Dr. Melanie Tidman DHSc, MA, OTR/L., MHP

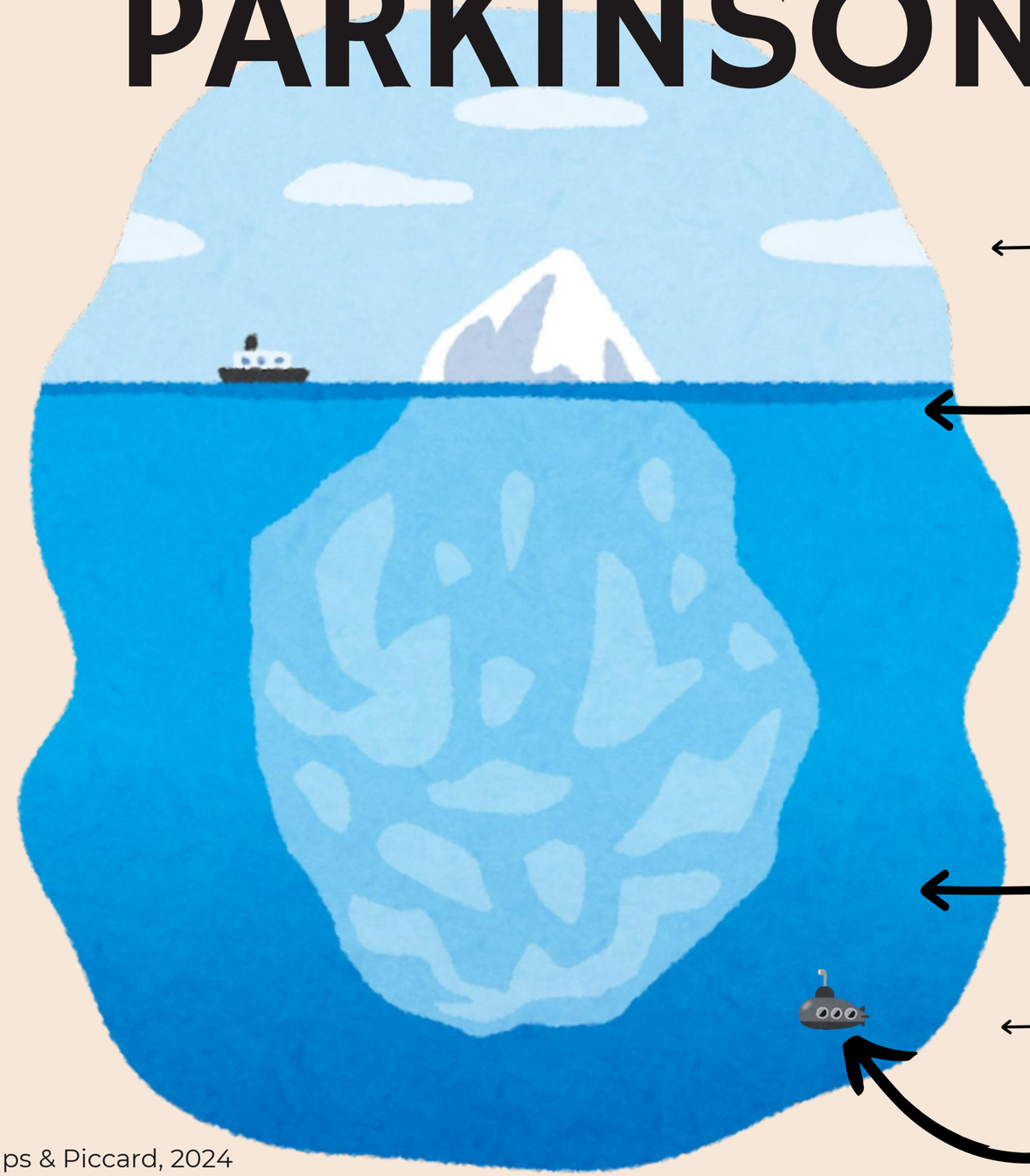
EIGHT YEARS OF EVIDENCE

RESEARCH IN PARKINSON'S DISEASE

OBJECTIVES

- Discuss Research Contributions Over the Past Five Years
- Discuss Results of Studies Conducted for Colorado Parkinson Foundation
- Discuss How to Apply Research Results to Mitigate Parkinson’s Disease Symptoms
- Discuss Next Steps in Research

PARKINSON'S DISEASE



MOTOR SYMPTOMS
Tremor, Rigidity, Gait Problems, Speech Problems

NON-MOTOR SYMPTOMS
Sleep, Fatigue, GI Issues, Depression, Apathy, Anxiety

COMMON CAUSES
Environmental Exposures, Pesticides, Insecticides, Pollution, H/O Head Trauma, Heavy Metals, Nutrition

LEAST COMMON CAUSES
Genetic Mutations (<5% of Cases)

NEW RESEARCH
Mitochondrial Dysfunction

Phillips & Piccard, 2024

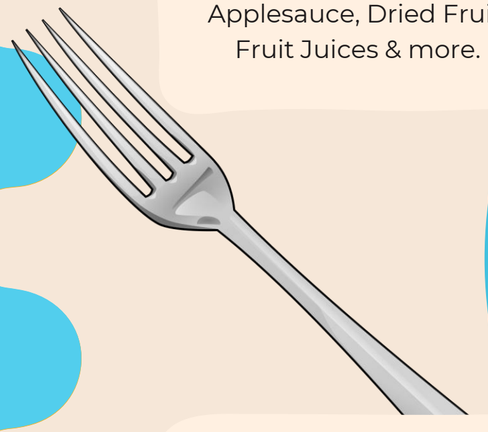
WHY DO RESEARCH?

