Ginger (B6, anti-inflammatory)
 - Rosemary (carnosic acid, supports DNA stability)
 - Cilantro (detoxifying effects, supports methylation indirectly)
 - Thyme (B6, antioxidant properties)
 - Basil (polyphenols, DNA protective)
 - Oregano (rosmarinic acid, B vitamins)
 - Parsley (folate-rich, supports methylation)
 - Sage (polyphenols, cognitive support)
 - Cinnamon (B vitamins, stabilizes blood sugar for methylation)
 - Cloves (antioxidants, supports DNA health)
 - Fennel Seeds (methylation support via B vitamins)

Oils & Fats:

- Olive oil (healthy fats, indirect support)
- Ghee (contains butyrate, supports gut health and methylation)

Foods for Histone Modification Support

Key nutrients: Polyphenols, sulforaphane, curcumin, resveratrol, omega-3s

Proteins & Animal Products:

- Wild-caught salmon (omega-3s)
- Sardines (omega-3s)
- Chicken (lean protein, histone regulation)

Vegetables:

- Broccoli (sulforaphane)
- Kale (polyphenols)
- Brussels sprouts (sulforaphane)
- Cauliflower (sulforaphane)
- Spinach (polyphenols)
- Leeks (prebiotics, histone acetylation support)
- Garlic (histone deacetylation modulation)

Fruits:

- Wild blueberries (resveratrol, histone modification)
- Grapes (resveratrol, epigenetic modulator)
- Pomegranates (ellagic acid, histone acetylation)
- Cherries (anthocyanins, epigenetic benefits)
- Blackberries (quercetin, polyphenols)
- Cranberries (polyphenols, supports histone function)
- Plums (polyphenols, DNA health)
- Peaches (flavonoids, epigenetic balance)
- Nectarines (supports histone acetylation)
- Red apples (skin on) (quercetin, polyphenols)

Legumes & Grains:

- Brown rice (histone modification support)
- Lentils (B vitamins, polyphenols)
- Whole Wheat

Nuts & Seeds:

- Walnuts (Best for histone modification: rich in omega-3s and polyphenols)
- Pistachios (High in resveratrol and polyphenols, modulates histone acetylation)
- Pecans (Polyphenols and gamma-tocopherol for histone regulation)
- Macadamia Nuts (Healthy fats aid histone modifications)
- Hazelnuts (Flavonoids and vitamin E support histone balance)
- Sesame Seeds (Lignans and vitamin E regulate histone activity)
- Flaxseeds (Polyphenols and omega-3s modulate histone acetylation)
- Hemp Seeds (Omega-3s and polyphenols for histone acetylation)
- Pumpkin Seeds (Polyphenols and zinc contribute to histone regulation)

Dairy & Fermented Foods:

- Yogurt (histone acetylation support)
- Kefir (polyphenols from fermentation)

Herbs & Spices:

- Turmeric (curcumin, inhibits histone deacetylases)
- Green Tea (EGCG, histone acetylation regulation)
- Cinnamon (histone acetylation modulator)
- Nutmeg (polyphenols, brain health support)
- Cardamom (flavonoids, anti-inflammatory)
- Black Pepper (piperine, enhances bioavailability of polyphenols)
- Saffron (crocin, modulates histone deacetylation)
- Chamomile (apigenin, supports epigenetic modulation)
- Dandelion Root (polyphenols, gut-liver support)
- Peppermint (antioxidants, supports cell function)
- Lemon Balm (rosmarinic acid, DNA protection)
- Marjoram (polyphenols, anti-inflammatory)

Oils & Fats:

- Olive oil (polyphenols)
- Coconut oil (epigenetic regulatory effects)

Foods for Non-Coding RNA Support

Key nutrients: Omega-3s, polyphenols, prebiotics, probiotics, flavonoids

Proteins & Animal Products:

