

**A narrative review of a plant-based diets' effects on obesity/ weight loss,
cancer and inflammation in the human body.**

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Abstract

Plant-based diets are well known for their countless health benefits (Metoudi, 2025); this includes its' ability to decrease diseases such as obesity (Satija, 2019), Cancer (watling, 2022) along with chronic and systemic inflammation (Pahwa, 2018). A systematic review by Tran (2020) suggests that Plant-based diets can have BMI- reducing effects which could aid in reducing national obesity. Plant-based diets have found to have favourable effects on decreasing obesity-related diseases according to a review by Ivanova (2021) Unhealthful and healthful Plant-based diets have opposite effects on health with some studies suggesting the inverse effects of an unhealthy plant-based diet (Laouali, 2021). Red and processed red meats have found to be carcinogenic according to the World Health Organisation (2015). Vegetarian diets have shown to decrease likelihood of overall cancer by 14% in comparison to omnivorous diets (Watling, 2022). Meat has both pro and anti-inflammatory properties (Wang, 2024). Nutritious diets overall will have positive effects on inflammation whether that includes meat or not (Wang, 2023).

Chapter 1: Introduction

Over the last decade, plant-based diets have accumulated vast amounts of popularity due to numerous different reasons, from their positive environmental impact alongside possible ethical reasons; but one of the most popular reasons why many are intrigued in a diet similar to the plant-based diet would be a result of their countless health benefits (Metoudi, 2025). The plant-based diet focuses mainly on foods obtained from plants and avoiding animal products completely (in vegan diet) or mostly (in vegetarian diet) in an effort to ingest an abundance of nutrients, fiber, and antioxidants that can be found in plant foods (Feher, 2020). 3 million people in the UK follow a vegan or vegetarian diet with statistics suggesting a significant decline in meat consumption over recent years according to a recent study examining food diaries by Stewart (2021). By 2030, meat consumption is set to decline by 30% which highlights the relevance of diets such as vegetarianism, veganism and other similar diets (National Food Strategy, 2021). The BBC (2020) explains that according to a survey, the main reason as to why people are consuming less meat is due to animal welfare, closely followed by health reasons. According to Stewart (2021), the livestock sector is found to be responsible for approximately 15% of anthropogenic greenhouse-gas emissions along with driving deforestation, land degradation and biodiversity loss. Not only has meat

consumption resulted in environmental issues globally, but it has also found to have a notable negative impact on health and disease; possibly leading to obesity, cancer and other diseases including cardiovascular disease (Stewart, 2021). The plant-based diet consists of foods mainly focusing on plants and avoiding foods obtained from animals (Feher, 2020). Its' abundance of fibre, antioxidants, vitamins and minerals could have a significant impact on health (Feher, 2020). Research alludes to the idea that there are countless health benefits to a plant-based diet including digestion, heart health, mental health benefits along with glucose control and many more (Feher, 2020). Although meat is a key source of proteins and essential vitamins such as vitamins A, B1, B12, niacin and zinc, it has been discovered that meat could have major adverse effects on health and health outcomes (Richi, 2015). A meta-analysis by Wang (2016) examined the potential dose-response relationship with red, total and processed meat and the risk of cardiovascular, all cause and cancer mortality. This analysis included nine articles, seventeen prospective cohorts and 150, 328 deaths and participants were both men and women aged 17 to 87 (Wang, 2016). Among these studies, 3 were conducted in the USA, 1 in Australia, 2 in Europe and 3 in Europe (Wang, 2016). Results showed that an increase of each serving of total red meat consumption was associated with a statistically significant increased risk of cardiovascular mortality (RR= 1.19), all-cause mortality (RR=1.17) and cancer mortality (RR=1.12) (Wang, 2016).

Obesity has more than doubled since the 1990s and nearly tripled since the 1970s according to an article by the World Health Organisation (2024). With obesity being worse than ever and overall health arguably declining, changes need to be made to improve the health and longevity of people worldwide. As of 2022, obesity and being overweight is currently affecting 64% of adults aged 18 and over men and women (Office for Health Improvement and Disparities, 2024). Often linked with having weight loss benefits, a plant-based diet may be a useful dietary alternative for many individuals struggling with obesity (Satija, 2019). Greger (2020) explains that current evidence implies that a plant-based diet achieves greater weight loss in comparison with other dietary interventions. Not only has a plant-based diet been associated with weight loss but also has been positively linked to numerous obesity-related diseases such as LDL cholesterol, insulin levels and total cholesterol also (Ivanova, 2021). Obesity and its' association with a plant-based diet will be explored in more detail in this narrative review, some topics including 'calorie density', 'weight loss/ BMI reduction' and 'fat consumption'

Whilst inflammation is a natural bodily reaction to injury, infection and has a crucial role in immune defence, it can also be linked to numerous health problems when chronically inflamed and is linked to a variety of health issues like cardiovascular disease (Henein, 2022). Therefore, lowering inflammation may promote longevity and general health through decreasing disease (Schmid-Schönbein, 2006). Plant-based diets have been found useful for lowering inflammation in the body as a result of the anti-inflammatory ingredients in many foods such as fruits, vegetables, nuts and legumes (Schmid-Schönbein, 2006). Worldwide, 3 of 5 people die due to chronic inflammatory diseases like stroke, chronic respiratory diseases, heart disorders, cancer, obesity, and diabetes. (Pahwa, 2018). It may be beneficial to investigate the plant-based diets' effects on lowering these statistics through reducing bodily inflammation. According to an article by Herpich (2022), components like fibre which are plentiful in plant-based diets are beneficial for inflammation; this includes foods like vegetables, fruits, legumes and whole-grains. This is visible, as findings suggest improvements in metabolic and inflammatory profiles of individuals according to Herpich (2022).

There are more than 385,000 new cancer cases in the UK every year, and that's more than 1,000 every day according to Cancer Research UK (2019). The World Health Organization released an article in 2015 explaining the carcinogenic effects red meat and processed meat which solidified the impact of meat consumption on health for many (WHO, 2015). A study conducted by Watling (2022) explained that vegetarians have 14% lower risk of all cancers compared to meat-eaters. The idea that a plant-based diet can reduce cancer likelihood and mortality in people may be a hypothesis that will stand corrected and will be explored later on when studies are analysed.

