

## Deep Nutrition (Cate Shanahan) – Key Themes and Principles

**Traditional Diet & Epigenetics:** Shanahan argues that ancestral, nutrient-dense diets “program” healthy bodies via gene expression. Nutrients and toxins in food act as signals (“genetic switches”) that turn genes on or off <sup>1</sup>. Traditional diets (whole foods eaten by our ancestors) provided consistent, healthful signals, whereas modern diets rich in refined sugars and industrial seed (vegetable) oils introduce “chemical static” that blocks normal metabolic signals <sup>2</sup> <sup>1</sup>. In Deep Nutrition’s view, many chronic diseases (cancer, diabetes, obesity, etc.) stem from **mistimed gene expression** caused by nutrient deficiencies and toxins, not permanent genetic mutations <sup>1</sup>. For example, Shanahan highlights how high maternal intake of sugar and seed oils can disrupt fetal development, increasing risks of gestational diabetes and epigenetic defects <sup>2</sup>. In short, what we eat today can influence how our genes “work” tomorrow. She emphasizes that embracing ancestral eating patterns – the “**diet [humans] used to follow**” – can help restore healthy gene function <sup>3</sup> <sup>1</sup>.

**Dangers of the Modern Diet:** Shanahan identifies **refined sugars** and **industrial seed oils** as the two most harmful modern foods <sup>4</sup>. These foods promote chronic inflammation and metabolic damage. She cites evidence that industrial vegetable oils (soy, canola, corn, cottonseed, sunflower, safflower, grapeseed, rice-bran, etc.) create free radicals and alter cell membranes, which undermines cardiovascular and brain health <sup>5</sup> <sup>6</sup>. Likewise, excessive sugar (and high-glycemic carbohydrates) overloads the liver and pancreas and “blocks signals” needed for healthy metabolism <sup>2</sup> <sup>4</sup>. Shanahan also **debunks the low-fat myth**: she notes the idea that “saturated fat is bad” was based on flawed science <sup>3</sup>. In her view, vilifying natural fats (butter, egg yolks, etc.) led to the proliferation of cheap, processed foods and the current health crisis <sup>3</sup> <sup>5</sup>. The solution, she insists, is *not* more carb- and seed-oil-based “health” foods, but a return to real, nutrient-rich fats and whole foods.

### The Four Pillars of Traditional Nutrition

Shanahan’s **core dietary framework** is built on *four fundamental food categories* that traditional cuisines share <sup>7</sup>. These “Pillars” supply the vitamins, minerals, and bioactive compounds our bodies evolved to expect. They are:

- **Meat on the Bone (Whole Animal)** – Cuts of meat cooked with the bone (e.g. stews, soups) and **bone broths**. These provide collagen, gelatin, and fat-soluble nutrients. Shanahan emphasizes bone broth and gelatinous cuts as “miracle foods” for joints, skin and connective tissue, since they “stimulate fibroblasts to lay down collagen” <sup>8</sup>. Slow-simmered bones release minerals (calcium, magnesium) and growth factors that modern diets lack.
- **Organ Meats (“Nasty Bits”)** – Nutrient-dense organs (liver, kidney, heart, etc.). These supply very high levels of vitamin A (retinol), vitamin K<sub>2</sub>, iron and B vitamins, which are largely absent from muscle meats and most packaged foods. Shanahan points out that ancestral diets included organ meats as a key source of “fat-soluble activators,” crucial for fetal development and adult health <sup>3</sup>.

- **Fermented and Sprouted Foods** – Foods prepared by fermentation or sprouting (e.g. yogurt, kefir, sauerkraut, kimchi, natto, miso, sourdough bread, sprouted grains/legumes). Fermentation unlocks nutrients and adds probiotics, enzymes, and B vitamins. Shanahan notes these foods preserve and amplify nutrients: for example, fermented dairy products rejuvenate damaged milk proteins and increase mineral bioavailability <sup>9</sup>. She also encourages sourdough and sprouted grains as gentler ways to consume grains.
- **Fresh, Unprocessed Foods** – Raw or lightly cooked plant and animal foods with no industrial processing. These include fresh fruits and vegetables, whole nuts/seeds, and pasture-raised meats/dairy. “Fresh” here means retaining the food’s natural enzymes and micronutrients (e.g., raw milk or minimally heated animal fat). Shanahan criticizes ultra-processed products (refined oils, bleached flour, sugary drinks) and champions natural foods rich in intact nutrients <sup>7</sup> <sup>10</sup>.

By consistently including foods from each pillar – especially bone broths, fermented foods and plenty of vegetables – one can “program” the body for optimal health <sup>7</sup> <sup>10</sup>. Shanahan notes that even widely admired cuisines (e.g. traditional French or Japanese) rely on all four pillars (butter/cream, offal/eggs, pickles/ferments, fresh produce) rather than refined oils or sugars <sup>7</sup>. She suggests starting with one pillar (e.g. a daily broth or raw greens) and gradually incorporating all four into every week’s meals.