WHAT WE'VE BEEN EATING SINCE 1977

CURRENT GOVERNMENTAL GUIDELINES

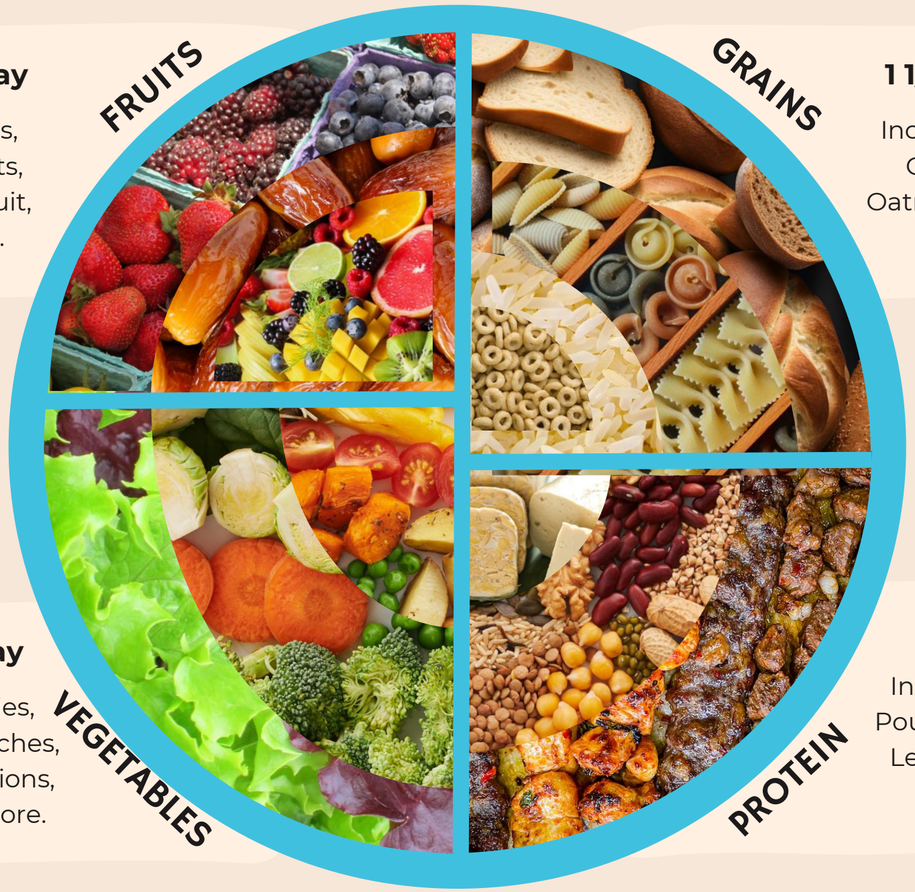
1/2 - 2 Cups Per Day

Includes: Fresh Fruits, Berries, Canned Fruits, Applesauce, Dried Fruit, Fruit Juices & more.



2/3 - 4 Cups Per Day

Includes: Leafy Veggies, Tubers, Tomatoes, Starches, Potatoes, Avocado, Onions, Cabbage, Squash & more.



1 1/2 - 5 Cups Per Day

Includes: Breads, Tortillas, Cereal, Popcorn, Rice, Oatmeal, Pasta, Grits, Foods Made From Grains.

2 - 7 oz Per Day

Includes: Seafood, Meat, Poultry, Eggs, Beans, Peas, Lentils, Nuts, Seeds, Soy, Tofu, & Tempeh.

DAIRY

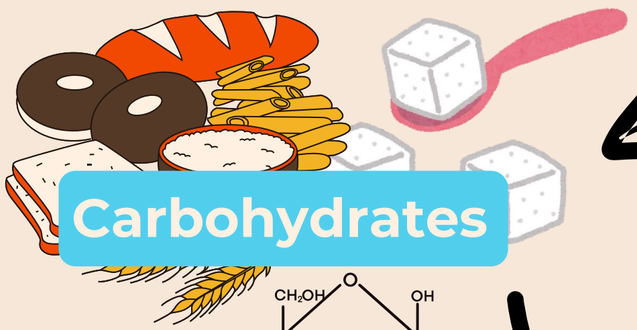
2 - 7 oz Per Day

Includes: Yogurt, Milk, Cheese, Lactose-free Milk, Fortified Soy Milk & Yogurt. **DOES NOT** include High Fat Content Milk Products such as Cream Cheese, Sour Cream, Cream & Butter.

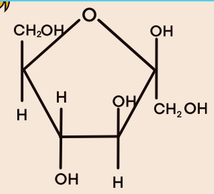
Hey...where are the fats?

See: MyPlate.gov

THE AXIS OF ILLNESS



Carbohydrates



Insulin Resistance

Chronic Disease

Obesity

Inflammation

KETO FOR NEURO

Ketogenic Diet for Neurological Conditions

70%-80%

Fats

20%-25%

Proteins

5%-10%

Carbohydrates

KETO FOR METSYN

Ketogenic Diet for Metabolic Conditions:
Weight Loss, Diabetes, GI Issues, &
Autoimmune Disorder

60%-70%

Fats

25%-35%

Proteins

5%-7%

Carbohydrates

THE LOW CARB HIGH FAT KETOGENIC DIET

NUTS & BERRIES

SALAD & VEGGIES

EGGS & CHEESE

MEAT, POULTRY & SEAFOOD

FATS & OILS

Click on the lightbulb icon to navigate back to this slide.

Click on a study's icon below to navigate to the information about that study.

RESEARCH TIMELINE

2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025

PARKINSON'S DISEASE AND EXERCISE

A Community Partnership Pilot Study

KETO & PARKINSON'S: DEPRESSION & ANXIETY

Parkinson's Depression & Anxiety Pilot Study

PARKINSON'S DISEASE CASE STUDY

Effects of Keto on Parkinson's

KETO & PARKINSON'S: LONGITUDINAL STUDY

Parkinson's Depression & Anxiety 6 Month Study

METABOLIC SYNDROME CASE STUDY

Keto & MetSyn in Parkinson's Disease

NOW RECRUITING!

Sleep, Fatigue, Cognition & Parkinson's: A 36 Week Pilot Study

2018-2019

PARKINSON'S DISEASE & EXERCISE

A Community Partnership Case Study

THE EFFECTS OF A COMMUNITY-BASED PARKINSON'S WELLNESS RECOVERY(PWR) PROGRAM ON MOBILITY, BALANCE, COGNITION, ADLS/SELF CARE, AND QOL: A COMMUNITY PARTNERSHIP PILOT STUDY

Tidman and Skotzke

QR CODE

Scan or Click the QR Code to Read the Published Article

CLINICAL QUESTION

QUESTION BEING RESEARCHED:

How does participation in a community exercise program affect symptoms of Parkinson's Disease (PD), depression, socialization, and motivation to improve quality of life

THE WHY

Persons with PD suffer from depression and lack motivation to participate in community activities or exercises.

VARIABLES

EXERCISE

Fitness Education Program at the YMCA.