- Sardines (omega-3s)
- Wild-caught salmon (omega-3s)
- Chicken (protein, RNA-related regulation)
- Eggs (choline, epigenetic RNA influence)

Vegetables:

- Fermented vegetables (kimchi, sauerkraut – probiotics)
- Garlic (prebiotic, RNA modulation)
- Onions (prebiotic, RNA modulation)
- Leeks (prebiotics, gut-brain axis support)
- Spinach (polyphenols)

Fruits:

- Raspberries (ellagic acid, RNA expression)
- Strawberries (flavonoids, RNA regulation)
- Figs (polyphenols, prebiotic fiber)
- Persimmons (flavonoids, antioxidants)
- Pears (prebiotic fiber, RNA support)
- Lemons (quercetin, vitamin C for RNA stability)

- Limes (polyphenols, gut-microbiome influence)
- Tart cherries (polyphenols, non-coding RNA support)

Nuts and Seeds:

- Pistachios (High in prebiotic fiber and polyphenols that influence RNA expression)
- Walnuts (Best for RNA regulation: omega-3s, polyphenols, and fiber improve gut-brain-RNA function)
- Cashews (Antioxidants protect RNA stability)
- Almonds (Prebiotic fiber supports RNA regulation via gut microbiota)
- Hazelnuts (Polyphenols contribute to RNA modulation)
- Flaxseeds (Best for RNA regulation: omega-3s and prebiotic fiber)
- Chia Seeds (Rich in fiber, omega-3s, and polyphenols)
- Sesame Seeds (Polyphenols regulate RNA stability)
- Hemp Seeds (Omega-3s help regulate non-coding RNA pathways)
- Sunflower Seeds (Prebiotic fiber supports gut-RNA influence)

Best Food & Herb/Spice Combinations for DNA Methylation Support

These combinations enhance folate metabolism, methyl donor availability, and DNA methylation balance.

1. Spinach + Garlic + Olive Oil

- Spinach (high in folate)
- Garlic (sulfur compounds, supports methylation enzymes)
- Olive Oil (healthy fats for absorption)

► **Why?** The sulfur compounds in garlic help activate folate in spinach, and olive oil improves absorption of fat-soluble nutrients.

2. Eggs + Turmeric + Black Pepper

- Eggs (rich in choline for methylation)
- Turmeric (curcumin supports methylation balance)
- Black Pepper (piperine enhances curcumin absorption)

► **Why?** Choline in eggs supports DNA methylation, while curcumin modulates methylation-related genes. Black pepper increases curcumin absorption.

3. Beets + Ginger + Lemon

- Beets (rich in betaine, supports methylation)
- Ginger (B6, anti-inflammatory)
- Lemon (vitamin C enhances nutrient absorption)

► **Why?** Beets provide betaine, which supports methylation enzymes, while ginger and lemon enhance digestion and nutrient uptake.

4. Liver + Rosemary + Thyme

- Liver (one of the richest sources of folate, B vitamins, and choline)
- Rosemary (carnosic acid protects DNA)
- Thyme (B6, antioxidant support)

► **Why?** B vitamins in liver help regulate methylation pathways, while rosemary and thyme offer antioxidant protection.

5. Lentils + Cilantro + Cumin

- Lentils (high in folate)
- Cilantro (detoxifying effects, supports methylation balance)
- Cumin (enhances digestion and B vitamin absorption)

► **Why?** The combination supports methylation balance, while cilantro aids in detoxification and cumin improves digestion.

Best Food & Herb/Spice Combinations for Histone Modification Support

These combinations support histone acetylation and deacetylation balance using polyphenols, sulforaphane, and curcumin.

1. Broccoli + Turmeric + Black Pepper

- Broccoli (sulforaphane supports histone acetylation)
- Turmeric (curcumin inhibits histone deacetylation)
- Black Pepper (piperine enhances curcumin absorption)

► **Why?** Sulforaphane and curcumin work together to modulate histone enzymes, reducing inflammation and improving gene regulation.