## Dietary Principles and Actions

Building on these themes, Deep Nutrition lays out practical guidelines for daily eating. Key actionable points include:

- **Avoid Industrial Seed Oils:** Eliminate “toxic” vegetable oils (the “Hateful 8”: canola, soybean, corn, cottonseed, sunflower, safflower, grapeseed, rice-bran) <sup>6</sup>. These high-PUFA oils promote inflammation, oxidative stress and fat storage. Shanahan recommends reading labels to avoid these oils in packaged foods and restaurant fare.
- **Cut Refined Sugars & Carbs:** Minimize white sugar, high-fructose corn syrup, and refined grains. Limit starchy carbs (bread, pasta, rice) especially if you have metabolic issues. Shanahan advises keeping added sugars and refined flours very low (often under ~100g total carbs per day) <sup>11</sup>. Instead, rely on vegetables and low-glycemic whole foods for carbs. Reducing sugar not only improves blood sugar control but also “unblocks” the genetic signals disrupted by modern diets <sup>2</sup> <sup>11</sup>.
- **Emphasize Whole Fats:** Eat ample natural fats from pastured sources. Choose butter, ghee, coconut oil, olive oil, and animal fats (grass-fed steak fat, chicken skin) in place of low-fat alternatives. Shanahan specifically encourages whole dairy and eggs: “Eat butter, eggs, cheese, and whole milk” from well-raised animals, which raise good HDL cholesterol and support bone and brain health <sup>12</sup>. She warns that decades of eating fat-free products can impair the body’s ability to burn fat and lead to chronic hunger.
- **Consume Vegetables with Fat, Salt, and Acid:** Combine veggies with healthy fat (oil or butter), salt, and a splash of acid (vinegar or citrus) at meals <sup>13</sup>. This classic combination optimizes the absorption of fat-soluble vitamins and antioxidants. For example, a salad dressed with oil/lemon/salt helps the body take up beta-carotene and other nutrients. Shanahan notes this “fat+salt+acid” trick as a simple way to unlock vegetables’ full nutritional value <sup>13</sup>.
- **Favor Vegetables Over Fruit:** While fruit is healthier than candy, it’s still high in sugar. Eat 2–3 servings of non-starchy vegetables before having any fruit. This helps keep blood sugar stable and

prevents overconsumption of fructose <sup>14</sup> . (In practice, fruits become an occasional “treat” after meeting veggie and protein goals.)

- **Prioritize Collagen and Bone Broth:** Regularly include bone broth or gelatinous cuts (oxtail, chicken feet, knuckles) in the diet. Bone broth is rich in collagen, proline, glycine and growth factors that support joints, skin and gut lining <sup>8</sup> . Shanahan calls it the “#1 miracle food” for connective tissue health. She advises using pastured bones and long simmering (6–24 hours) to maximize nutrients.
- **Eat Fermented Foods Daily:** Incorporate probiotic foods (plain yogurt, kefir, sauerkraut, kimchi, natto, etc.) into every week. These introduce beneficial bacteria and fermented enzymes that aid digestion and nutrient absorption. Improving gut health helps avoid the bloating and cravings that can undermine healthy eating <sup>15</sup> .
- **Use Whole Proteins:** Obtain protein from real foods (meat, fish, eggs, dairy, beans) rather than powders or bars. Shanahan points out that most adults already meet or exceed protein needs; isolated protein powders can stress the liver and hamper fat-burning <sup>16</sup> . Focus instead on balanced meals with meats, seafood and whole eggs.
- **Balance Lifestyle Factors:** While diet is primary, Shanahan also stresses adequate **exercise** and **sleep**. She recommends varied physical activity (walking, resistance, play) that you enjoy, as fun movement improves metabolism and stress resilience <sup>17</sup> . Getting 7–8 hours of sleep nightly is critical, since lack of sleep raises cortisol and inflammatory hormones. Together, diet changes plus consistent sleep and exercise create a “truce” with metabolism that makes weight maintenance and health easier <sup>17</sup> .

Each of these guidelines follows the logic of ancestral eating: maximize real, nutrient-rich foods (especially fats, collagen, fermented veggies) and minimize novel toxins (refined carbs, industrial fats). Shanahan provides meal plans and recipes to illustrate these rules, but the core message is to treat food as information for your genes.

**Implementing Deep Nutrition:** The **Deep Nutrition** book also includes extensive practical resources to help readers make the transition <sup>10</sup> . Shanahan offers sample menus, shopping guides and a detailed FAQ to address common challenges. She encourages readers to start small (e.g. add one bone broth soup per week, replace soda with water) and then build momentum. The evidence and steps are presented in a clear, science-backed format – suitable for anyone interested in nutritional science or functional health.

Overall, *Deep Nutrition* emphasizes that by returning to the nutrient profiles of traditional diets – plenty of collagen, fat-soluble vitamins, probiotics and real food – one can “revive [the] body’s vitality” from the inside out <sup>8</sup> <sup>1</sup> . In Shanahan’s view, every bite of wholesome food has the power to improve gene expression and long-term health, whereas modern processed diets do the opposite <sup>1</sup> <sup>4</sup> .

**Sources:** Cate Shanahan, *Deep Nutrition: Why Your Genes Need Traditional Food* (and related summaries) <sup>2</sup>

<sup>1</sup> <sup>3</sup> <sup>18</sup> <sup>7</sup> <sup>6</sup> <sup>11</sup> <sup>12</sup> <sup>13</sup> <sup>8</sup> <sup>15</sup> <sup>17</sup> .

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<sup>1</sup> <sup>2</sup> <sup>7</sup> <sup>9</sup> Full text of “Deep Nutrition Why Your Genes Need Traditional Food”

[https://archive.org/stream/DeepNutritionWhyYourGenesNeedTraditionalFood/DeepNutritionWhyYourGenesNeedTraditionalFood\\_djvu.txt](https://archive.org/stream/DeepNutritionWhyYourGenesNeedTraditionalFood/DeepNutritionWhyYourGenesNeedTraditionalFood_djvu.txt)

<sup>3</sup> Deep Nutrition, a book by Dr Cate Shanahan

<https://drcate.com/deep-nutrition-why-your-genes-need-traditional-food/>

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<https://drcate.com/deep-nutrition-made-simple/>