In recent estimates, in 2014 nearly 60% of Americans had at least one chronic condition, 42% had more than one and 12% of adults had 5 or more chronic conditions (Pahwa, 2018). Acknowledging this information, research needs to be conducted to understand and improve these statistics. Exploring the idea that a plant-based diet can have a significant effect on life-threatening diseases like cancer and obesity along with inflammation may improve research and in turn, improve the health of many. Publication bias can be an issue especially when surrounding political or controversial subjects such as this subject. Methodological issues could also be a limitation therefore carefully reviewing the method behind each study will be needed therefore longitudinal and experimental studies are preferable for a deeper understanding. Long term data is preferable when conducting studies to understand more

long-term effects of the diet, this may be a problem as plant-based diets are quite a recent and modern subject. The aim for this study will be to evaluate and critically analysing existing research in order to provide a comprehensive overview of the current evidence on a plant-based diet and its' association with obesity and weight loss, cancer and inflammation.

Chapter 2: Method

Rationale

When reflecting on current statistics of health- obesity, cancer and inflammation in particular, and the relevance of plant-based diets, it was a clear decision when deciding on wheat subject to continue researching for this project. A literature-based study was chosen for various reasons. A narrative review would include multiple sources of data in hopes to decrease the likelihood of inconsistencies that may come with an intervention, along with a larger sample size to give a larger scope of results. When deliberating the idea of interventions for disease, long-term health and mortality, a follow up of a few years is ideal for a reliable outcome. Longitudinal studies were a large focus in this narrative review, meaning that recurrence, disease progression and mortality rates are factors that would be considered more-so than a short-term follow up which focuses more on symptom relief and initial bodily response for instance. Inflammation as a title on its' own could have been effective as a short-term intervention but limited resources were a problem when considering gathering experimental. Measuring inflammatory markers most effectively is done through blood tests and urine samples. A literature-based study, narrative review in particular, gave the opportunity to assess already existing interventions and research which were able to give enough time for a long- term intervention and follow up. Assessing long-term interventions along with other studies would give a broad amount of information on all three subjects (obesity, inflammation, cancer) to help secure a comprehensive study which with optimism, gave a more reliable result or outcome. The analytical nature of the research surrounding a literature-based study helps to identify gaps on research along with understanding patterns which may help further investigate data.

A narrative review was chosen specifically for this title and subject firstly, to offer more flexibility and scope when reviewing data, allowing space for all scientific research. Health and nutrition can be subjective, and it is important in this case, to analyse all scientific

theories within correlational studies and statistical analyses to ensure a non-bias conclusion. The topic chosen for this project is broad and a narrative review is a helpful option in order to provide synthesis of knowledge and possibly not a definitive answer, due to evolving or inconsistent research.

Eligibility Criteria

The population group for this review was greatly contemplated before coming to a final decision. It was decided that the population groups were adults aged 18+. Narrowing down the population group meant that less overall research which may lead to a sacrifice of quality research and vital data to fit into a particular criteria. It was taken into account that a broader view could construct a less specific review therefore it was important to explore topics in depth. The idea is that the more variety of studies and interventions available, the better quality data is also available. This in turn, helped include the best quality data possible in this project, ensuring a more reliable review. Data originating from Western countries such as the United States of America, Australia, Europe and Canada and especially the United Kingdom are preferable when choosing studies as lifestyle factors similar when compared to the United Kingdom. That being said, global data is not excluded. In order to be eligible for this narrative review it was important that a mixture of original trials and reviews including systematic and meta-analyses to provide a comprehensive overview of literature. Abstracts, letters and editorials were excluded in this review to ensure credibility. Studies were eligible if they were relevant to the title and subject of the narrative review. A process of selecting then screening studies through full- text screening and quality assessment took place finally when selecting articles to further ensure the credibility and quality of data selected. The criteria consisted of checking the date published, the amount of people that have cited or referenced the paper (if this information was visible) followed by checking if the source was credible and if the authors were qualified in the field.

Study Selection and Data Extraction

The procedures that took place when constructing a review were vital to narrowing down research used in the review and in turn, improve quality. Firstly, there is the inclusion, exclusion criteria which includes factors like scope, date range, language and study design. The scope for research in this narrative review will range from various reviews and studies; there will be no strict criteria for scope. Date range will aim to be no later than 2015, aiming to concentrate on most recent research. 2015 was chosen in particular as a guide due to an

important article being published in 2015 by WHO surrounding the carcinogenic effects of processed and red meat, which could have been a significant standpoint in research surrounding this subject. Various studies have been conducted in the past years including epidemiological studies, systematic reviews and clinical trials. For example, there is a systematic review that examines a mixture of clinical trials, observation and interventional trials to identify the impact of a plant-based diet for overweight and obesity prevention and treatment (McGreivy, 2017).

Search Strategy

When conducting a literature search, databases such as PubMed, Web of Science and Google Scholar was used to research articles to ensure credibility and standard. Key terms that were being used in the search consisted of ‘plant-based, Vegetarian, Vegan, Obesity, Weight loss, Cancer, Inflammation, Inflammatory markers, meat’.

Chapter 3: Discussion

Obesity / weight loss

Obesity is a term described by the NHS as ‘a person who has excess body fat’ and is often measured through the form of ‘BMI’, also known as ‘Body Mass Index’ (NHS, 2023).

Obesity is measured as a BMI of 30 and over whilst overweight is measured by the NHS as a BMI of 25-29 (NHS, 2023). Obesity has also been linked to multiple chronic diseases that may come hand-in hand when suffering with obesity or overweight (Samra, 2021). Physical inactivity, genetics, epidemiology and postnatal influences are all causes of obesity according to Masood (2023).

Weight loss / BMI reduction

A systematic review by Tran (2020) analyses the effects of a plant-based diet on weight status and focusing on BMI and/ or body weight before eliminating meat and after conveyed convincing results surrounding BMI improvements in participants. 22 publications from 19 studies were included in the review with the majority being randomized controlled trials. 8 of the 22 articles analysed in the systematic review suggested a significant reduction in body

weight and BMI although within the 8 studies, 3 included the same data or studies and 1 was a non-randomized controlled study (Tran, 2020). They explained that the BMI and weight reduction could be a result of an increase in fiber intake, polyunsaturated fats, plant proteins and a decreased intake of energy, saturated fats and animal proteins within their diet (Tran, 2020). In a review by McGreivy (2017) which includes a variation of interventional and observational studies, it was found that among all 12 intervention-based studies which were reviewed, those who followed some form of a plant-based diet lost an average of 2.02kg more than participants following a non-plant-based diet. The particular meta-analysis mentioned in McGreivy's review was a review conducted by Huang RY (2016) and they conducted it over a median 18-week period. Among the variety of diets evaluated in the study, data proved that BMI seemed to increase as consumption of animal-based products like meat, dairy and eggs increased; that meaning that vegans' BMI was found to be significantly less than the omnivores' BMI (McGreivy, 2021). Diets included in this study were vegan, vegetarian, pesco-vegetarian, semi-vegetarian and omnivorous. In a systematic review including prospective cohorts of 18 years and older and 7 publications of 9 cohorts, Jarvis (2022) found favourable results in body weight management and obesity prevention when healthy plant food patterns were emphasized in participants. They also found when comparing extreme quintiles of healthy plant-based diets, there was an inverse association with obesity (HR = 0.31) (Jarvis, 2022).

