



## Treatment Suggestions for Anon Reader

This report is for Krovinova@seznam.cz using this sample BiomeSight:2022-10-25 Self . It uses their reported medical conditions, microbiome sample, US National Library of Medicine, and a fuzzy logic expert system to compute recommendations balancing study reliability and contraindications. These suggestions should always be reviewed by a medical professional before starting.

NOTA BENE: This is working solely from published studies. Other suggestions algorithms are available on Microbiome Prescription. The URL above may be sent to your MD if you wish to share it.

The reported condition(s) are

This person has a significant amount of bacteria known to form biofilms

Substances with a are reported to reduce biofilms. See for studies.

### 1. Depression - Depressive Disorder

1. **Omega-3 Fatty Acids:** Some studies suggest that omega-3 supplements, particularly those rich in EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid), might have modest benefits as adjuncts to traditional treatments for depression. Omega-3s are essential for brain health, and they may have some mood-stabilizing properties.
2. **Vitamin D:** Low levels of vitamin D have been associated with depression. While the exact relationship is complex and not fully understood, maintaining adequate vitamin D levels through supplements or exposure to sunlight may support overall mental health.
3. **B Vitamins:** Some B vitamins, such as B6, B9 (folate), and B12, are involved in neurotransmitter synthesis and may have a role in mood regulation. Folate deficiency, in particular, has been linked to depressive symptoms.
4. **Probiotics:** The gut-brain connection has led to studies exploring the potential impact of probiotics on mental health. Research suggests that gut health may influence mood, and some studies propose that certain probiotics might have a modest effect on reducing depressive symptoms. However, more research is needed to determine specific strains, dosages, and their impact on depression.

## Significant Bacteria Shifts

Based on the existing literature on the US National Library of Medicine and this microbiome sample, we have the following matches for bacteria shifts. There is a growing body of literature finding that the effectiveness of interventions depends on the existing microbiome. We filter by documented interventions that helps some with this condition and suggestions based on this person's specific microbiome to produce this "double validated" list.

Bacteroidaceae - family : Low	<sup>5 16</sup>	Lactobacillus - genus : Low	<sup>5 8 14 15 17 18 19 21 23</sup>
Bacteroides - genus : Low	<sup>13 16 20 22</sup>	Parabacteroides - genus : Low	<sup>11 20</sup>
Bifidobacterium longum - species : Low	<sup>7 10</sup>	Porphyromonas - genus : High	<sup>1</sup>
Collinsella - genus : Low	<sup>9</sup>	Prevotella - genus : High	<sup>3 4 24</sup>
Collinsella aerofaciens - species : Low	<sup>9</sup>	Sphingobacterium - genus : Low	<sup>13</sup>
Escherichia - genus : Low	<sup>2 5 12</sup>	Streptococcus - genus : Low	<sup>6</sup>

## Cross Validated Suggestions

The following improves the bacteria identified above and also is reported in the literature of helping some people with this condition. Each is link to the source study.

5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} <sup>64</sup>  
 3,3',4',5,7-pentahydroxyflavone {Quercetin} <sup>41</sup>  
 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} <sup>31</sup>  
 a-Amino-3-indolepropionic acid {Tryptophan} <sup>72</sup>  
*Agaricus bisporus* {White button mushrooms} <sup>31</sup>  
*Akkermansia muciniphila* {Pendulum Probiotic} <sup>43 62 66 74 81 92</sup>  
 alpha-linolenic acid {Omega-3} <sup>34 35 41 48</sup>  
 arabinogalactan {arabinogalactan} <sup>86</sup>  
*Bifidobacterium breve* {B. breve} <sup>46 89</sup>  
*bifidobacterium infantis* {B. infantis} <sup>78</sup>  
 Biotin {Vitamin B7} <sup>76</sup>  
 blueberry <sup>41</sup>  
 Caffeine <sup>41</sup>  
*Camellia sinensis* {oolong tea} <sup>48</sup>  
*Citrus limon* {Lemon} <sup>47</sup>  
 Coffee <sup>41</sup>  
*coptis chinensis* {Chinese goldthread } <sup>49</sup>  
*Crocus sativus* {Saffron} <sup>44 48</sup>  
*Cuminum cyminum* {Cumin} <sup>48</sup>  
 dietary fiber <sup>41</sup>  
 eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} <sup>41 48</sup>  
 Epicatechin {Green tea polyphenol} <sup>41</sup>  
 folate {Vitamin B9} <sup>33 34</sup>  
 fruit <sup>32 40</sup>  
*Glycine max* x *Aspergillus oryzae* {Miso} <sup>41</sup>  
 green tea <sup>41</sup>  
*Hericium erinaceus* {Lion's Mane Mushroom } <sup>68</sup>  
*Heyndrickxia coagulans* {B. coagulans} <sup>25 26</sup>  
*Hypericum perforatum* {St. John's Wort} <sup>41 48</sup>  
*Ipomoea batata* {Purple sweet potatoes} <sup>31</sup>  
 kefir <sup>90</sup>  
 Kimchi <sup>31</sup>  
*Lacticaseibacillus casei* {L. casei} <sup>77</sup>  
*Lacticaseibacillus rhamnosus* {l. rhamnosus} <sup>54 63 84 87 93</sup>  
*lactobacillus acidophilus* {L. acidophilus} <sup>49 50 51</sup>  
*lactobacillus helveticus* {L. helveticus} <sup>49 67 82</sup>  
*lactobacillus helveticus,lactobacillus rhamnosus* <sup>80 84</sup>  
*Lactobacillus plantarum* {L. plantarum} <sup>41 49 53 55</sup>

Lactococcus lactis {*Streptococcus lactis*} <sup>44</sup>  
*Lentinula edodes* {Shiitake Mushroom} <sup>31</sup>  
*Levlactobacillus brevis* {L.brevis} <sup>42</sup>  
*Limosilactobacillus fermentum* {L. fermentum} <sup>88</sup>  
 long-term, moderate-intensity exercise  
{exercise} <sup>65 71</sup>  
 low carbohydrate diet <sup>41</sup>  
 low-fat diets <sup>40</sup>  
*Lycium barbarum* x *Lycium chinense*, {Goji Fruit, Juice} <sup>48</sup>  
*Malus domestica* {apple} <sup>70</sup>  
 Mixture of Vitamin B? {B Vitamins} <sup>27</sup>  
*Musa acuminata* {Banana} <sup>31</sup>  
*Nigella sativa* {black cumin} <sup>56</sup>  
 nuts <sup>40 41</sup>  
 oligosaccharides {oligosaccharides} <sup>80</sup>  
*Phaseolus vulgaris* {Boston bean} <sup>40</sup>  
 Pisces {Fish} <sup>32 41</sup>  
 polyphenols <sup>41</sup>  
 Pulses, Beans <sup>40</sup>  
*Pyroguaiac acid* {Guaiacol} <sup>70</sup>  
 resveratrol-pterostilbene {grapes, blueberries} <sup>41</sup>  
 resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} <sup>41</sup>  
*Rhodiola rosea* {Rosavin} <sup>48</sup>  
*Rubus* {Raspberries} <sup>41 52</sup>  
 SAM-e <sup>41</sup>  
 Selenomethionine {Selenium supplement} <sup>85</sup>  
*Solanum tuberosum* {Potatoes} <sup>73</sup>  
 soy <sup>40 41</sup>  
 $\beta$ -glucan {Beta-Glucan} <sup>57 58 59 60</sup>  
 tea <sup>91</sup>  
 Traditional Mediterranean diet {Mediterranean diet} <sup>40</sup>  
*Vaccinium* {Cranberry} <sup>41</sup>  
 vegetable <sup>32 40</sup>  
 vegetarians <sup>40</sup>  
 vitamin d <sup>27 28 29 30 41 69</sup>  
*Whole Cow milk* {Whole Milk} <sup>31</sup>  
 whole-grain diet <sup>40</sup>  
 yogurt <sup>41</sup>

## Alternative Names

Depending on where you are located, some names may be unfamiliar. Some of the items listed may not be identical but are deemed to be reasonable approximations.