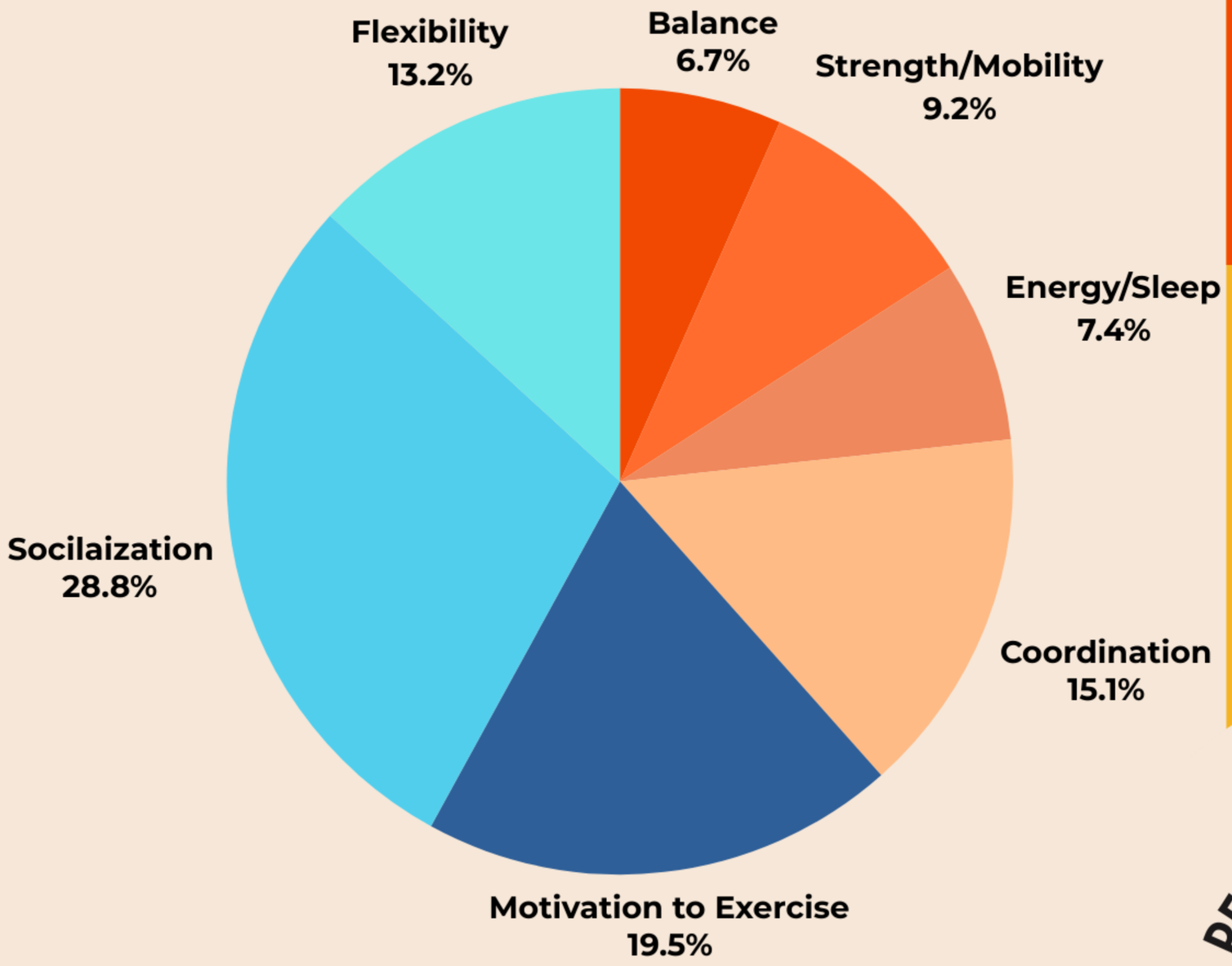
FITNESS PROGRAM

60 minute classes, Dr. Becky Farley PWR UP, two times per week for 8 weeks.

PARTICIPATION

Study participants participated in 90% of study classes.

RESULTS



PERCENT OF PARTICIPANTS HAD IMPROVEMENTS OHM

CONCLUSION

WHAT WAS STUDIED

The study involved a community exercise program provided at a local YMCA designed specifically for persons with PD to enhance their motor skills, balance, and coordination.

WHAT THE RESULTS TOLD US

This community-based exercise study showed improvements in socialization, self-reported coordination and motivation to exercise.

INTERESTED TO STUDY NEXT

Future research should include larger study sample sizes and longer duration studies to determine the benefits of a long-term exercise intervention on physical, emotional, and mental health in PD.

2020-2022

KETO & PARKINSON'S: DEPRESSION & ANXIETY

⏰ Parkinson's Depression & Anxiety Pilot Study

EFFECTS OF AN LOW CARBOHYDRATE, HIGH FAT, KETOGENIC DIET ON PARKINSON'S DISEASE SYMPTOMS, DEPRESSION, ANXIETY, QOL, AND GENERIC HEALTH: A PILOT STUDY

Tidman, White & White

QR CODE

Scan or Click the QR Code to Read the Published Article

CLINICAL QUESTION

QUESTION BEING RESEARCHED:

To evaluate a low carbohydrate, high fat, ketogenic diet (LCHF/KD) on symptoms, depression, anxiety, and biomarkers in adults with Parkinson's Disease (PD).

THE WHY

Evidence presents nonpharmacological treatments as viable treatments adding to therapeutic options, and suggests a LCHF/KD is a beneficial treatment of chronic diseases such as obesity, diabetes, cardiovascular disease, and in applications for NDDs, specifically, Parkinson's Disease

VARIABLES

TIMEFRAME

16 participants over a 12 week time period.

SYMPTOMS & BIOMARKERS

Analyzed changes in BMI, Waist Measurements, Symptoms of PD, Depression, Anxiety, Cardiovascular Risk, QoL Data.

DIET

Low Carb, High Fat Ketogenic Diet

RESULTS

This is just a snapshot of the results from the study.

Biomarkers		Difference					P Value
Biomarker	Test	N	Mean	SD	Median	IQR	P
BMI (kg/m^2)	t	16	-2.54	1.66	-2.24	2.21	<0.0001
Fasting Insulin (mIU/L)	S	16	-4.70	6.10	-2.45	7.30	0.0018
HgA1C (%)	t	16	-0.46	0.69	-0.30	0.15	<0.0001
PAS Total Score	t	16	-3.06	4.06	-2.00	7.00	0.0086
UPDRS Subtotal	t	16	-1.06	1.39	-1.00	2.00	0.0079
Waist Circumference (in)	t	16	-3.84	3.21	-3.88	4.25	0.0002
Weight (lbs)	t	16	-16.81	11.03	-15.25	14.40	<0.0001

RESULTS

Changes in biomarkers were observed

81.6% Saw a difference of 0.88 to 5.88 in their BMI

47.7% Saw a difference of 4.70 to 16.9 in their Fasting Insulin

47.7% Saw a difference of 3.84 to 10.26 in their Waist Measurement

47.7% Saw a difference of 16.81 to 38.87 in their Weight

CONCLUSION

WHAT WAS STUDIED

The effects of a LCHF/KD on a participants' depression, anxiety, and health biomarkers over 12 weeks. The study provided pre-post-study comparisons of biomarkers, weight, waist measurement, United Parkinson's Disease Rating Scale (UPDRS), Parkinson's Anxiety Scale (PAS), and CESDR Depression Scale after 12 weeks on a LCHF/KD.

WHAT THE RESULTS TOLD US

Statistically, significant improvements occurred in several measurements, anxiety scores, and Part I of Parkinson's Disease rating scale.

INTERESTED TO STUDY NEXT

Future research should investigate the efficacy of using the LCHF/KD in patients with PD and symptoms of depression and anxiety over an extended study period (>12 weeks) to note any additional effects of the nutritional intervention on Neurodegenerative disease symptoms, and stage progression in Parkinson's Disease.

2022

PARKINSON'S DISEASE CASE STUDY

Effects of Keto on Parkinson's

EFFECTS OF A KETOGENIC DIET ON SYMPTOMS, BIOMARKERS, DPERESSION, AND ANXIETY IN PARKINSON'S DISEASE: A CASE STUDY

Tidman

QR CODE

Scan or Click the QR Code to Read the Published Article

CLINICAL QUESTION

QUESTION BEING RESEARCHED:

We documented a case study involving a 68-year-old female with PD stage I and a history of mild symptoms of anxiety and depression. The subject adopted a traditional ketogenic diet (fats 70%; protein 25%; carbohydrates 5%) for 24 weeks. Baseline, 12-week and 24-week biomarkers (lab results), and scores on a depression scale, anxiety scale, and the Unified Parkinson's Disease Rating Scale (UPDRS) (parts I-III) for PD symptoms were compared.