Obesity related disease

Numerous chronic diseases have been associated with obesity including type ii diabetes, metabolic syndrome, hypertension and cardiovascular disease (Mcgreivy, 2017). Plant- based diets may be beneficial for individuals suffering from type ii diabetes, arthritis and cardiovascular disease according to Ivanova (2021). A review by Ivanova (2021) which included 11 studies evaluating the correlation between plant-based diets and obesity and overweight management, indicates that all studies evaluated associate a plant-based diet with better overall health, including obesity-related-chronic diseases. This included reductions in LDL cholesterol, total cholesterol and fasting insulin levels (Ivanova, 2021). In a randomised controlled trial where participants intake a whole foods plant-based diet, they found that after a 6-month follow up, BMI scores had reduced 3.9kg m⁻² more in participants following a whole-foods plant-based diet than normal care (4.4, 0.4) along with mean cholesterol levels (Wright, 2017). Although the successful results, normal care for cholesterol would have had a similar result to the whole foods plant-based diet (Wright, 2017). This study included

participants aged 35-70 which were obese or overweight and suffered with at least 1 of 4 diseases (type ii diabetes, ischaemic heart disease, hypertension or hypercholesterolaemia). In the study conducted by Laouali (2021) where they analysed the differences on participants after consumption of healthy and unhealthy plant-based diet, they found that a higher a better obedience to a plant-based diet and healthier plant-based diets was associated with lower Obesity-related diseases such as type ii diabetes and hypertension, whereas an unhealthy plant based diet was not associated with type ii diabetes whereas a positive association was observed with hypertension. Also mentioned in the review by Ivanova (2021), weight loss results varied from all studies with some finding no significant reduction in weight and up to 10kg weight loss results in others. These inconsistent findings could spark uncertain conclusions when discussing the plant-based diets and weight loss. Although, one recent study by Barnard (2022) looks into the effects that Mediterranean diet along with a low-fat plant based diet can have on cardiometabolic risk factors and body weight. This randomised cross-over trial included 62 overweight adults, and they were randomly assigned to Mediterranean diet or a vegan diet for a 16-week period (Barnard, 2022). Whilst there were no changes in weight for those consuming the Mediterranean diet, the vegans lost an average of 6.0kg (Barnard, 2022).

Calorie Density

There are many theories and hypotheses as to why the plant-based diet is useful for weight loss- first theory being calorie density (Liu, 2020). Calorie density could have a significant impact on BMI reduction and weight loss in obese and overweight individuals and that could be the reasoning behind the effectiveness of a 'healthy' plant-based diet on many areas on health including weight loss (Liu, 2020). The concept behind 'calorie density' is the number of calories per unit of food (Greger, 2020). When the stomach reaches its' capacity for food volume, stretch receptors in the stomach sends a signal to the appetite regulation centres in the brain to signal fullness (Greger, 2020). From this, we can understand that intaking a high-volume, low-calorie meal could signal feelings of fullness without intaking a significant number of calories, leaving the person feeling satiated (Greger, 2020). Many 'healthy' plant-based foods are low in calories meaning that weight loss could be effective when on a healthier plant-based diet. Foods like fruits, vegetables, wholegrains and beans are much lower in calorie density when compared to foods like cheeses, sugars, fats and meats (Greger, 2020).

Fat consumption

Fat content could be another reason as to why a plant-based diet has been effective in reduction of weight in obese participants (Ivanova, 2021). In the systematic review conducted by Tran (2020), they acknowledged that multiple studies surrounding a plant-based diet reported lower intakes of protein, fat and cholesterol, along with higher intakes of fiber and carbohydrates when comparing the intervention group to the control group- indicating that a whole-foods plant-based diet typically has a lower fat-intake than an omnivorous diet. A meta-analysis which examined a total of 16 intervention trials which compared low-fat diets with control groups that consumed their regular diets and low-fat diets, and they found a more significant weight loss result in the low-fat group (Astrup, 2000). During the intervention, they ensured that the carbohydrate sources were rich in fiber- derived from fruits, vegetables and whole grains in order to incorporate foods with lower calorie-density whilst keeping participants feeling full (Astrup, 2000). The results in this analysis were that the low-fat group lost 2.40kg more in the fixed effects analysis and 2.52kg more in the random effects analysis when compared to the control groups (Astrup, 2000). Although this study is dated and research has developed since, this study may help give a guide when discussing low-fat plant-based diets. Linking back to calorie density, a low-fat diet could be effective since fats are heavily calorie-dense, therefore a lower intake of fat, could mean an overall lower intake of calories which links back to calorie density (Greger, 2020).

Healthful and unhealthful diets on obesity

Although the plenty assets a healthy plant-based diet may have on obesity and weight loss in particular; if not executed correctly, a plant-based diet may have negative impacts on health and weight loss in some cases (Kim, 2021). Health implications may come with a non-‘healthful’ plant-based diet, this meaning consumption of certain meat alternatives, processed foods and foods with a high- calorie or high saturated fat content. According to Wang (2023), an unhealthy vegetarian diet can increase risk of obesity-related diseases such as type ii diabetes, coronary heart disease, cardiovascular mortality. Not only does an unhealthy vegetarian diet cause those diseases, but it can also have a direct negative impact on obesity itself and blood pressure (Wang, 2023). A prospective cohort study including 74,522 women with a ~20 year follow up evaluated the different effects of healthful plant-based diets and unhealthful plant-based diets (Laouali, 2021). In the conclusion, they added that ‘only healthier plant foods were associated with lower risks, partly through decreasing BMI’

suggesting that healthy plant foods can support BMI reduction but possibly not an unhealthy plant-based diet (Laouali, 2021). Li (2021) highlights possible concerns surrounding the adoption of an unhealthy plant-based diet on mortality. They established a study through a method using 24-hour dietary recalls and documented mortality cause and linked to their dietary status which were organised into groups of Healthful plant based diets, overall plant-based diet and unhealthful plant-based diets. Among 40,074 participants, 4904 deaths were documented after a median follow-up of 7.8 years. Results indicate that healthy plant-based diets had advantageous effects on overall mortality with a HR of 0.86 in contrast to an adoption of an unhealthy plant-based diet which has adverse effects on mortality with a HR of 1.33 (Li, 2021). Although this study does not show any association with BMI or obesity, it could be possible due to its association with obesity-related diseases. In support of this, a study on Iranian women conducted in 2020 shows a direct association with certain unhealthful plant-based dietary patterns and likelihood of obesity (Zamani, 2020).