<b>5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine}</b>	Found in goldenseal, Chinese goldthread, barberry, tree turmeric, Oregon grape
<b>3,3',4',5,7-pentahydroxyflavone {Quercetin}</b>	quercetin aglycone,bioflavonoid,a type of flavonol
<b>3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin}</b>	Cirantin, Ciratin,Hesperidina
<b>a-Amino-3-indolepropionic acid {Tryptophan}</b>	Found in Chicken and Turkey, sardines and Lobsters
<b>Agaricus bisporus {White button mushrooms}</b>	Common mushroom,White mushroom,Button mushroom,Cultivated mushroom,Table mushroom,Champignon,Champignon de Paris
<b>alpha-linolenic acid {Omega-3}</b>	ALA. Plant based, Flaxseed, otherwise see Fish oil NOT a-Lipoic acid (also ALA)
<b>arabinogalactan {arabinogalactan}</b>	Galactoarabinan, Galactoarabinin, AG, Ara-6, source Larch Trees and Leeks
<b>Biotin {Vitamin B7}</b>	Vitamin H
<b>Camellia sinensis {oolong tea}</b>	Blue Tea, Qingcha, Wulong
<b>Citrus limon {Lemon}</b>	Citron, Limón, Zitrone, Limão
<b>coptis chinensis {Chinese goldthread }</b>	Coptide chinois, Golden thread, Yellowroot, Cankerroot, Mouth root, Huang Lian
<b>Crocus sativus {Saffron}</b>	Zafran, Kesar, Azafrán, Safran, Zafferano
<b>Cuminum cyminum {Cumin}</b>	Jeera, Cumino, Kümmel, Comino, Kumin, Kamun, Jira, Jintan
<b>eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil}</b>	Typically from salmon, mackerel, and sardines
<b>Epicatechin {Green tea polyphenol}</b>	Epigallocatechin-3-gallate (EGCG), (-)-Epicatechin, Found in Camellia sinensis (tea plant), Cecropia hololeuca, Apples, Cocoa
<b>folate {Vitamin B9}</b>	folic acid when referring to its synthetic form, folacin, pteroyl-L-glutamic acid, Wills factor
<b>fruit</b>	Fruits(Raw)
<b>Glycine max x Aspergillus oryzae {Miso}</b>	Japanese fermented soybean paste made with Aspergillus oryzae
<b>Hericium erinaceus {Lion's Mane Mushroom }</b>	Yamabushitake (Japanese), Bearded Tooth Fungus, Monkey's Head Mushroom, Hedgehog Mushroom, Old Man's Beard, Bearded Hedgehog
<b>Heyndrickxia coagulans {B. coagulans}</b>	Was Bacillus coagulans, AKA Weizmannia faecalis, lactobacillus sporogenes
<b>Hypericum perforatum {St. John's Wort}</b>	Goatweed, Klamath weed, Tipton's weed, Rosin rose, Hypericum, Millepertuis, Johanniskraut
<b>Ipomoea batata {Purple sweet potatoes}</b>	Okinawan sweet potato, Murasaki sweet potato: Often confused with purple yams [different]
<b>Lacticaseibacillus casei {L. casei}</b>	Streptobacterium casei, Lactobacillus casei
<b>Lacticaseibacillus rhamnosus {L. rhamnosus}</b>	lactobacillus rhamnosus, Lactobacillus casei subsp. rhamnosus

<b><i>lactobacillus acidophilus {L. acidophilus}</i></b>	Bacillus acidophilus
<b><i>lactobacillus helveticus,lactobacillus rhamnosus</i></b>	<i>L helveticus,L rhamnosus</i> (probiotics)
<b><i>Lactobacillus plantarum {L. plantarum}</i></b>	<i>lactobacillus plantarum, Lactobacillus arabinosus</i>
<b><i>Lentinula edodes {Shiitake Mushroom}</i></b>	Black mushroom, Chinese black mushroom, Sawtooth oak mushroom, Golden oak mushroom, Oakwood mushroom
<b><i>Levilactobacillus brevis {L.brevis}</i></b>	old name <i>Lactobacillus brevis</i>
<b><i>Limosilactobacillus fermentum {L. fermentum}</i></b>	<i>Lactobacillus fermentum</i>
<b><i>long-term, moderate-intensity exercise {exercise}</i></b>	Shifts not seen with short-term, high-intensity exercise
<b><i>low carbohydrate diet</i></b>	low-sugar
<b><i>Lycium barbarum x Lycium chinense, {Goji Fruit, Juice}</i></b>	Wolfberry,Chinese wolfberry, Matrimony vine, Himalayan goji, Tibetan goji, Ningxia wolfberry, Chinese boxthorn, <i>Frukta lycii</i> ,Gougizi
<b><i>Malus domestica {apple}</i></b>	Apple skin
<b><i>Mixture of Vitamin B? {B Vitamins}</i></b>	Vitamin B1,thiamine hydrochloride,Vitamin B-12,vitamin b2,Riboflavin,vitamin B3,niacin,Vitamin B5,Vitamin B6,pyridoxine hydrochloride,vitamin B7, biotin,Vitamin B9,folic acid
<b><i>Musa acuminata {Banana}</i></b>	<i>Musa × paradisiaca</i> , plantains,Cavendish banana, Green banana resistant starch
<b><i>Nigella sativa {black cumin}</i></b>	black seed, black caraway, kalonji,fennel flower
<b><i>oligosaccharides {oligosaccharides}</i></b>	includes Fructo-oligosaccharides (FOS),Galacto-oligosaccharides (GOS),Mannan oligosaccharides (MOS),Human milk oligosaccharides (HMOs)
<b><i>Phaseolus vulgaris {Boston bean}</i></b>	Navy bean,Haricot bean,Pearl haricot bean,Boston bean,White pea bean,White Kidney Bean,Pinto Bean
<b><i>Pisces {Fish}</i></b>	includes Agnatha,Chondrichthyes ,Osteichthyes
<b><i>Pulses, Beans</i></b>	Black Beans,Broad Beans,dry beans, dry broad beans, dry peas, chickpeas, cow peas, pigeon peas, lentils, Bambara beans, vetches, lupins
<b><i>Pyroguaiac acid {Guaiacol}</i></b>	polyphenol, includes Eugenic acid. found in Coffee, smoked foods, Scotch Whiskey
<b><i>resveratrol-pterostilbene {grapes, blueberries}</i></b>	grape seed/polyphenols/red wine
<b><i>resveratrol-pterostilbene x Quercetin {quercetin x resveratrol}</i></b>	Mixture of the two
<b><i>Rhodiola rosea {Rosavin}</i></b>	Rhodiola,Golden root,Rose root,Arctic root,Hong Jing Tian (Chinese),Rosenroot
<b><i>Rubus {Raspberries}</i></b>	<i>Rubus occidentalis</i> (black raspberry), <i>Rubus leucodermis</i> (whitebark raspberry), <i>Rubus parvifolius</i> (Australian native raspberry), <i>Rubus phoenicolasius</i> (wine raspberry or wineberry), <i>Rubus strigosus</i> (America...
<b><i>SAM-e</i></b>	S-adenosylmethionine