THE WHY

There is a growing interest in the investigation of nutritional approaches to managing symptoms, depression and anxiety in Parkinson’s Disease.

BACKGROUND

PARTICIPANT

- Female
- 68 years of age.
- Married
- Student
- Adult children.

MEDICAL HISTORY

- Parkinson’s Disease Stage 1; Mild Parkinson’s Disease motor symptoms - mainly during daily activities.
- Mild-to-moderate symptoms of anxiety and depression.
- Issues with blood glucose control.

SCALES

- Center for Epidemiologic Studies Depression Scale-Revised (CESDR-R-20).
- The Parkinson’s Anxiety Scale (PAS)
- The Unified Parkinson’s Disease Rating Scale (UPDRS)

VARIABLES

TIMELINE

Measurements taken at baseline, 12 weeks, and 24 weeks.

DATA ANALYZED

Analyzed changes in HbA1C, Triglycerides, HDL, Fasting Insulin, High Sensitivity C-Reactive Protein, Waist Measurements, CESDR Score, PAS Score, Cardiac Risk Ratio, Hs-CRP.

DIET

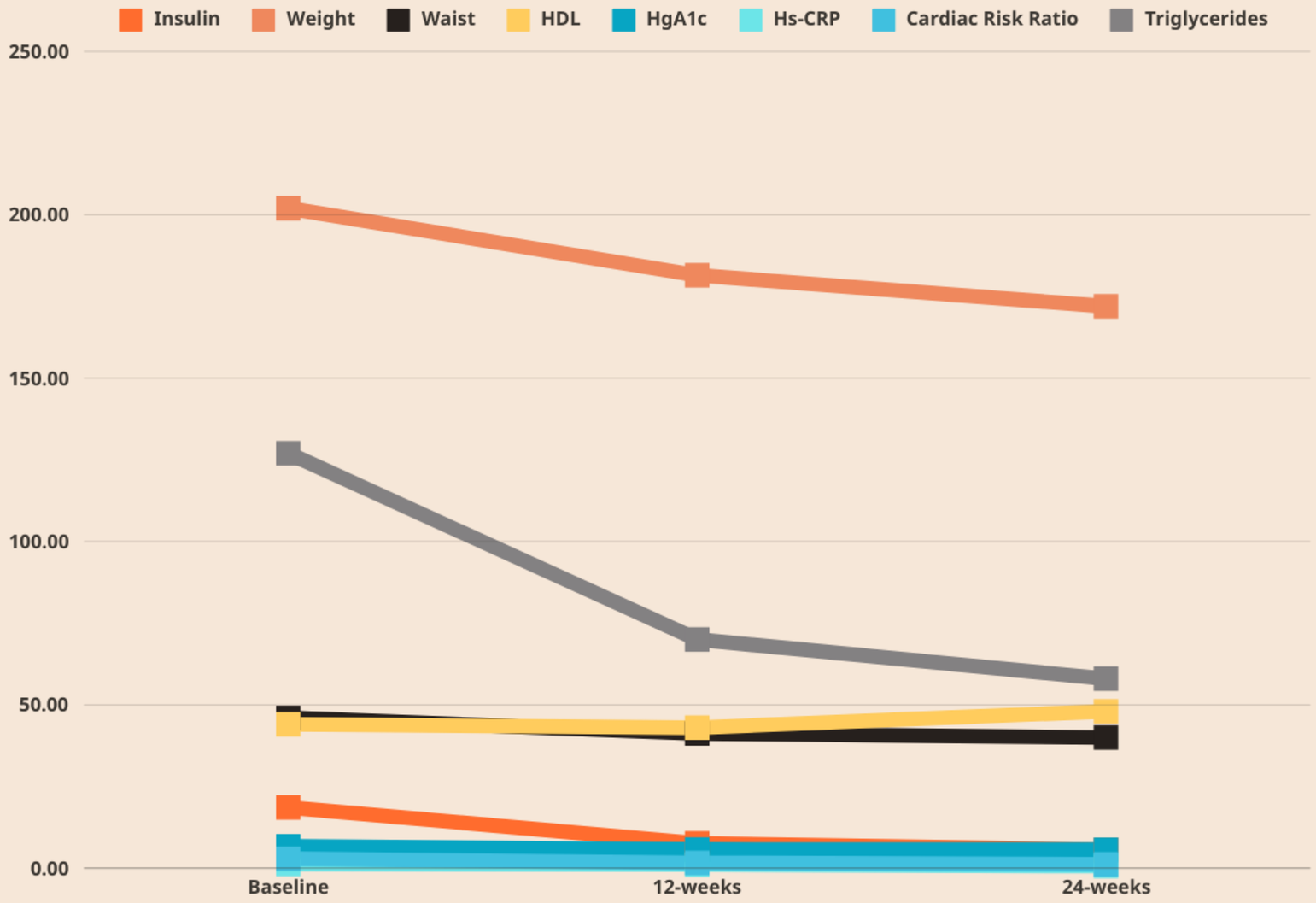
Low Carb, High Fat Ketogenic Diet

RESULTS

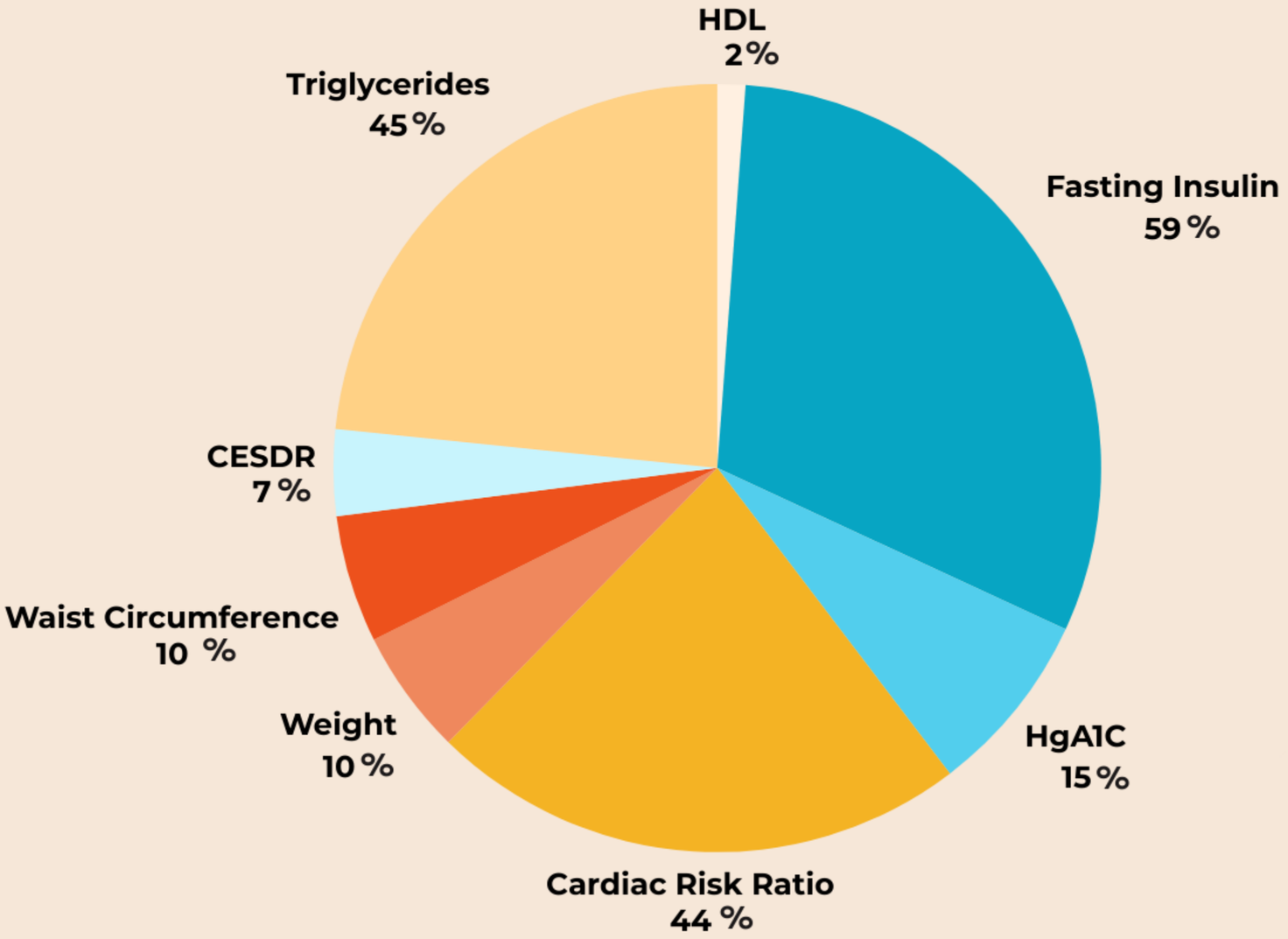
This is just a snapshot of the results from the study.

Biomarker	Baseline	12 Weeks	24 Weeks	Change (Points)
CESDR Score	42	39	34	-8
PAS Score	23	20	17	-6
UPDRS Score	24	26	33	+9
Triglycerides (mg/dL)	127	70	58	-69
HDL (mg/dL)	44	43	48	+4
Hs-CRP (mg/L)	1.29	1.09	0.64	-0.65
Fasting Insulin (mIU/L)	18.6	7.6	5.6	-13
HgA1C (%)	6.7	5.7	5.6	-1.1
Cardiac Risk Ratio (Tri/HDL)	2.88	1.62	1.20	-1.68
Weight (lbs)	202	181.5	172.4	-29.6
Waist Circumference (in)	46	41.25	40	-6

RESULTS

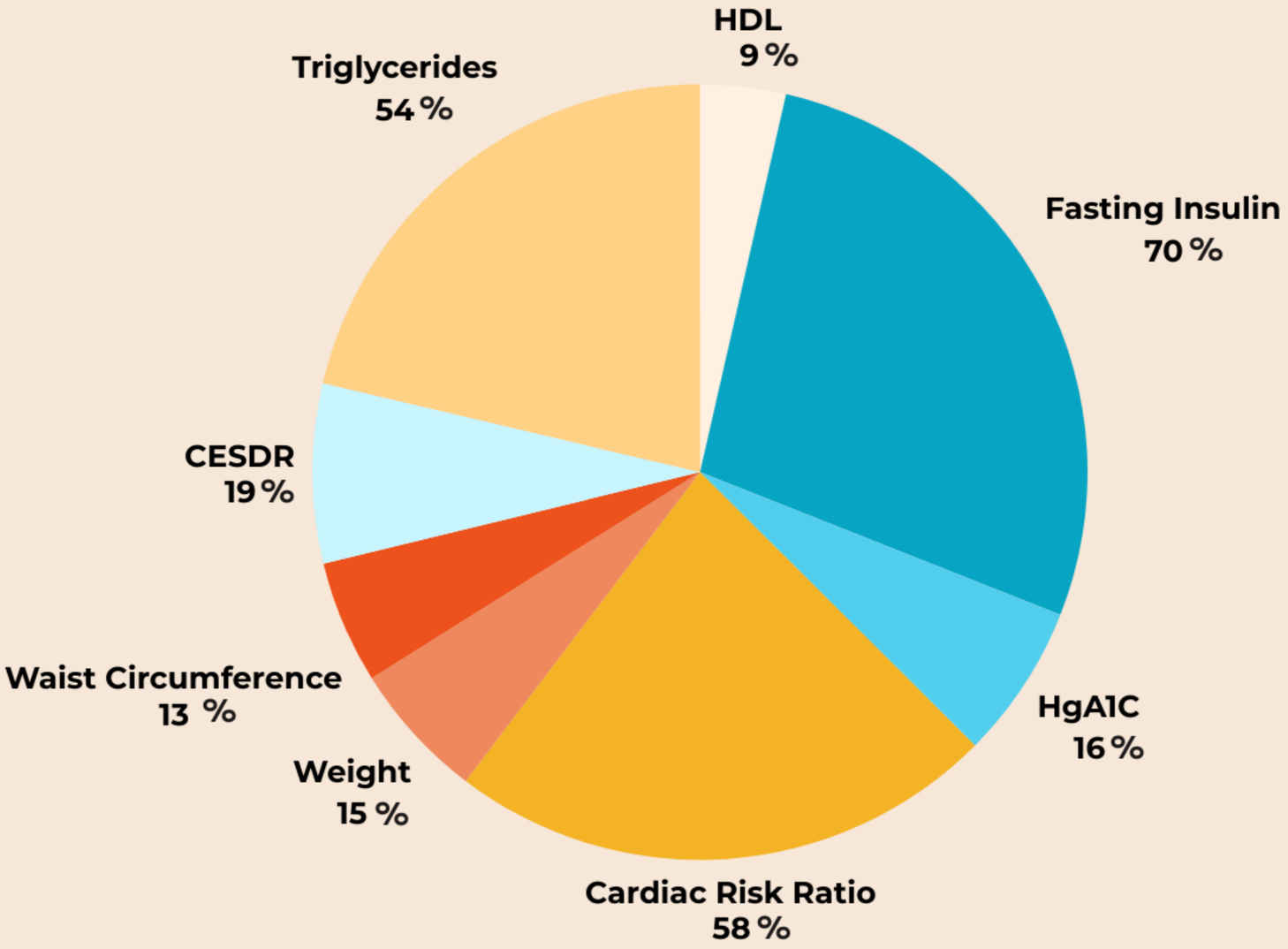

Insulin
Weight
Waist
HDL
HgA1c
Hs-CRP
Cardiac Risk Ratio
Triglycerides
250.00
200.00
150.00
100.00
50.00
0.00
Baseline
12-weeks
24-weeks