These contradicting results demonstrate that a plant-based diet typically can have useful effects on weight loss but could be less effective or detrimental when consuming unhealthful plant-based foods. Eating within a calorie deficit is easier in a plant-based diet due to the low-calorie density in the majority of plant-based foods (Greger, 2020). A plant-based diet can also decrease likelihood of obesity-related disease and mortality (Wright, 2020).

Cancer

With the development of science, especially surrounding health, cancer is still prevalent and common amongst adults and children worldwide and is the leading cause of death worldwide- accounting for almost 10 million deaths in 2020 (WHO, 2021). Discovering and exploring the link between plant-based diets and cancer may help minimise and aid in case prevention in people of our community.

Meat and cancer

In a publication by The World Health Organisation published in 2015, they explained the carcinogenic effects of red and processed meat in humans (WHO, 2015). Results from a prospective analysis by Watling (2022) suggests a direct correlation between meat intake and cancer development. Including a substantial group with 472,377 participants total, Watling (2022) recruited a cancer-free cohort that were categorised into groups of meat eaters

(247,571), low meat-eaters (205,385), fish-eaters (10,696) and vegetarians (8685). Among these participants, cancer incidence was measured to discover whether there is a pattern depending on their dietary habits. Findings suggest that overall, they found that low meat-eaters were 2% less likely to develop cancer when compared to regular meat eaters (Watling, 2022). Also compared to regular meat eaters, fish eaters were 10% less likely whilst vegetarians were 14% less likely to develop any type of cancer (Watling, 2022). Vegetarian women had an 18% lower risk of developing post-menopausal breast cancer compared to meat eaters and the potential reason given was that their overall body mass index was lower than the meat-eaters (Watling, 2022). Key (2022) highlighted inverse effects on total cancer in their review in both vegetarians and vegans but other factors such as smoking in lung cancer participants for example may have affected their results.

Prostate cancer

Watling (2022) also found that vegetarians had a 31% lower risk of developing prostate cancer when compared to meat-eaters but gave no explanation as to why this is. To support the results of a plant-based diet surrounding prostate cancer, a systematic review including 32 publications synthesized studies surrounding prostate cancer prevention amongst men that were at risk and found desirable findings (Gupta, 2022). All results by Gupta (2022) exhibited positive results for lower risk of prostate cancer or no significance. The World Health organisation (2015) suggested that there is evidence to support the correlation between red meat and prostate cancer also further explaining that the IARC Working Group have considered more than 1000 epidemiological studies surrounding red and processed meat and cancer. On the other hand, results seem to be inconsistent when discussing a plant-based diet and its' effects on prostate cancer. A British study was executed by Parra-soto (2022), comparing both men and women meat-eaters, vegetarian and pescatarians on overall, colorectal and prostate cancer in the form of a meta-analysis. Results after a mean follow-up period of 10.6 years conveyed that when compared to meat eaters, vegetarians had an overall lower cancer risk (Parra-soto, 2022). Pescatarians also have a decreased risk of overall cancers but more when compared to a plant-based diet which could signify that meat intake is associated with a greater risk of overall cancers (Parra-soto, 2022). When reflecting on the results for prostate cancer in particular, results for prostate cancer were insignificant ($RR = 0.83$) (Parra-soto, 2022).

Cancer mortality

Moving on to a prospective cohort study which measured mortality rates and its' association with meat and processed meat intake prevalence which included approximately 500,000 participants aged 50-71 (Pan, 2012). Of the 23, 926 deaths measured, 9464 were cancer deaths along with cardiovascular disease for 5910 of the deaths (Pan, 2012). Cancer and Cardiovascular disease were measured as 'all-cause mortality' in this intervention. During the 2.96 million person-years of follow-up, findings suggested that mortality increased as a response to a 1-serving-per-day increase, resulting with an increased hazard ratio of 1.13 for unprocessed red meat and 1.20 for processed red meat which are both very significant results (Pan, 2012). The corresponding hazard ratio for cancer mortality was valued at 1.16. Moving forward, Pan (2012) suggests that substituting 1 serving of red meat per day for another protein alternative (foods including fish, poultry, nuts, legumes, dairy, wholegrains) could lead to a 7-19% lower mortality risk which also means it will lower cancer- associated outcomes. To oppose this hypothesis, a systematic review facilitated by Dinu (2017) which included 86 cross-sectional and 10 cohort prospective studies evaluated the overall effectiveness of plant-based diets on health outcomes- including all cancers- and found conflicting outcomes. Total incidence of cancer exhibited a significant decrease (0.92) , which includes lung, breast, colorectal and prostate cancers (Dinu, 2017). Although incidence outcomes for cancer were found to be significantly lower, plant-based diets seemed to have no significant impact on mortality from cancer (Dinu, 2017). That being said, another systematic review found that an adherence to a healthy plant-based diet has been negatively correlated with cancer mortality with an average relative risk of 0.91 (Tan, 2024). This supports the narrative that adherence to a plant-based diet can decrease the risk of cancer mortality. A review article by Fernández-Fígares (2025) also supports the idea that plant foods are associated with a lower risk of mortality through explaining that replacing meat with a whole-food plant alternative can lower risk of chronic disease and mortality. Fernández-Fígares (2025) goes on to explain that compared to animal and non-plant foods, whole plant foods have found to reduce insulin resistance, cholesterol, inflammation along with inducing favourable changes in gut microbiome composition and sex hormones which in turn, helps to contribute to lower breast cancer risk, leading to less mortality. A recent prospective study by Xu (2025) explores all-cause and cause-specific mortality and found that a greater adherence to a plant-based diet was significantly associated with a lower all cause and cause-specific mortality. When comparing the results for highest versus lowest quintiles of perceived disability index, the HR result for the multivariable-adjusted HR for all-cause mortality was

0.83 and 0.89 for cancer mortality in those in the highest quintile of the perceived disability index (Xu, 2025).