<b>Selenomethionine {Selenium supplement}</b>	Sodium selenate, Methylselenocysteine, Selenocysteine. Found in Brazil Nuts, Tuna, Halibut and Sardines
<b>Solanum tuberosum {Potatoes} soy</b>	Spud,Tater,Earth apple Soymilk
<b>β-glucan {Beta-Glucan}</b>	Beta-D-glucose polysaccharide, found in Oats, Barley, Rye, Wheat, oyster mushroom, sea weed
<b>Traditional Mediterranean diet {Mediterranean diet}</b>	Mediterranean-style diet,Mediterranean eating pattern,Mediterranean dietary pattern
<b>Vaccinium {Cranberry} vegetarians</b>	May include Lingonberry lacto-ovo-vegetarian diet
<b>vitamin d</b>	cholecalciferol,Vitamin D3, activated 7-dehydrocholesterol
<b>whole-grain diet</b>	whole grain,bran

## Suggestions Impact On Each Bacteria Picked

Reviewing substances reported to help with this condition on the US National Library of Medicine, and which will correct the above bacteria shifts. the following are recommended. Some bacteria may lack literature because none of the studied substances for the condition(s) are known to modify the bacteria.

- Bacteroidaceae
  - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} <sup>64 147</sup>
  - 3,3',4',5,7-pentahydroxyflavone {Quercetin} <sup>41 64 204 207 435 486 1610 1611 1613 1616 1619 1860 1967 1969 2134</sup>
  - 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} <sup>31 41 631 746 2125</sup>
  - Agaricus bisporus {White button mushrooms} <sup>31 880 1409</sup>
  - alpha-linolenic acid {Omega-3} <sup>31 34 1410 2150</sup>
  - arabinogalactan {arabinogalactan} <sup>35 41 48 86 284 2150</sup>
  - blueberry <sup>41 86 389 478 744 2069</sup>
  - Caffeine <sup>41 547</sup>
  - Camellia sinensis {oolong tea} <sup>41 48 707 1054 1115 1116 1117 1195 1199</sup>
  - Citrus limon {Lemon} <sup>47 1860</sup>
  - Coffee <sup>41 47 547 1873</sup>
  - coptis chinensis {Chinese goldthread } <sup>41 49 435 707 1054 1115 1116 1117 1195 1199</sup>
  - dietary fiber <sup>41 49 122 966</sup>
  - eicosapentaenoic acid (EPA),docosahexaenoic acid (DHA) {Fish Oil} <sup>41 162 195 205 248 307 310 332 354 478 486 501 564 631 678 486 501 564 631 678 680 694 744 785 981 1047 1061 1173 1176 1183 1225 1406 1471 1472 1580 1585 2109 2227</sup>
  - Epicatechin {Green tea polyphenol} <sup>41 48 1115 1580</sup>
  - fruit <sup>32 41 122 1116 1117</sup>
  - Glycine max x Aspergillus oryzae {Miso} <sup>32 40 41 122 162 195 205 248 307 310 332 354 478 481 486 501 564 631 678 680 694 744 785 981 1047 1061 1173 1176 1183 1225 1406 1471 1472 1585</sup>
  - green tea <sup>41 1115</sup>
  - Hericium erinaceus {Lion's Mane Mushroom } <sup>41 68 864 1116 1117 1882 2075 2079</sup>
  - Ipomoea batata {Purple sweet potatoes} <sup>31 68 866 869 872 1673 1939</sup>
  - kefir <sup>90 481</sup>
  - Lacticaseibacillus casei {L. casei} <sup>77 90 125 801</sup>
  - Lacticaseibacillus rhamnosus {L. rhamnosus} <sup>54 77 289 1808 1810 1813</sup>
  - lactobacillus acidophilus {L. acidophilus} <sup>49 54 63 84 87 93 138 289 1751 1752 1753</sup>
  - lactobacillus helveticus {L. helveticus} <sup>49 50 51 138 571</sup>

- *lactobacillus helveticus,lactobacillus rhamnosus* 67 80 82 289 571
- *Lactobacillus plantarum {L. plantarum}* 41 80 84 177 289 571
- *lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic}* 41 49 53 55 75 132 177 182 420 1729 1732 1735 1736 1737
- *Lactococcus lactis {Streptococcus lactis}* 44 75 138 545 698 914 1213 1657 1660
- *Lentinula edodes {Shiitake Mushroom}* 31 1671
- *Limosilactobacillus fermentum {L. fermentum}* 31 88 522 1674
- *long-term, moderate-intensity exercise {exercise}* 65 616
- *low-fat diets* 40 65 71 616 1594 1599 1600 2130
- *Lycium barbarum x Lycium chinense, {Goji Fruit, Juice}* 48 1831
- *Malus domestica {apple}* 48 70 307 1955
- *Mixture of Vitamin B? {B Vitamins}* 27 70 181 354 478 564 744 1173 1176 1860
- *Musa acuminata {Banana}* 27 31 501 1415
- *nuts* 31 40 160 678 680 1585
- *oligosaccharides {oligosaccharides}* 41 80 160 193
- *Phaseolus vulgaris {Boston bean}* 40 80 228 331 345 390 483 505 546 598 1923 1962 2100 2101
- *polyphenols* 40 41 122 1031 1032
- *Pulses, Beans* 40 41 144 162 205 248 310 486 631 694 1054 1061
- *Pyroguaic acid {Guaiacol}* 40 70 156 160 483
- *resveratrol-pterostilbene {grapes, blueberries}* 41 70 122 2100
- *resveratrol-pterostilbene x Quercetin {quercetin x resveratrol}* 41 122 162 205 310
- *Solanum tuberosum {Potatoes}* 41 73 162 205 248 310 486 568 631
- *soy* 40 160
- *β-glucan {Beta-Glucan}* 41 57 160 518
- *tea* 57 58 59 60 91 518 547 1705 1711 1712 1718 1956 1971
- *Traditional Mediterranean diet {Mediterranean diet}* 40 91 239 707 1054 1115 1116 1117 1195 1199
- *Vaccinium {Cranberry}* 40 41 1206 1819 2048 2053
- *vegetarians* 40 124
- *vitamin d* 27 40 140 272
- *whole-grain diet* 27 28 29 30 40 41 69 140 232 479 528 2207 2267 2356
- *yogurt* 40 41 125 518 759 1277
- *Bacteroides*
- *5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine}* 41 64 132 138 147 346 1419 1657 1660
- *3,3',4',5,7-pentahydroxyflavone {Quercetin}* 41 64 204 207 435 486 710 1610 1611 1613 1614 1616 1619 1860 1967 1969 2134
- *3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin}* 31 41 631 746 2125
- *Agaricus bisporus {White button mushrooms}* 31 823 880 1409
- *Akkermansia muciniphila {Pendulum Probiotic}* 31 43 1110 1410
- *alpha-linolenic acid {Omega-3}* 34 62 66 74 81 92 1110 2150
- *arabinogalactan {arabinogalactan}* 35 41 48 86 284 2150
- *blueberry* 41 86 389 478 744 2069
- *Caffeine* 41 547
- *Camellia sinensis {oolong tea}* 41 48 707 1054 1115 1116 1117 1195 1199
- *Citrus limon {Lemon}* 47 48 1860 2236
- *Coffee* 41 547
- *coptis chinensis {Chinese goldthread }* 41 49 435 707 1054 1115 1116 1117 1195 1199
- *Crocus sativus {Saffron}* 44 49 965 966 1473
- *dietary fiber* 41 48 122 965

- eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 162 195 205 307 310 332 354 478 486 564 610 631 678 680 694 744 981 1047 1061 1173 1174 1176 1183 1225 1226 1406 1471 1472 1974 2024 2109 2216 2227 2376
- Epicatechin {Green tea polyphenol} 41 48 1115 2024
- fruit 32 41 122 1116 1117
- Glycine max x Aspergillus oryzae {Miso} 32 40 41 122 162 195 205 307 310 332 354 478 481 486 564 610 631 678 680 694 744 981 1047 1061 1173 1174 1176 1183 1225 1226 1406 1471 1472
- green tea 41 1115
- Hericium erinaceus {Lion's Mane Mushroom } 41 68 864 1116 1117 1882 2075 2079
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- Malus domestica {apple} 48 70 307 1955 2087
- Mixture of Vitamin B? {B Vitamins} 27 70 181 354 478 564 610 744 1173 1174 1176 1860
- Musa acuminata {Banana} 27 31 678 1415
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- β-glucan {Beta-Glucan} 41 57 160 518
- tea 57 58 59 60 91 518 547 1277 1705 1706 1711 1712 1718 1720 1722 1723 1956 1971 2372
- Traditional Mediterranean diet {Mediterranean diet} 40 91 189 707 1054 1115 1116 1117 1195 1199
- Vaccinium {Cranberry} 40 41 205 239 1206 1819 2048 2053
- vegetarians 40 41 124 2115
- vitamin d 27 40 140 272
- whole-grain diet 27 28 29 30 40 41 69 140 232 479 847 2207 2267 2356
- yogurt 40 41 125 518 610 759 1245 1277 2098
- Bifidobacterium longum
  - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 41 64 138 153 346 1419 1657 1660 2251
  - 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 64 188 2196

- 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} 31 41 486 631 746 1051 1851 1997
- α-Amino-3-indolepropionic acid {Tryptophan} 31 72 883 1052 1900
- Agaricus bisporus {White button mushrooms} 31 1409
- alpha-linolenic acid {Omega-3} 34 328
- arabinogalactan {arabinogalactan} 34 35 41 48 86 328 1830
- Bifidobacterium breve {B. breve} 46 86 115 131 380 389 391 399 523 727 1035 1182
- bifidobacterium infantis {B. infantis} 46 78 89 415 1035 1036
- blueberry 41 78 270 2173
- Caffeine 41 569 2049
- Camellia sinensis {oolong tea} 41 48 255 436 1053 1111 1112 1114 1117 1366 2126
- Citrus limon {Lemon} 47 773
- Coffee 41 47 1900
- dietary fiber 41 113 255 436 1053 1111 1112 1114 1117 2225
- eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 126 129 188 205 231 236 253 266 270 274 277 279 308 311 315 335 354 366 373 399 414 419 465 486 489 534 543 569 601 631 680 761 848 898 981 1047 1060 1148 1177 1178 1224 1227 1406 1407 1408 1470 1472 1846 1919 2109 2206 2219 2221 2229 2231 2285 2315
- Epicatechin {Green tea polyphenol} 41 48 205 475 848 1111
- folate {Vitamin B9} 33 41 1112 1114 1117 1455 2126
- fruit 32 34 113 1455
- green tea 32 40 41 113 126 129 188 231 236 253 266 270 274 277 279 311 315 335 354 366 465 486 489 534 543 569 631 680 761 848 898 981 1047 1060 1177 1178 1224 1227 1406 1407 1408 1485 2177
- Hericium erinaceus {Lion's Mane Mushroom } 41 68 255 436 864 1111 1112 1114 1117 1839 1857 2075 2076 2193
- Heyndrickxia coagulans {B. coagulans} 25 68 621 866 870
- Hypericum perforatum {St. John's Wort} 26 41 621 969
- Ipomoea batata {Purple sweet potatoes} 31 48 661 969
- kefir 90 962
- Kimchi 31 90 761 1233 1235
- Lacticaseibacillus casei {L. casei} 31 77 125 990 992
- Lacticaseibacillus rhamnosus {l. rhamnosus} 54 77 176 289 404 1805 1806 1811 1814
- lactobacillus acidophilus {L. acidophilus} 49 54 63 84 87 93 130 289 1751 1754
- lactobacillus helveticus {L. helveticus} 49 50 51 130 138 285 555 1429 1799 1800 1801 1802
- lactobacillus helveticus,lactobacillus rhamnosus 67 80 82 289 1429
- Lactobacillus plantarum {L. plantarum} 41 80 84 289 329 1429
- lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 8 41 49 53 55 75 329 438 597 629 666 747 770 1202 1727 1728 1729 1733 1734 1738 1739 1740 1741 1742 1743 1744 1770 1942 2147 2331
- Lactococcus lactis {Streptococcus lactis} 44 75 213 353 401 576 620 702 757 765 914 1213 1425 1426 1427 1428
- Lentinula edodes {Shiitake Mushroom} 31 1997
- Levilactobacillus brevis {L.brevis} 31 42 558 2169
- Limosilactobacillus fermentum {L. fermentum} 88 786
- Lycium barbarum x Lycium chinense, {Goji Fruit, Juice} 48 88 366 819 820 1776 1777 1778 1779 1782
- Malus domestica {apple} 48 70 231 543 1965 2087
- Mixture of Vitamin B? {B Vitamins} 27 70 236 266 277 354 534 761 773 1177 1178 2253
- Musa acuminata {Banana} 27 31 113 1417 1455
- nuts 31 40 192 680
- oligosaccharides {oligosaccharides} 40 41 80 192 726
- Phaseolus vulgaris {Boston bean} 40 80 228 235 245 273 323 331 342 343 344 345 375 385 390 391 422 430 431 469 478 529 540 546 641 648 797 806 829 1433 1434 1863 1919 1921 1923 1928 1952 2012 2083 2158 2175 2190 2225 2226 2306
- polyphenols 40 41 126 280 1033