RESULTS @ 12 WEEKS



PERCENT DECREASE IN MEASUREMENT AFER 12 WEEKS WHEN COMPARED TO BASELINE

RESULTS @ 24 WEEKS



PERCENT DECREASE IN MEASUREMENT AFER 24 WEEKS WHEN COMPARED TO BASELINE

RESULTS

Overall Changes in Biomarkers in 24 Weeks

69.9%

Decrease in Fasting Insulin

54.3%

Degrease in Triglycerides

58.3%

Decrease in Cardiac Risk Ratio

CONCLUSION

WHAT WAS STUDIED

The subject adopted a traditional ketogenic diet (fats 70%; protein 25%; carbohydrates 5%) for 24 weeks. Baseline, 12-week and 24-week biomarkers (lab results), and scores on a depression scale, anxiety scale, and the Unified Parkinson's Disease Rating Scale (UPDRS) (parts I-III) for PD symptoms were compared

WHAT THE RESULTS TOLD US

Significant improvements were observed in all health biomarkers, including a reduction in HbA1C, C-reactive protein (CRP), triglycerides, and fasting insulin, along with weight loss and reduction in cardiac risk factors. Improved high-density lipoprotein (HDL) levels were seen at 12 weeks and 24 weeks, along with improved anxiety symptoms at the 12-week and 24-week mark. Minimum improvement was seen on depression scale scores at 24 weeks

INTERESTED TO STUDY NEXT

The results of this case study demonstrate the need for more randomized clinical trials to further test the effectiveness of the LCHF/KD in improving cognitive function and controlling or reducing symptoms of depression, anxiety, and both motor and nonmotor symptoms in PD.

2023-2024

KETO & PARKINSON'S: LONGITUDINAL STUDY

Parkinson's Depression & Anxiety 6 Month Study

IMPACT OF A KETO DIET ON SYMPTOMS OF PARKINSON'S DISEASE, BIOMARKERS, DEPRESSION, ANXIETY AND QUALITY OF LIFE: A LONGITUDINAL STUDY

Tidman, White & White

QR CODE

Scan or Click the QR Code to Read the Published Article

CLINICAL QUESTION

QUESTION BEING RESEARCHED:

Evidence suggests low-carbohydrate diets (LCHF) may assist in treating neurodegenerative diseases such as Parkinson's disease (PD); however, gaps exist in the literature.

THE WHY

Patients and medical providers are progressively interested in non-pharmacological, adjunct treatments for PD symptoms due to significant side effects in some individuals

MEASURMENTS

Taken at baseline, 12 weeks, and 24 weeks; UPDRS Scale, CEDS-R-20 Scale, PAS Scale, and Blood Glucose/Ketone Meter Measurements.

DATA ANALYZED

Analyzed changes in HbA1C, Triglycerides, HDL, Fasting Insulin, High Sensitivity C-Reactive Protein, Waist Measurements, CESDR Score, PAS Score, Cardiac Risk Ratio, Hs-CRP.

DIET

Low Carb, High Fat Ketogenic Diet; tracked using Myfitnesspal or submitted logs.

VARIABLES

RESULTS

This is just a snapshot of the results from the study.

Biomarkers		Difference					P Value
Biomarker	Test	N	Mean	SD	Median	IQR	P > 0.05
BMI	t	7	-3.34	2.97	-3.03	3.40	0.0249
CESDR SCORE	T	7	-4.57	4.89	-4.00	8.00	0.0484
Fasting Insulin (mIU/L)	T	7	-7.53	8.22	-6.50	13.30	0.0516
HgA1C (%)	T	7	-0.31	0.36	-0.20	0.20	0.156
Hoehn & Yahr Stage	T	7	-0.79	0.64	-1.00	1.50	0.0171
PAS SCORE	S	7	-6.29	2.87	-7.00	2.00	0.313
Triglycerides (mg/dL)	S	7	-39.43	61.69	-15.00	67.00	0.469
Triglycerides to HDL Ratio	S	7	-1.21	2.11	-0.31	1.64	0.469
UPDRS SUBTOTAL	T	7	-1.71	1.80	-2.00	3.00	0.0453
Waist Circumference (in)	T	7	-5.68	5.32	-4.75	7.00	0.0302
Weight (lbs)	T	7	-23.43	20.69	-23.00	15.60	0.0242

RESULTS

Changes in biomarkers were observed

81.9% Saw a difference of 0.37 to 9.28 in their BMI

47.7% Saw a difference of 7.53 to 24 in their Fasting Insulin

47.7% Saw a difference of 39.4 to 162.8 in their Triglycerides

81.9% Saw a difference of 2.74 to 44.12 in their Weight

CONCLUSION

WHAT WAS STUDIED

This 24-week pilot study was to investigate the effects of a KD nutritional approach for the treatment of symptoms of PD (UPDRS I and II scores), biomarkers of metabolic health body mass index (BMI), Hemoglobin A1C (HbA1C), fasting insulin, triglycerides, C-reactive protein, high-density lipoprotein (HDL) and total cholesterol. In addition, the study looked at symptoms of depression and anxiety in people with PD between the ages of 36–85. Furthermore, participants shared their personal experiences before, during, and after the implementation of the KD intervention in connection with their QoL.

WHAT THE RESULTS TOLD US

Statistically significant differences were seen in HgA1C at 24 weeks. In addition to fasting blood work, other metabolic health biomarkers were BMI, weight and waist circumference. Results comparing baseline to 24-week study participant assessments demonstrated statistically significant improvements BMI changes, weight and waist circumference, anxiety scores and PD symptoms.

INTERESTED TO STUDY NEXT

Future research with a more extensive, randomized control approach is needed to generalize these findings and explore dietary interventions as an alternative treatment for PD symptoms, depression, anxiety, metabolic health biomarkers and overall QoL.

2024

METABOLIC SYNDROME CASE STUDY

Keto & MetSyn in Parkinson’s Disease

KETOGENIC DIET AND METSYN IN PARKINSON'S DISEASE - SYMPTOMS, BIOMARKERS, DEPRESSION AND ANXIETY: A 24 WEEK CASE STUDY

Tidman

QR CODE

Scan or Click the QR Code to Read the Published Article

CLINICAL QUESTION

QUESTION BEING RESEARCHED:

This case report documents a 24-week KD intervention for a 53-year-old man with multiple comorbid diagnoses, PD (Hoehn-Yahr stage IIa) with a history of morbid obesity with increased waist circumference, prediabetes, hyperinsulinaemia and significantly impaired mobility with chronic back pain, anxiety disorder and depression

THE WHY

The use of therapeutic carbohydrate restriction (TCR) in the form of a ketogenic diet (KD) to induce nutritional ketosis is increasingly being used to manage symptoms under investigation and to identify the potential application of nutritional ketosis in NDDs such as PD.

BACKGROUND

PARTICIPANT

- Male
- 53 years of age.
- Multiple Comorbid Diagnoses

MEDICAL HISTORY

- Parkinson’s Disease Stage IIa (Hoehn-Yar)
- Morbidly Obese
- Prediabetic
- Hyperinsulinemia
- Significant mobility impairment with chronic back pain.
- Anxiety disorder and depression.