Digestive cancers

Other cancers have also been evaluated in numerous studies with many studying digestive cancers in particular. With the knowledge that has been discovered surrounding red meat and cancer, a plant-based diet has been considered by authors when constructing data. A study systematically evaluating 2 databases including 6 cohort studies and over 3,000,000 subjects is conducted by Zhao (2022) and explores the relationship between a plant-based diet and risk of digestive cancers. Results suggest a pattern between a plant-based diet and a lower risk of digestive cancers with a result of 0.82 HR in the cohort studies and 0.70 in the control studies (Zhao, 2022). All results in case-control studies and cohort studies conveyed an association between a plant-based diet and protective factors against digestive cancers. The cancers studied ranged from pancreatic cancer, to colorectal, colon, rectal, gastric, liver and oesophageal cancers (Zhao, 2022). In a publication by the World Health Organisation (2015), they stated that there was strong evidence to suggest the link between red meat and colorectal cancer which further supports this narrative. Colorectal cancer is described as a tumor of the digestive tract which can lead to cancer-related deaths according to Xu (2025). Also demonstrating the positive effects of a plant-based diet and colorectal cancer risk, a prospective cohort study was conducted comparing both a healthy and unhealthy plant-based diet. Including 186,675 participants free of cancer, Liu (2023) examined a 24- hour food diary questionnaire and separated the cohort into groups including unhealthy plant diets, healthy plant diets and plant-based diets. Results conveyed that a better adherence to certain diets decreased risk of colorectal cancer by 13% for plant-based diets, 15% for healthy plant-based diets and an increase of 14% for unhealthy plant-based diets (Liu, 2023). That being said, a study conducted by Key (2022) where they evaluated plant-based diets on long term health found no difference in risk between vegetarians and meat eaters.

More than 1.9 million new colorectal cancer cases including 935,000 deaths were estimated to occur in 2020 globally therefore finding ways to lower this statistic may aid in decreasing from its' current ranking of third in incidence and second in mortality worldwide (Liu, 2023). Both studies gave an explanation to support these results in the discussion section. In summary, Zhao (2022) explained that certain bioactive substances often found in abundance in a plant-based diet, can be beneficial against cancer. Along with vitamins and compounds

such as carotenoids, vitamin c, vitamin e and other antioxidants which have found to have anti-cancerous properties (Zhao, 2022). Liu (2023) also suggested an explanation for their results that were similar to this study. Liu (2023) explained that the protective association of high-quality plant-based foods and colorectal cancer could be a result of the antioxidant and anti-inflammatory properties often found in nutritious foods such as polyphenols like proanthocyanidins and anthocyanin 3- glucosides which have found to have protective activities against colorectal cancer. Another reason could be the dietary fiber within wholegrains, fruits and vegetables which regulates prebiotic microbiota and fermentation rate which also have health benefits (Liu, 2023). Contents of an unhealthy diet have adverse effects on health and more specifically on colorectal cancer risk and could be due to its' inflammatory nature and lack of fibre, prebiotics and antioxidants (Liu, 2023). Nitrates and Nitrites are preservatives found in processed meat that could also be a reason for the carcinogenic effects of processed meats (Pogorzelska-Nowicka, 2022). When this meat is cooked at a high temperature, these preservatives can be converted into nitrosamines which are known as carcinogens. Smoking and curing meat, which is common in processed meat can produce polycyclic aromatic hydrocarbons which are also carcinogenic (Pogorzelska-Nowicka, 2022). When discussing red meat, reasons as to why there are carcinogenic effects to the meat range from fat content, cooking methods and the fact that they contain heme iron. Heme iron is a form of iron that can promote free radicals in the gut (Pogorzelska-Nowicka, 2022). Free radicals fight antioxidants and can damage the DNA of cells which can lead to mutations and the development of cancer (Pogorzelska-Nowicka, 2022). The fat content that red meat contains can contribute to inflammation which could also lead to an increased risk of cancer (Pogorzelska-Nowicka, 2022). High temperature cooking including can produce harmful chemicals such as heterocyclic amines (HCAs) and Polycyclic Aromatic Hydrocarbons (PAHs) which are known to increase the risk of cancer (Pogorzelska-Nowicka, 2022).

Inflammation

Inflammation is the fundamental process involved in tissue repair following an injury. It involves a series of cellular and microvascular responses that work together to eliminate damaged tissue and promote the generation of new tissue (Schmid-Schönbein, 2006). The cascade involves increased permeability of microvessels, the adhesion of circulating cells to

the vessel walls near the injury site, the migration of various cell types, cell apoptosis, and the formation of new tissue and blood vessels (Schmid-Schönbein, 2006). Chronic inflammation has been linked to a wide range of diseases including cancer, cardiovascular disease, diabetes and autoimmune disorders. Chronic inflammation can contribute to the development of long-term health issues (Gusev, 2022). Due to the typically healthy nature of a plant-based diet, it will be interesting to evaluate whether the hypothesis that a plant-based diet can contribute to lower inflammation is true (Gusev, 2022). A cross-sectional study was conducted by Pourreza (2021) where they examined 390 overweight and obese women aged 18-48 and found that there was a significant correlation between an adherence to a plant-based diet.

Meat intake

Meat intake is one of the main aspects differentiating a plant-based diet to an omnivorous diet therefore, discovering whether meat is inflammatory could help dictate whether a plant-based diet is less inflammatory or not. By 2030, meat intake is predicted to decrease 30% (National Food Strategy Report. 2021). Plant-based diets have been identified as a dietary strategy associated with protection against chronic disease (Thomas, 2023). With high levels of vitamins, minerals, antioxidants and fibre, plant-based diets could be recognised as anti-inflammatory and work against inflammation in the body (Thomas, 2023). An American intervention by Najjar (2018) included 31 male and female (aged 32-69) overweight and obese subjects and measured inflammatory markers of participants after following a plant-based diet for 4 weeks, using a paired samples t-test to analyse the data. Results found that inflammatory indicators such as hs-CRP, IL-6, Lp-PLA2 and fibrinogen significantly decreased ($P < 0.004$) (Najjar, 2018). Another study, this time conducted on a British cohort measuring inflammatory markers measured inflammation from blood tests on over 400,000 participants, men and women aged 38- 73 (Papier, 2022). The aim of this study was to examine the cross-sectional associations of habitual meat consumption with total white blood cell count and serum-c reactive protein which will establish whether meat influences inflammation markers in blood tests (Papier, 2022). They followed up a median of 4.4 years later to conduct another blood test and compared the two to estimate associations between inflammation and total meat, unprocessed red meat, processed meat and poultry (Papier, 2022). Results showed an increase for all meats including g total meat (11.6%), unprocessed red meat (14.4%), poultry (12.8%) but processed meat in particular (38.3%) (Papier, 2022). Although there was an association with inflammatory markers, association with all meats were small and this could be because of higher adiposity (Papier, 2022). Also, regarding