- Pulses, Beans 40 41 129 144 188 253 315 486 631 848 1051 1060 1366 1893 2144 2327
- Pyroguaic acid {Guaiacol} 70 2059
- resveratrol-pterostilbene {grapes, blueberries} 41 70 126 2143
- resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 126 129 253 315 848 1958
- Rhodiola rosea {Rosavin} 41 48 129 188 253 315 486 631 848 930 1051
- Selenomethionine {Selenium supplement} 48 85 297 931 932
- Solanum tuberosum {Potatoes} 73 568
- soy 40 145
- β-glucan {Beta-Glucan} 40 41 57 145 250 280 298 301 306 309 386 429 432 573 850
- tea 57 58 59 60 91 573 1708 1709 1712 1713 1714 1718 1719 1721 1724 2174 2311
- Traditional Mediterranean diet {Mediterranean diet} 40 91 205 255 436 1053 1111 1112 1114 1117 1366
- vitamin d 27 40 239 485 775 776 1203 1205 1206 1819 2053
- Whole Cow milk {Whole Milk} 27 28 29 30 31 41 69 367 485 662 773 847 2322
- whole-grain diet 31 40 119 1104
- yogurt 8 40 41 151 166 230 238 287 374 559 606 618 677 895 1022 1243 1244 1278 1283 1284 1285 1286 1287 1288 1289 1462 1855 1910 1911 1913 2237
- *Collinsella*
  - Biotin {Vitamin B7} 41 76 125 130 138 176 213 285 340 353 367 376 384 401 402 404 441 536 550 555 576 620 701 711 1104 1424 1428
  - blueberry 41 724
  - Caffeine 41 607
  - Camellia sinensis {oolong tea} 41 48 1053 2236
  - Citrus limon {Lemon} 47 773
  - Coffee 41 607
  - dietary fiber 41 117 1053
  - eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 205 354 724 1047
  - folate {Vitamin B9} 33 48 205 355
  - fruit 32 34 117 355
  - Hericium erinaceus {Lion's Mane Mushroom } 32 40 68 117 354 724 865 1047
  - Lacticaseibacillus rhamnosus {l. rhamnosus} 54 314
  - lactobacillus acidophilus {L. acidophilus} 49 54 63 84 87 93 130 314 1749
  - lactobacillus helveticus,lactobacillus rhamnosus 50 51 80 130 314
  - lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 75 84 213 314
  - long-term, moderate-intensity exercise {exercise} 65 1597
  - Lycium barbarum x Lycium chinense, {Goji Fruit, Juice} 48 65 71 1597 1599 2132 2317
  - Malus domestica {apple} 70 354
  - Mixture of Vitamin B? {B Vitamins} 27 340
  - oligosaccharides {oligosaccharides} 27 80 295 355 773
  - polyphenols 41 80 117 649 1430 2317
  - Pulses, Beans 40 144
  - resveratrol-pterostilbene {grapes, blueberries} 41 117
  - resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 117
  - β-glucan {Beta-Glucan} 57 1724
  - tea 58 59 60 91 607 1724
  - vitamin d 27 91 140 1053
  - whole-grain diet 27 28 29 30 40 41 69 140 773
  - yogurt 40 41 130 1284
- *Collinsella aerofaciens*

- Caffeine 41 213 1053 1632
- Camellia sinensis {oolong tea} 48 2236
- Citrus limon {Lemon} 47 773
- Coffee 41 1053
- dietary fiber 41 1047
- folate {Vitamin B9} 33 355
- fruit 32 34 355 1047
- Lacticaseibacillus rhamnosus {l. rhamnosus} 40 54 314 1047
- lactobacillus acidophilus {L. acidophilus} 49 63 84 87 93 130 314
- lactobacillus helveticus,lactobacillus rhamnosus 50 51 80 130 314
- Mixture of Vitamin B? {B Vitamins} 27 84 314 355
- oligosaccharides {oligosaccharides} 27 80 295 773
- β-glucan {Beta-Glucan} 57 80 649 1430 1724
- tea 58 59 60 91 1053 1724
- vitamin d 27 773
- whole-grain diet 28 29 30 40 41 69 773
- yogurt 40 41 130 1284
- Escherichia
  - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 64 204
  - 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 64 1490 2194
  - Caffeine 41 1053
  - Citrus limon {Lemon} 47 470
  - Coffee 41 1053
  - dietary fiber 41 142
  - fruit 32 41 142 244 361
  - green tea 32 40 41 142 244 361 2077
  - Hericium erinaceus {Lion's Mane Mushroom } 68 865
  - Lacticaseibacillus casei {L. casei} 77 1815
  - lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 75 97
  - Lactococcus lactis {Streptococcus lactis} 44 75 581 1214 1428
  - Limosilactobacillus fermentum {L. fermentum} 88 1780
  - oligosaccharides {oligosaccharides} 80 134
  - Phaseolus vulgaris {Boston bean} 40 80 273 280
  - polyphenols 41 244
  - resveratrol-pterostilbene {grapes, blueberries} 41 244 361 1490
  - resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 244
  - SAM-e 41 541 1490
  - β-glucan {Beta-Glucan} 57 1717
  - tea 58 59 60 91 1053 1717
  - vegetable 32 1959
  - vegetarians 40 261 1959
  - vitamin d 27 516
  - yogurt 27 28 29 30 41 69 516 1428 2323
- Lactobacillaceae
  - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 64 153
  - 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 64 188 1609 1610 1612 1615 1616 1617 1618 1932 2035 2189 2195
  - 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} 31 41 486 631 746 853 1051 1489 1851 1997
  - α-Amino-3-indolepropionic acid {Tryptophan} 31 72 883 1052 1372

- Akkermansia muciniphila {Pendulum Probiotic} 43 72 1109 1412 1413 1414 2122
- alpha-linolenic acid {Omega-3} 34 62 66 74 81 92 328 1109
- arabinogalactan {arabinogalactan} 34 35 41 48 86 284 328 1154 2124
- blueberry 41 86 270 299 380 744 1180 1181 1182
- Caffeine 41 440 569
- Camellia sinensis {oolong tea} 41 48 607 707 1053 1055 1112 1113 1116 1194 1196 1197 1198
- Citrus limon {Lemon} 47 383
- Coffee 41 47 440 912 1223
- dietary fiber 41 122 607 707 1053 1055 1112 1113 1116 1194 1196 1197 1198
- eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 126 142 188 195 196 205 231 236 244 253 266 270 279 308 311 315 373 465 486 487 501 569 612 631 651 664 679 680 694 744 761 792 826 842 848 853 982 1051 1060 1061 1148 1173 1174 1175 1177 1178 1179 1224 1225 1228 1407 1470 1472 1489 1557 1558 1859
- Epicatechin {Green tea polyphenol} 41 48 205 848 1112 1579 1581 2024
- folate {Vitamin B9} 33 41 1113 1116 1454 1949
- fruit 32 33 34 122 1454 1455 1456 2088
- green tea 32 40 41 122 126 142 188 195 196 231 236 244 253 266 270 279 311 315 465 486 487 501 569 612 631 651 664 679 680 694 744 761 792 826 842 848 853 982 1051 1060 1061 1112 1173 1174 1175 1177 1178 1179 1224 1225 1228 1407 1470 1472 1489 1557 1558 1859
- Hericium erinaceus {Lion's Mane Mushroom } 41 68 864 1113 1116 2075 2076
- Heyndrickxia coagulans {B. coagulans} 25 68 603 866 867 869 870
- Ipomoea batata {Purple sweet potatoes} 25 26 31 603 661 1623
- kefir 31 90 611 1549 1550 1551
- Kimchi 31 90 761 1232 1235 1236 1237 2251
- Lacticaseibacillus casei {L. casei} 31 77 125 990 991 1132
- Lacticaseibacillus rhamnosus {l. rhamnosus} 54 77 176 271 289 404 579 1804 1805 1807 1809 1811 1814 1816
- lactobacillus acidophilus {L. acidophilus} 49 54 63 84 87 93 130 289 911 1747 1748 1749 1750 2241
- lactobacillus helveticus {L. helveticus} 49 50 51 130 138 285 555 571 1797 1798 1800 1801 1802 1803
- lactobacillus helveticus,lactobacillus rhamnosus 49 67 80 82 289 571 1429
- Lactobacillus plantarum {L. plantarum} 41 80 84 133 289 571 911 1429
- lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 41 49 53 55 75 133 138 182 296 329 417 438 506 531 629 666 770 1202 1727 1729 1730 1731 1732 1735 1739 1741 1743 1770 1942 1953 2082 2200 2235 2331 2337 2344
- Lentinula edodes {Shiitake Mushroom} 31 75 213 353 401 555 567 581 757 765 914 1425 1427 1655 1656 1657 1658 1660 1997
- Levilactobacillus brevis {L.brevis} 31 42 843 2169
- Limosilactobacillus fermentum {L. fermentum} 88 434
- long-term, moderate-intensity exercise {exercise} 65 71 88 525 786 819 1775 1776 1778 1781 1782
- Lycium barbarum x Lycium chinense, {Goji Fruit, Juice} 48 65 71 1557 1592 1593 1595 1601 1816 2106
- Malus domestica {apple} 48 70 231 1558 1831 1943 2309 2318
- Mixture of Vitamin B? {B Vitamins} 27 70 236 266 383 744 761 792 1173 1174 1175 1177 1178 1179 2131
- Musa acuminata {Banana} 27 31 501 636 1418 1454 1455 1456 1516 1517
- Nigella sativa {black cumin} 31 56 679 680 1149
- nuts 40
- oligosaccharides {oligosaccharides} 40 41 80 134 247 725 726
- Phaseolus vulgaris {Boston bean} 40 80 228 235 281 290 293 331 372 430 454 468 494 540 593 598 649 670 797 1430 1433 1434 1923 1925 1928 1963 1968 2083 2226
- Pisces {Fish} 32 1576
- polyphenols 41 122 1576