SCALES

- Center for Epidemiologic Studies Depression Scale-Revised (CESDR-R-20).
- The Parkinson’s Anxiety Scale (PAS)
- The Unified Parkinson’s Disease Rating Scale (UPDRS)

VARIABLES

TIMELINE

Measurements taken at baseline, 12 weeks, and 24 weeks.

DATA ANALYZED

Analyzed changes in HbA1C, Triglycerides, HDL, Fasting Insulin, CRP, Weight, Waist Measurements, CESDR Score, PAS Score, Cardiac Risk Ratio, UPDRS Score.

DIET

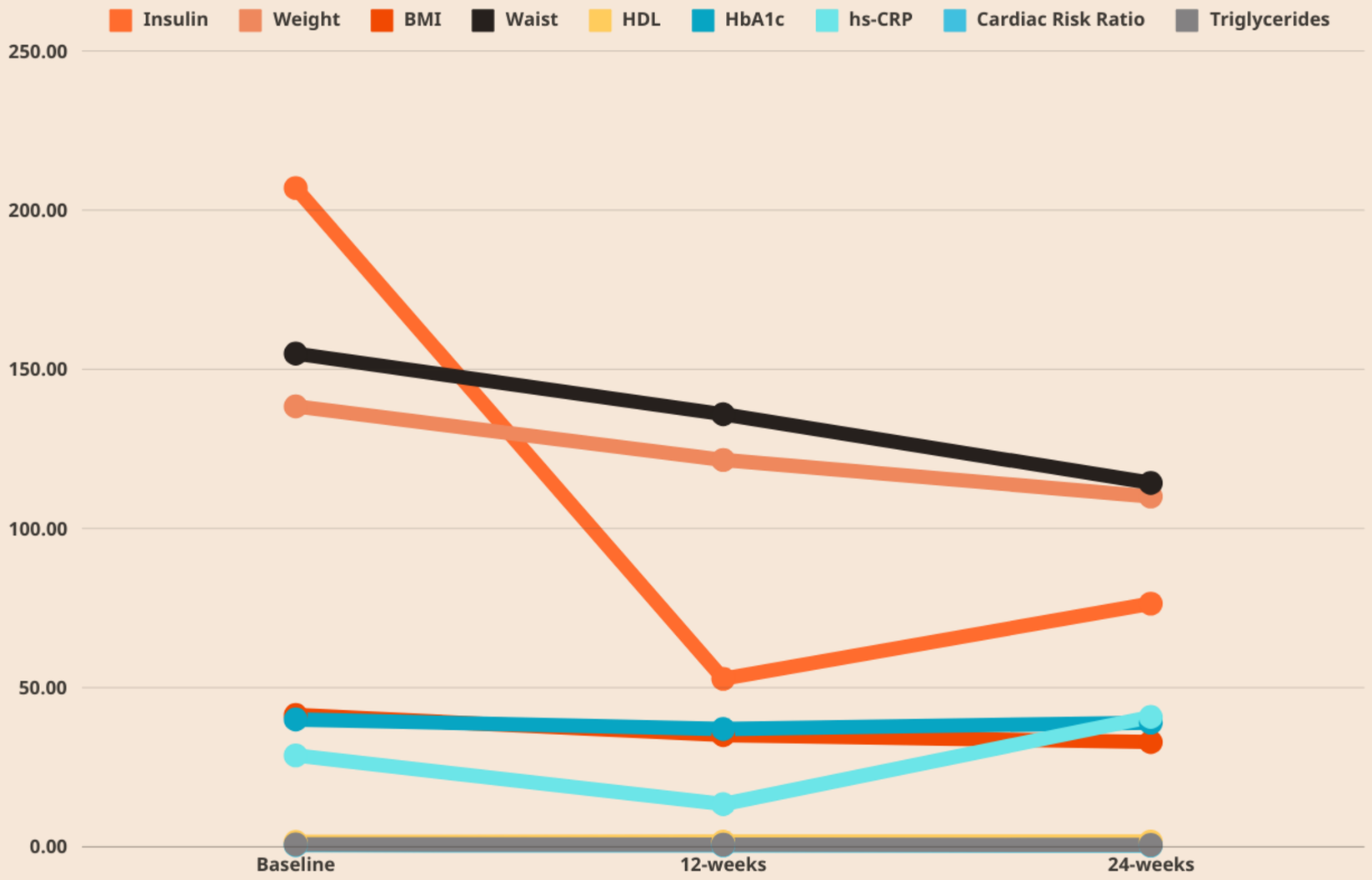
Therapeutic Carbohydrate Restriction - Ketogenic Diet (70% Fats, 25% Proteins, 5% Carbohydrates)

RESULTS

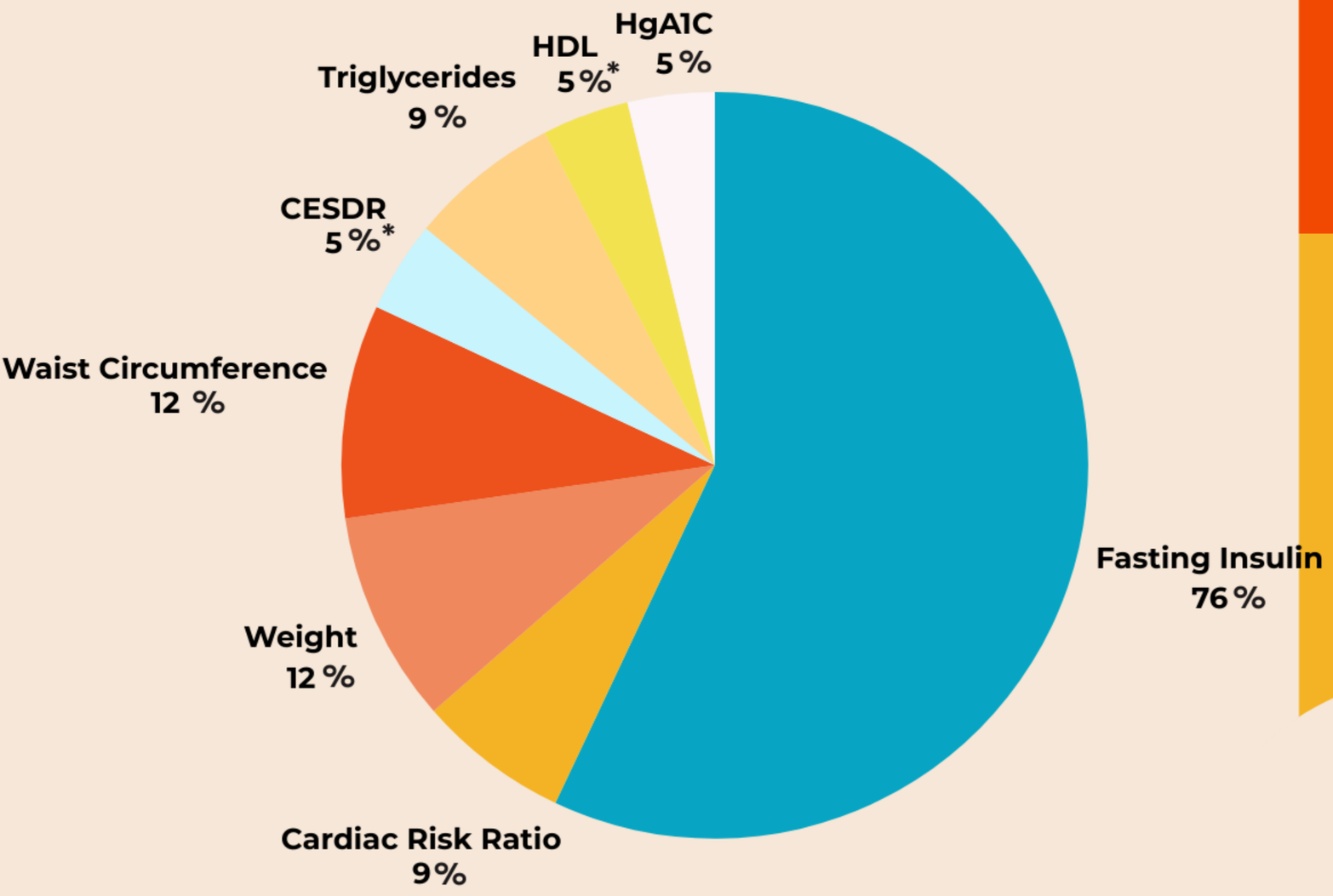
This is just a snapshot of the results from the study.