inflammation, a systematic review and meta-analysis was constructed in order to evaluate the impact of vegan and vegetarian diets on inflammation markers including 1073 publications and 21 cross-sectional studies which met a specific inclusion criterion for the review. Studies included in the systematic review conducted by Menzel (2020) measured TNF-a, E-selectin or MCP-1, which are molecules involved in the immune response during inflammation. TNF-a or Tumor Necrosis Factor-alpha is known as a pro-inflammatory cytokine, and this plays a central role in immune response and inflammation (Jang, 2021). It is involved in numerous physiological processes including immune cell regulation, tissue repair along with inflammation (Jang, 2021). E-selectin is a cell adhesion molecule which plays a significant role in the inflammatory response (Silva, 2018). It is mainly expressed on endothelial cells which line blood vessels. During inflammation e-selectin expression is induced on the endothelial surface (Silva, 2018). MCP-1 or Monocyte Chemoattractant Protein-1 is a pro-inflammatory cytokine that plays a role in recruiting monocytes to other sites of inflammation (Singh, 2021). MCP-1 is produced by numerous cells including endothelial cells, fibroblasts, macrophages and smooth muscle cells when responding to inflammatory stimuli such as infection, injury and oxidative stress (Singh, 2021). According to the systematic review meta-analysis by Menzel (2020) where 1073 papers were 21 cross-sectional studies were included; results indicate that measures of TNF-a were insignificant between vegetarians and omnivores along with results for E-selectin and MCP-1 and the differences between healthy vegetarians and omnivores. A vegan diet was associated with lower levels of CRP when compared to meat eaters with a mean difference of 0.54mg/l (Menzel, 2020). They went on to explain that conclusions for vegetarians were less distinct with a mean difference of 0.25mg/l (Menzel, 2020). These inflammatory biomarker results by Menzel (2020) were noted as insignificant. From observations on these studies, it seems that meat does not have a significant impact on inflammation within the body. A study by Wang (2024) testing for inflammatory components in various foods describes the divergence in food inflammation scores because of various components including saturated fatty acids, vitamin b6 and other components. Wang (2024) explains that there are both pro-inflammatory and anti-inflammatory properties in animal fats therefore this could be the reason as to why inflammatory-related results surrounding meat and animal fats are inconsistent or non-significant. Non-significant results were also prevalent in a systematic review by Ilari (2025) where they evaluated the Mediterranean diet, vegan diet and vegetarian diet and their reactions to inflammation. Results showed that both the Mediterranean diet along with plant-based diets are likely to reduce the level of the most commonly investigated biomarkers to

identify oxidative stress or early inflammation (Ilari, 2025). That being said, some studies suggested non-significant results to inflammation, but the author explains that small changes in biomarkers can be clinically significant in the long term (Ilari, 2025).

Healthy diet

Nutritious diets in general have found to reduce the risk of chronic disease and mortality through decreasing inflammation (Wang [2], 2023). Although meat may not have significant positive or negative effects on bodily inflammation, healthy or unhealthy plant-based diets could have different effects on inflammation within the body. A study by Wang [2] (2023) explored differences in a healthy plant-based diet and an unhealthy diet with inflammation on a total of 27,915 participants from the USA in the form of a 24-hour recall dietary interview. They found that a plant based diet (0.83) and a healthy plant-based diet (0.79) was associated with lower inflammation whilst an unhealthy plant (1.18) based diet was associated with higher inflammation (Wang [2], 2023). This indicates that a whole food or healthy diet is essential for lowering inflammation rather than a plant-based diet as a whole (Wang [2], 2023). Another study conducted by Wang (2024.) tests foods and their impact on inflammation whilst discussing inflammatory components in detail. Wang (2024) took a weighted approach to measure inflammation, testing 45 foods in total. Results stated that textured vegetable protein (dry) demonstrated remarkable anti-inflammatory activity as a result of its' extremely high isoflavone content according to Wang (2024). Textured vegetable protein (also known as soy protein) contain isoflavones daidzein, genistein and glycitein which have multiple health benefits but main one being its' anti-inflammatory properties. Vegetables also include high levels of flavonoids which also have key anti-inflammatory components (Wang, 2024). From a plant-based diet perspective, this protein source is commonly used in cooking therefore those who consume a healthy plant-based diet which includes textured vegetable protein or soy protein and vegetables, could result with a highly anti-inflammatory diet (Wang, 2024). Saturated fats were stated as crucial for inflammation by Wang (2024) which could be a reason as to why Wang (2023) explains the negative impact of an unhealthy plant-based diet on health and inflammation. **WHY IS THIS??**

Chapter 4: Conclusion

Conclusions

In conclusion, overall, research suggests that a plant-based diet can have various benefits in relation to obesity, cancer and inflammation. Obesity-related disease found to have decreased in participants according to Ivanova (2021) and many studies reported weight loss as a result of plant-based diets (Tran, 2020). To further support statements by Ivanova, Jarvis (2022) found that a healthy plant based diet worked effectively in obesity-related disease prevention. Calorie density is likely to be the reason for weight loss in many as a calorie deficit could be more achievable when following plant-based diets (Greger, 2020).

A study by the WHO (2015) outlines the carcinogenic effects of meat in humans. There is evidence that vegetables contain bioactive substances that work against cancer (Zhao, 2022), whilst the cooking process in processed meat may be carcinogenic (pogorzelska-Norwicka, 2022). There were mixed results on a plant-based diets effects on digestive cancers although most suggesting a decrease in likelihood or prevalence (key, 2022). This could be a result of the high fibre intake of a plant-based diet which naturally improves the gut microbiome which in turn, may decrease likelihood of digestive cancers (Liu, 2023). There were links associating plant-based diets with a decreased likelihood of prostate cancer but more resesrach has to be done for a more certain answer (Gupta, 2022).