- Pulses, Beans 40 41 126 144 188 244 253 315 486 631 651 664 694 842 848 853 1051 1055 1060 1061 1489 1889 1893 1894 2127 2144 2164
- Pyroguaiac acid {Guaiacol} 70 968
- resveratrol-pterostilbene {grapes, blueberries} 41 70 122 2059 2131 2143 2261
- resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 122 126 244 253 315 651 842 848 2027
- Rhodiola rosea {Rosavin} 41 48 126 188 244 253 315 486 631 651 762 842 848 853 1051 1489
- Rubus {Raspberries} 41 48 196 931 932 1025 1026
- Selenomethionine {Selenium supplement} 41 52 85 196 297 826
- soy 40 85 174 1584 1888
- β-glucan {Beta-Glucan} 40 41 57 174 250 298 309 386 432 478 556 850 1348 1349 1350
- tea 57 58 59 60 91 478 573 607 1707 1710 1712 1713 1716 1717 1721 2311
- Traditional Mediterranean diet {Mediterranean diet} 40 91 205 707 1053 1055 1112 1113 1116 1194 1196 1197 1198
- vegetarians 40 549 775 776 1203 1204 1916 2140
- vitamin d 27 383
- Whole Cow milk {Whole Milk} 27 28 29 30 31 41 69 383 596 811 848 2321 2323
- whole-grain diet 31 40 151 1102 1103 1104
- yogurt 40 41 125 166 230 232 238 258 294 379 478 509 559 618 1244 1246 1247 1275 1278 1279 1282 1285 1286 1287 1290 1460 1461 1462 1562 1854 1912 1913 1915 2095 2245

- Lactobacillus

- 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 41 64 130 138 153 176 213 271 285 318 353 384 401 402 404 555 567 701 711 757 765 811 818 1102 1103 1104 1419 1420 1421 1422 1423 1424 1425 1427 1624 1625 1626 1627 1628 1631 1655 1656 1657 1658 1660 2251
- 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 64 188 1609 1615 1616 1617 1618 2035 2189 2195
- 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} 31 41 486 631 746 853 1051 1489 1851 1997
- α-Amino-3-indolepropionic acid {Tryptophan} 31 72 883 1052 1372
- Akkermansia muciniphila {Pendulum Probiotic} 43 72 1109 1412 1413 1414 2122
- alpha-linolenic acid {Omega-3} 34 62 66 74 81 92 328 1109
- arabinogalactan {arabinogalactan} 34 35 41 48 86 284 328 1154 2124
- Biotin {Vitamin B7} 76 86 299 380 744 1180 1181 1182 2030
- blueberry 41 270
- Caffeine 41 440 569
- Camellia sinensis {oolong tea} 41 48 607 1053 1055 1112 1113 1116 1194 1196 1197 1198
- Citrus limon {Lemon} 47 383
- Coffee 41 47 440 912 1223
- Crocus sativus {Saffron} 41 44 607 965 1053 1055 1112 1113 1116 1194 1196 1197 1198
- Cuminum cyminum {Cumin} 48 965 970
- dietary fiber 41 122
- eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 126 142 188 195 196 205 231 236 244 253 266 270 279 308 311 315 373 465 486 487 501 569 612 631 651 664 679 680 694 744 761 792 826 842 848 853 982 1051 1061 1148 1173 1174 1175 1177 1178 1179 1224 1225 1228 1407 1470 1472 1489 1557 1558 2054 2216 2221 2229 2285
- Epicatechin {Green tea polyphenol} 41 48 205 848 1112 1579 1581 2024
- folate {Vitamin B9} 33 41 1113 1116 1454 1949
- fruit 32 33 34 122 1454 1455 1456
- green tea 32 40 41 122 126 142 188 195 196 231 236 244 253 266 270 279 311 315 465 486 487 501 569 612 631 651 664 679 680 694 744 761 792 826 842 848 853 982 1051 1061 1112 1173 1174 1175 1177 1178 1179 1224 1225 1228 1407 1470 1472 1489 1557 1558 1859 2177
- Hericium erinaceus {Lion's Mane Mushroom } 41 68 864 1113 1116 2075 2076
- Heyndrickxia coagulans {B. coagulans} 25 68 866 867 869 870 1623
- Ipomoea batata {Purple sweet potatoes} 26 31 661 1623