2. Wild Blueberries + Cinnamon + Green Tea

- Wild Blueberries (rich in resveratrol, supports histone function)
- Cinnamon (polyphenols support histone acetylation)
- Green Tea (EGCG regulates histone modifications)

► **Why?** Blueberries, cinnamon, and green tea are powerful histone-modulating polyphenols, supporting gene expression balance.

3. Walnuts + Nutmeg + Cardamom

- Walnuts (rich in omega-3s, modulates histone acetylation)
- Nutmeg (brain-supportive polyphenols)
- Cardamom (flavonoids, anti-inflammatory)

► **Why?** Walnuts' omega-3s help regulate histone enzymes, while nutmeg and cardamom enhance cognitive function.

4. Pomegranates + Ginger + Lemon Balm

- Pomegranates (ellagic acid modulates histone acetylation)
- Ginger (anti-inflammatory)
- Lemon Balm (polyphenols for epigenetic support)

► **Why?** Pomegranates' ellagic acid helps histone acetylation, while ginger and lemon balm add neuroprotective effects.

5. Cauliflower + Garlic + Olive Oil

- Cauliflower (sulforaphane supports histone modifications)
- Garlic (sulfur compounds enhance histone acetylation)
- Olive Oil (polyphenols support gene regulation)

► **Why?** Sulforaphane and garlic's sulfur compounds work together to modulate histone enzymes, while olive oil enhances absorption.

Best Food & Herb/Spice Combinations for Non-Coding RNA Support

These combinations enhance non-coding RNA regulation, supporting gene expression through gut-brain interactions.

1. Fermented Vegetables + Ginger + Chili Peppers

- Kimchi/Sauerkraut (probiotics influence non-coding RNA)
- Ginger (modulates inflammation and RNA stability)
- Chili Peppers (capsaicin regulates non-coding RNA)

► **Why?** Fermented foods improve gut microbiome function, which is crucial for non-coding RNA regulation, while ginger and chili peppers enhance gut-brain communication.

2. Sardines + Garlic + Lemon

- Sardines (omega-3s regulate non-coding RNA)
- Garlic (prebiotic, gut-RNA axis)
- Lemon (polyphenols for RNA function)

► **Why?** Sardines' omega-3s support gene regulation, while garlic's prebiotics improve gut microbiome function, which influences non-coding RNA stability.

3. Kefir + Cinnamon + Cloves

- Kefir (probiotics modulate RNA expression)
- Cinnamon (regulates RNA function)
- Cloves (antioxidants protect RNA stability)

► **Why?** Kefir supports gut microbiota, which affects RNA regulation, while cinnamon and cloves enhance RNA protection.

4. Walnuts + Green Tea + Licorice Root

- Walnuts (omega-3s regulate RNA pathways)
- Green Tea (polyphenols regulate RNA expression)
- Licorice Root (supports gut-brain-RNA influence)

► **Why?** Walnuts and green tea enhance RNA modulation, while licorice root supports gut-brain signaling.

5. Tart Cherries + Hibiscus + Holy Basil (Tulsi)

- Tart Cherries (polyphenols regulate RNA stability)
- Hibiscus (flavonoids influence non-coding RNA)
- Holy Basil (Tulsi) (anti-inflammatory, RNA modulation)

► **Why?** Cherries and hibiscus polyphenols stabilize non-coding RNA, while tulsi adds stress-protective benefits.

Key Takeaways:

- ✓ DNA Methylation Support: Focus on folate-rich foods + sulfur compounds (garlic, onions, eggs) + turmeric & rosemary.
- ✓ Histone Modification Support: Use sulforaphane-rich veggies + curcumin + resveratrol foods (berries, pomegranates, green tea).
- ✓ Non-Coding RNA Support: Combine fermented foods + omega-3s (sardines, walnuts) + polyphenol-rich herbs (green tea, hibiscus, tulsi).