Links between plant-based diets and inflammation were less significant than cancer and obesity. Plant-based proteins compared with meat protein showed no changes in inflammation status (Turner, 2017). That being said, certain diets including plant-based diets according to Ilari (2015) were found to decrease inflammation. Healthy plant-based diets were highlighted for decreasing inflammation and found to be effective, whilst unhealthy plant-based diets found to increase inflammation (Wang, 2023).

Research improvements

Research on plant-based diets and health was plentiful, and this was evident when constructing this review. Although, research on inflammation should be increased to deliver a better understanding on the subject and to encourage further research such as this project and others similar. In turn, more research on food types and inflammation is needed to progress in this field.

Challenges to practical applications

It's possible that some farming industries may face complications if many adopt a plant-based diet. With current issues surrounding cost of living, many industries may rely on a good

economy, including the farming industry. This could mean that a movement of a plant-based diet change may be detrimental for these businesses. Another challenge could be that cooking and nutritional knowledge is needed for health improvements when adopting a plant-based diet (Rickerby, 2024). Many may choose plant-based alternatives that contain high levels of saturated fats which might have adverse effects on health instead of inverse.

Opportunities to practical applications

According to sources studied in this project, many explain the positive effects of a plant-based diet on obesity and weight loss. A decreased level of national obesity and obesity-related disease cases may relieve pressure of the NHS. Adoption of more plant-based diets may also lower cancer prevalence in the United Kingdom.

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Appendices

Author	Type	Overview	Result / Conclusion
Stewart, C. (2021)	Review	Used information from a 10 year study conducted by NDNS on meat intake.	There was an overall decrease in meat intake.
Watling, C. (2022)	Prospective Analysis	They conducted a prospective analysis including 472,377 UK participants to explore the correlation between cancer risk and meat intake.	Lower risk of post menopausal breast cancer, and colorectal cancer in low meat-eaters.
National Food Strategy (2021)	Independent Review	A detailed current review on food and the environment.	Explores issues surrounding the possible negative impact of meat consumption on climate change.
Feher (2020)	Comprehensive review	A review exploring a plant-based diet and its' barriers to the switch.	The plant-based diet has many barriers which can make the diet less desirable.
Office for Health Improvement and Disparities (2024)	Article	Statistics on Obesity	Obesity is prevalent and 64.0% of adults aged 18 years and over in England were estimated to be

			overweight or living with obesity in 2022.
World Health Organisation (2024)	Article	Statistics on Obesity	1 in 8 people suffered with obesity in 2022.
Ivanova, S. (2021)	Review	Exploring the correlation between a plant-based diet and weight management	Data suggests a positive correlation between a plant-based diet and weight loss.
Greger, M. (2020)	Review article	The evidence surrounding a plant-based diet for weight loss.	Exploring the correlation between a plant-based diet and weight loss.
Pan, A. (2012)	Prospective cohort study	Exploring the influence that red meat can have on health.	Red meat has been linked to an increased risk of total, CVD and cancer mortality.
Richi, E.B. (2015)	Review	Highlights health risks associated with meat consumption	Although meat is a valuable source of micro and macro-nutrients, long-term consumption of meat can lead to a variety of diseases and mortality.
Schmid-Schönbein, G.W. (2006)	Review Article	Explaining Inflammation	An overview on the science surrounding inflammation
Pahwa, R. (2018)	Article	Explaining Chronic inflammation	An overview on chronic inflammation
Cancer Research UK. (2019)	Article	Statistics on cancer in the United Kingdom	385,477 new cancer cases in 2017-2019
World Health Organisation. (2015)	Article	An article highlighting the carcinogenic effects of red meat and processed meat	Evidence links processed and red meat to colorectal, pancreatic and prostate cancer.
Turner- McGreivy, G. (2018)	Review	A review exploring a plant-based diets role in overweight and obese prevention	Individuals consuming plant based diets tend to have lower BMI and they also appear

			effective for weight loss.
Kim, J. (2022)	Cohort study	Identifying colorectal cancer according to plant-based dietary patterns	Greater adherence to plant-based diets rich in healthy plant foods and low in less healthy plant foods is associated with a reduced risk of CRC in men, but not in women.
NHS. (2023)	Article	An overview on obesity including facts, statistics and mechanisms.	Information on obesity, BMI, causes and treatment.
Tran, E. (2020)	Systematic Review	A systematic review on a plant-based diets effect on weight status	A plant-based diet may have beneficial health effects on body weight and BMI in many individuals
Laouali, N. (2021)	Prospective Cohort Study	BMI association with a plant-based diet	Results varied. Only healthy plant-based foods were associated with a decrease in BMI.
Greger, M. (2020)	Review	Whole food plant-based diet's effects on weight loss	Plant-based diet is effective for weight loss along with other health benefits.
Wright, N. (2017)	Randomised controlled trial	Using a plant-based diet to see whether it correlates to numerous diseases	A plant-based diet had improvements on BMI, cholesterol and more.
Astrup, A. (2000)	Meta-analysis	The role of dietary fat is explored along with vegetable and animal fats.	A low-fat diet, high in protein and fibre-rich carbohydrates, mainly from different vegetables, fruits and whole grains, is highly satiating for fewer calories than fatty foods.
Wang, T. (2023)	Review	A review highlighting benefits and drawbacks of a plant-based diet in detail.	A plant-based diet consisting of minimal amounts of processed foods can

			decrease risk of certain diseases.
Gupta, N. (2022)	Systematic Review	A review exploring the impact of a plant-based diet on prostate cancer incidence and outcomes	General favourable results overall and demonstrated either a lower risk of prostate cancer or no significant difference
Zhao, Y. (2022)	Meta- Analysis	Explores the correlation between plant-based diets and digestive cancers	The plant-based diet had a positive impact on protection against digestive cancers.
Liu, F. (2023)	Prospective Study	Including 186,675 participants, the study explored the risk of colorectal cancer when supplementing a plant-based diet.	Colorectal cancer risk increased with unhealthy plant based diet and decreased with a healthy plant based diet
Dinu, M. (2017)	Meta- analysis	A meta-analysis of observational studies explored different plant-based diets and their health outcomes	A plant-based diet can significantly lower risk of heart disease along with other diseases such as cancer
Tan, J. (2024)	Systematic review / meta-analysis	Discover a plant-based diets' effects on all-cause mortality	An unhealthy plant-based diet increased all-cause mortality whilst a healthy plant based diet decreased.
Parra-Soto, S. (2022)	Prospective cohort study / meta-analysis	An investigation to see the effects of meat, vegetarian and pescetarian diets on all cancer and cancer sites.	Compared with meat-eaters, vegetarians and pescatarians had a lower risk of overall, colorectal, and prostate cancer.
Papier, K. (2022)	Study	Higher meat intake and its' result on inflammatory markers	A higher meat consumption was positively associated with inflammatory markers. That being said, the magnitudes of associations were small and mainly due to higher adiposity.