- kefir 31 90 611 1549 1550 1551
- Kimchi 31 90 761 1232 1235 1236 1237 2251
- Lacticaseibacillus casei {L. casei} 31 77 125 990 991 1132
- Lacticaseibacillus rhamnosus {L. rhamnosus} 54 77 176 271 289 404 579 1679 1804 1807 1809 1811 1814 1816
- lactobacillus acidophilus {L. acidophilus} 49 54 63 84 87 93 130 289 911 1747 1749 1750 2241
- lactobacillus helveticus {L. helveticus} 49 50 51 130 138 285 555 571 1011 1797 1798 1800 1801 1802 1803 2372
- lactobacillus helveticus,lactobacillus rhamnosus 49 67 80 82 289 571 1429
- Lactobacillus plantarum {L. plantarum} 41 55 80 84 289 571 911 1429
- lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 41 49 53 55 75 133 138 182 296 329 417 438 506 531 629 666 770 1202 1727 1729 1730 1731 1732 1735 1739 1741 1743 1942 1953 2082 2200 2331 2344
- Lentinula edodes {Shiitake Mushroom} 31 75 213 353 401 555 567 581 757 765 914 1425 1427 1655 1656 1658 1660 1997
- Levilactobacillus brevis {L.brevis} 31 42 843 2169
- Limosilactobacillus fermentum {L. fermentum} 88 434
- long-term, moderate-intensity exercise {exercise} 65 71 88 525 819 1775 1776 1778 1781 1782 2375 2384
- Lycium barbarum x Lycium chinense, {Goji Fruit, Juice} 48 65 71 1557 1592 1593 1595 1601 1816 2106 2171
- Malus domestica {apple} 48 70 231 1558 1831 1943 2309 2318
- Mixture of Vitamin B? {B Vitamins} 27 70 236 266 383 744 761 792 1173 1174 1175 1177 1178 1179 2131
- Musa acuminata {Banana} 27 31 501 636 1418 1454 1455 1456 1516
- Nigella sativa {black cumin} 31 56 679 680 1149
- nuts 40
- oligosaccharides {oligosaccharides} 40 41 80 228 247 725 726
- Phaseolus vulgaris {Boston bean} 40 80 235 281 290 293 331 430 454 468 494 540 593 598 644 649 670 797 1430 1432 1433 1434 1923 1925 1963 1968 2083 2190 2226 2388
- Pisces {Fish} 32 1576
- polyphenols 41 122 1576
- Pulses, Beans 40 41 126 144 188 244 253 315 486 631 651 664 694 842 848 853 1051 1055 1061 1489 1889 1893 1894 2127 2144 2164
- Pyroguaic acid {Guaiacol} 70 968
- resveratrol-pterostilbene {grapes, blueberries} 41 70 122 2059 2131 2143 2261
- resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 122 126 244 253 315 651 842 848 2211
- Rhodiola rosea {Rosavin} 41 48 126 188 244 253 315 486 631 651 762 842 848 853 1051 1489
- Rubus {Raspberries} 41 48 196 931 932 1025 1026
- Selenomethionine {Selenium supplement} 41 52 85 196 297 826
- soy 40 85 174 1584 1888
- β-glucan {Beta-Glucan} 40 41 57 174 250 298 309 386 432 478 556 850 1348 1349 1350
- tea 57 58 59 60 91 478 573 607 1286 1707 1710 1713 1715 1716 1717 1721 1723 2311 2371 2372 2374
- Traditional Mediterranean diet {Mediterranean diet} 40 91 205 1053 1055 1112 1113 1116 1194 1196 1197 1198
- vegetable 32 40 348 549 775 776 1164 1203 1204 1206 2140
- vegetarians 40 1164 1916
- vitamin d 27 383
- Whole Cow milk {Whole Milk} 27 28 29 30 31 41 69 383 596 811 848 2321
- whole-grain diet 31 40 151 1102 1103 1104
- yogurt 40 41 125 166 230 232 238 258 294 379 478 509 559 618 1244 1246 1247 1275 1276 1278 1279 1282 1285 1286 1287 1290 1460 1461 1462 1562 1854 1912 1913 1915 2095
- Parabacteroides
  - 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 130 138 176 213 271 285 318 353 384 401 402 404 555 567 631 701 711 757 765 811 1102 1103 1104 1419 1420 1421 1423 1424 1425 1427 1624 1625 1626 1627 1628 1631 1655 1656 1658 1660 2251

- Agaricus bisporus {White button mushrooms} 31 41 1410 2125
  - alpha-linolenic acid {Omega-3} 31 34 1154 1411
  - blueberry 34 35 41 48 569 1154 1583
  - Caffeine 41 547
  - Coffee 41 547 922 1054 1115 1199 1200
  - dietary fiber 41 162 922 1054 1115 1199 1200
  - Epicatechin {Green tea polyphenol} 41 354 526 569 604 631 678 981 1115 1183 1226 2112
  - folate {Vitamin B9} 33 41 1457 2136
  - fruit 32 34 162 1457
    - green tea 32 40 41 162 354 526 569 604 631 678 981 1115 1183 1226
  - Hericium erinaceus {Lion's Mane Mushroom } 68 866
  - Heyndrickxia coagulans {B. coagulans} 25 68 1672 2330
  - Lacticaseibacillus casei {L. casei} 26 77 1812 2330
  - Lacticaseibacillus rhamnosus {l. rhamnosus} 54 77 1752 1813
  - lactobacillus acidophilus {L. acidophilus} 49 63 84 87 93 1011 1752
  - Lactobacillus plantarum {L. plantarum} 41 50 51 828 1011
  - lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 49 53 55 75 698 828
  - Lactococcus lactis {Streptococcus lactis} 44 75 1213 1659
  - long-term, moderate-intensity exercise {exercise} 65 2224
  - Lycium barbarum x Lycium chinense, {Goji Fruit, Juice} 48 65 71 526 2224 2332
  - Malus domestica {apple} 70 354
  - Mixture of Vitamin B? {B Vitamins} 27 70 1457 2068
  - Musa acuminata {Banana} 31 678
  - nuts 40 725
    - oligosaccharides {oligosaccharides} 41 80 334 725
    - polyphenols 41 80 162 777 1431 1926 1927
  - Pyroguaiac acid {Guaiacol} 41 70 156 604 631
  - resveratrol-pterostilbene {grapes, blueberries} 41 162
  - resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 162 604
  - Rhodiola rosea {Rosavin} 41 48 604 631 1025
  - tea 91 547
  - Traditional Mediterranean diet {Mediterranean diet} 40 91 239 1054 1115 1199 1200
  - vitamin d 27 847
  - whole-grain diet 27 28 29 30 40 41 69 847 848 1914
  - yogurt 41 711
- Porphyromonas
    - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 41 64 204 1659
    - 3,3',4',5,7-pentahydroxyflavone {Quercetin} 41 2185
    - Caffeine 41 179 2186
    - Coffee 41 179
    - coptis chinensis {Chinese goldthread } 49 967
    - dietary fiber 41 335
    - Epicatechin {Green tea polyphenol} 41 442 1142 2080
    - fruit 32 335
      - green tea 32 40 41 335 442 1142 1993
      - kefir 41 90 164 2078 2080 2192
    - Lacticaseibacillus casei {L. casei} 77 579
    - Lacticaseibacillus rhamnosus {l. rhamnosus} 54 736

- *lactobacillus helveticus,lactobacillus rhamnosus* 54 63 80 84 87 93 736 1874
  - *Lactobacillus plantarum* {*L. plantarum*} 41 84 447 736
  - *lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei* {cvs maximum strength probiotic} 41 49 53 55 75 447 772 1202 2343
  - *Lentinula edodes* {*Shiitake Mushroom*} 31 75 1874 2170
  - *Nigella sativa* {black cumin} 56 2326
  - *oligosaccharides* {*oligosaccharides*} 80 193
  - *polyphenols* 41 80 245 442
  - *resveratrol-pterostilbene* {grapes, blueberries} 41 442
  - *resveratrol-pterostilbene x Quercetin* {quercetin x resveratrol} 41 442
  - *Selenomethionine* {Selenium supplement} 85 2355
  - *soy* 40 1076
  - *β-glucan* {Beta-Glucan} 41 57 1076
  - *tea* 58 59 60 91 179
  - *Vaccinium* {Cranberry} 41 2179
  - *vitamin d* 27 41 479 2180 2181
  - *whole-grain diet* 28 29 30 40 41 69 141 479
  - *yogurt* 40 41 294 772
- *Prevotella*
    - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 41 64 204 1373
    - 3,5,7-trihydroxy flavanone-7-rhamnoglucoside {Hesperidin} 31 64 880 1932 2197
    - *Agaricus bisporus* {White button mushrooms} 31 1411
    - alpha-linolenic acid {Omega-3} 34 2124
    - *Caffeine* 35 41 48 2124
    - *Camellia sinensis* {oolong tea} 41 48 547 1053 2242
    - *Coffee* 41
    - *coptis chinensis* {Chinese goldthread } 41 49 547 967 1053
    - *dietary fiber* 41 137
    - eicosapentaenoic acid (EPA),docosahexaenoic acid (DHA) {Fish Oil} 41 315 1582 2380
    - *Epicatechin* {Green tea polyphenol} 41 48 1582
    - *fruit* 32 137
    - *green tea* 32 40 41 137 315
    - *Ipomoea batata* {Purple sweet potatoes} 31 1551
    - *kefir* 90 164
    - *Lacticaseibacillus rhamnosus* {*l. rhamnosus*} 54 736
    - *lactobacillus helveticus* {*L. helveticus*} 49 54 63 84 87 93 736 911 1429
    - *lactobacillus helveticus,lactobacillus rhamnosus* 67 80 82 736 1429
    - *Lactobacillus plantarum* {*L. plantarum*} 41 80 84 736 803 911 1429
    - *lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei* {cvs maximum strength probiotic} 41 49 53 55 75 772 803 2348
    - *Lentinula edodes* {*Shiitake Mushroom*} 31 2170
    - *Levlactobacillus brevis* {*L.brevis*} 42 123
    - *Limosilactobacillus fermentum* {*L. fermentum*} 88 1776
    - *long-term, moderate-intensity exercise* {*exercise*} 65 1596
    - *low carbohydrate diet* 41 65 71 1596 1598
    - *Mixture of Vitamin B?* {*B Vitamins*} 27 219
    - *oligosaccharides* {*oligosaccharides*} 27 80 245 336 1517
    - *Pisces* {*Fish*} 32 845
    - *polyphenols* 41 137 845

- resveratrol-pterostilbene {grapes, blueberries} 41 137 315
  - resveratrol-pterostilbene x Quercetin {quercetin x resveratrol} 41 137 315
  - Selenomethionine {Selenium supplement} 41 85 315 1861
  - soy 40 503
  - β-glucan {Beta-Glucan} 40 41 57 503 1076 1077 1078
  - tea 58 59 60 91
  - Traditional Mediterranean diet {Mediterranean diet} 40 91 189 547 1053
  - vegetarians 40 124 549 776
  - vitamin d 27 847
  - whole-grain diet 28 29 30 40 41 69 181 847
  - yogurt 40 41 294 461 772 1280
  - Streptococcus
    - 5,6-dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-a]quinolizinium {Berberine} 41 64 143 1629 1630
    - Agaricus bisporus {White button mushrooms} 31 64 204 1409
    - arabinogalactan {arabinogalactan} 86 299
    - Citrus limon {Lemon} 47 86 341 387
    - dietary fiber 41 47 236 470 773
    - eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) {Fish Oil} 41 205 1178 2220
    - folate {Vitamin B9} 33 48 205 2088
    - fruit 32 34 236 2088
    - kefir 32 40 90 236 515 1178 1234
    - Kimchi 31 991
    - Lacticaseibacillus rhamnosus {l. rhamnosus} 31 54 1132 1750
    - Lactobacillus plantarum {L. plantarum} 41 54 63 84 87 93 1735 1750 2241
    - lactobacillus rhamnosus gg,bifidobacterium animalis lactis ,lactobacillus paracasei {cvs maximum strength probiotic} 49 53 55 75 155 1735
    - long-term, moderate-intensity exercise {exercise} 65 428
    - Malus domestica {apple} 65 70 71 236 428 476
    - Mixture of Vitamin B? {B Vitamins} 27 70 1178 2090 2253
    - oligosaccharides {oligosaccharides} 80 372
    - soy 40 199
    - vitamin d 27 41 199 773
    - Whole Cow milk {Whole Milk} 28 29 30 31 41 69 773 845
    - whole-grain diet 40 151
    - yogurt 40 41 845 1247 1281 1914
- ;

## Additional Suggestions

There are many other interventions computed to correct the bacteria shifts/abnormalities seen with this person. This is based on not-published studies and patent pending methods for selecting the bacteria. **The suggestions are based on studies from the US National Library of Medicine modifying those bacteria.** The top 30 suggestions are listed below and the top 30 items to avoid.

## Items to add

1. High-protein diet {Atkins low-carbohydrate diet}
2. Cichorium intybus {Chicory}
3. rosmarinus officinalis {rosemary}
4. high-fat diets
5. refined wheat breads
6. nicotinic acid {Vitamin B-3}
7. Zingiber officinale Roscoe {ginger}
8. Morus {Mulberry }
9. high red meat
10. Under cooked animal protein {Rare meat}
11. Dodecanoic acid {Lauric acid}
12. Flavan-3-ols {Epicatechin}
13. Helianthus tuberosus {jerusalem artichoke}
14. Pleurotus ostreatus {Oyster mushroom}
15. Curcuma longa {Turmeric}
16. (2S)-2-amino-5-carbamimidamidopentanoic acid {arginine}??
17. red wine polyphenols
18. Actinidia deliciosa/chinensis {kiwifruit}
19. chlorhexidine
20. Fraxinus angustifolia {Narrow-leaved ash}
21. Beta vulgaris {Beet}
22. Chrysanthemum × morifolium {Chrysanthemum}
23. N-[2-(5-methoxy-1H-indol-3-yl)ethyl]acetamide {Melatonin}
24. L-3-hydroxytrimethylaminobutanoate {carnitine}
25. Lentinellactobacillus kefiri {Kefibios}
26. Thymus vulgaris {thyme}??
27. isoflavones {Dietary phytoestrogens}
28. Calcium {Calcium Supplements}
29. Menta × piperita {peppermint}
30. Euterpe oleracea {Acai}

## Items to avoid

1. Slow digestible carbohydrates. {Low Glycemic}
2. Fiber, total dietary
3. Outer Layers of Triticum aestivum {Wheat Bran}
4. fruit/legume fibre
5. Linum usitatissimum {Flaxseed}
6. Saccharomyces cerevisiae var boulardii {S. boulardii}
7. Avena sativa {Oats}
8. wheat
9. High-fibre diet {Whole food diet}
10. pseudo-cereals {amaranth,quinoa, taro,buckwheat}
11. ketogenic diet
12. Cannabis sativa {Marijuana}
13. Hordeum vulgare {Barley}
14. bacillus,lactobacillus,streptococcus,saccharomyces probiotic
15. non-starch polysaccharides
16. Punica granatum {pomegranate}??
17. Ferrum {Iron Supplements}
18. red wine
19. high carbohydrate diet
20. Abstention from eating {Fasting}
21. pectin {pectin}
22. Ganoderma sichuanense {Reishi Mushroom}
23. Poly[β-D-xylopyranose(1→4)] {Xylan}
24. β-lactoglobulin {Whey}
25. gliadin, glutenin etc {Gluten}
26. Pisum sativum {pea}
27. 5,7-Dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one {Apigenin }
28. Avena sativa x Hordeum vulgare {barley,oat}
29. (2S)-2-amino-4-carbamoylbutanoic acid {Glutamine}
30. cranberry bean flour

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