Thomas, M.S. (2023)	Review	Plant-based diet and insulin resistance and inflammation	Regarding the different types of PBDs discussed, they concluded that vegan diets are very effective in lowering body weight and reducing inflammatory markers
Wang, Y.B (2023)	Review	Analysing the association between diet quality and inflammation	Healthy plant foods were associated with lower levels of inflammation
Wang, Z. (2024)	Study	Exploring the inflammatory markers in certain foods	Inflammatory foods are consumed too much. Anti-inflammatory plant foods were not consumed enough.
Menzel, J. (2020)	Systematic review / meta analysis	Plant based diets and inflammatory markers	Vegan and vegetarian diets were associated with lower inflammation.
Jang, D.I. (2021)	Review	Detailed scientific information on inflammation within the body	Explanation of inflammation
Silva, M. (2018)	Review	Scientific information on inflammation	Explanation of Inflammation
Singh, S. (2021)	Review	Detailed information on inflammation and MCP-1 in particular	Explanation of this process
Li, H. (2022)	Prospective study	Healthful and unhealthful plant-based diets and its links to all-cause and specific mortality	An increased intake of a plant-based diet rich in healthier plant foods is associated with lower mortality risk, whereas a plant-based diet that emphasizes less-healthy plant foods is associated with high mortality risk among adults in America.
Zamani, B. (2020)	Cross-sectional study	Exploring the association between	Healthy plant foods had inverse effects

		a plant-based diet and obesity and psychological profile.	on psychological disorders whilst unhealthy plant foods were associated with increased risk of obesity as well as depression.
Fernández-Fígares, M. (2025)	Review	Analysing the association between whole plant foods and breast cancer prevention and survival.	Evidence demonstrates that while animal protein portions increase, risk of breast cancer and other diseases increase.
Pogorzelska-Nowicka, E. (2022)	Review	Details on the carcinogenic effects of processed and red meat	Heat-treating meat may deliver carcinogenic effects.
Pourreza, S. (2021)	Cross- sectional study	Exploring a plant-based diets effects on inflammatory markers	A plant based diet found to decrease inflammation and improve sleep quality
Jarvis, S.E. (2022)	Systematic Review	Reviewing plant-based dietary patterns and obesity risk	Plant based diets found to have inverse effects on weight loss and obesity prevention.
Key, T.J. (2022)	Study	A study that explores a plant based diets effects on long-term health.	Plant-based diets had inverse effects on overall cancer but found no significant difference for colorectal cancer
Ilari, S. (2025)	Systematic review / meta-analysis	Analysing the difference in inflammation between three diets (Mediterranean diet, vegan diet, vegetarian diet).	All had lower inflammation but may be counted as non-significant due to the small difference in results. Author decided to include results as significant due to the small results adding up and could have a positive impact over a significant amount of time.

Gusev, E. (2022)	Article	A recent article explaining the mechanisms and science of inflammation	An explanation of the nature of inflammation
Masood, B. (2023)	Review	A review explaining the causes of obesity	Physical inactivity, epidemiology, genetics and intrauterine environment are all causes of obesity.
Xu, C. (2025)	Article	An article explaining the nervous system and colorectal cancer.	Colorectal cancer, a common malignant tumor of the digestive tract, significantly contributes to cancer-related deaths
Xu, X. (2025)	Prospective study	A study exploring a plant-based diet's impact on all-cause and specific mortality.	A plant-based diet has found to reduce risk of all cause and cause-specific mortality.
Rickerby, A. (2024)	Systematic Review	A study highlighting the main barriers to adopting a plant-based diet.	Financial, Convenience, emotional and environmental reasons are all some aspects as to why people avoid adopting a plant-based diet.
Metoudi, M. (2025)	Cross-sectional study	An article explaining the results of a cross-sectional survey on barriers towards plant-based diets.	Most registered dietitians have a positive outlook on plant-based diets and would recommend them to patients.
Wang, X. (2015)	Meta-analysis	A meta-analysis of prospective cohort studies to measure the association between mortality risk and red and processed meat	Mortality increased overall as processed and red meat increased
Satija, A. (2019)	Review	A review analysing results from 3 prospective cohort studies on whether changes in plant-	Over 4 year intervals, increasing plant foods, especially healthy

		based diets can effect weight gain or loss.	plant foods can increase weight loss.
Henein, M.Y. (2022)	Article	This article explores the scientific role of inflammation in cardiovascular disease	Inflammation is linked to cardiovascular disease.
Herpich, C. (2022)	Article	An article that explores different diets and their link to inflammation.	Inflammation is lower in those who have a diet abundant in plants and those who follow a plant-based diet.
Sarma, S. (2021)	Review Article	This review article looks into obesity related diseases and particular trends in obesity related complications and obesity trends.	Obesity is a chronic multisystem disease which is associated with increased morbidity.
Huang, R.Y. (2016)	Meta-analysis	A meta-analysis of randomised controlled trials to see whether plant-based diets go hand-in-hand with weight reduction.	Plant-based diets had links to weight loss.
Barnard, N.D. (2022)	Randomised Cross-over Trial	A study that measures weight and cardiometabolic risk after a 16 week assigned diet (either vegan or med diet)	Results conclude that vegan diets are successful as weight loss diet as they lost an average of 6kg.
Liu, P.J. (2020)	Research Article	This article discusses people's preferences when aiming to stick to a calorie deficit	Many people choose to eat large volumes of low calorie-density foods over smaller portions
Najjar, R.S. (2018)	Secondary analysis of trial	This study measured inflammation after 4 weeks following a plant-based diet	Plant based diet has favourable effects on inflammation
Kim, J. (2021)	Prospective study	A study measuring disease- associated mortality and its' relation to a plant-based diet.	Results suggest that overall, a greater adherence to a plant-based dietary pattern was associated with lower total mortality whilst an unhealthy

			plant-based diet was associated with greater mortality rates
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