Biomarker	Baseline	Post 12 Weeks	12 Week Change	Post 24 Weeks	24 Week Change
Triglycerides (mg/dL)	69	63	-6	54	-15
HDL (mg/dL)	60	63	+3	64	+4
HgA1C (%)	5.8	5.5	-0.3	5.7	-0.1
hs-CRP (mg/l)	2.857	1.34	-1.53	4.08	+1.93
Insulin (uIU/ml)	29.3	7.6	-22.2	11.0	-18.8
Weight (lbs)	305	267.9	-37.1	242.6	-62.4
Cardiac Risk Ratio	1.15	1.05	-0.1	0.84	-0.31
Waist Measurement (in.)	61	53.5	-7.5	45	-16
PAS Score	31	21	-10	24	-7
CESD-R-20	38	41	+2	37	-1
UPDRS Total	41	39	-2	43	+2
UPDRS Pt 1	2	2	0	2	0
UPDRS Pt 2	15	10	-5	11	-4

RESULTS


Insulin
Weight
BMI
Waist
HDL
HbA1c
hs-CRP
Cardiac Risk Ratio
Triglycerides
250.00
200.00
150.00
100.00
50.00
0.00
Baseline
12-weeks
24-weeks

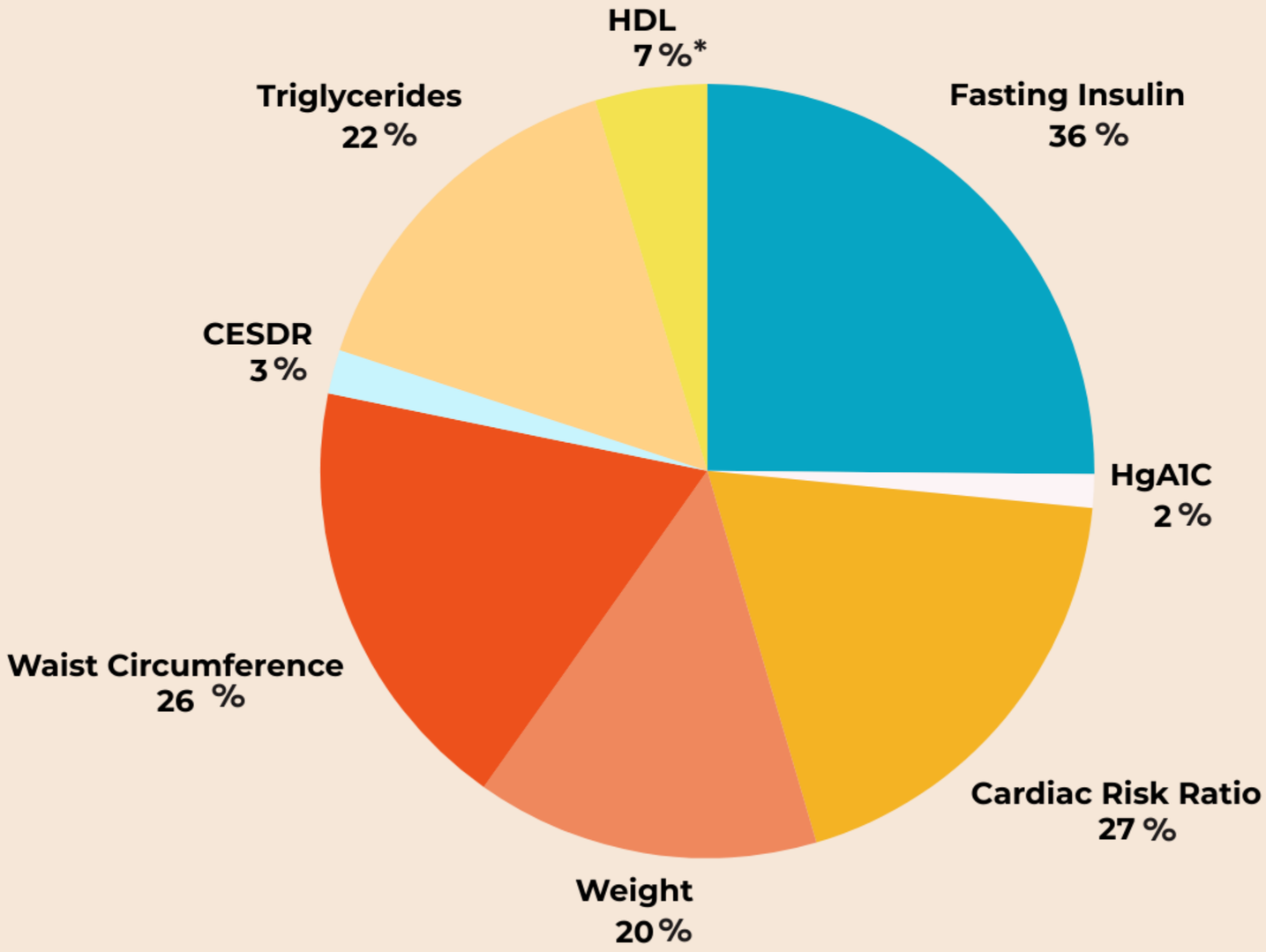
RESULTS @ 12 WEEKS



PERCENT DECREASE IN MEASUREMENT AFTER 12 WEEKS WHEN COMPARED TO BASELINE

* MEASUREMENTS INCREASED

RESULTS @ 24 WEEKS



PERCENT DECREASE IN MEASUREMENT AFTER 24 WEEKS WHEN COMPARED TO BASELINE

* MEASUREMENTS INCREASED

RESULTS

Overall Changes in Biomarkers in 24 Weeks

35.8%

Decrease in Fasting Insulin

20.5%

Decrease in Weight

26.2%

Decrease in Waist Measurement

CONCL USION

WHAT WAS STUDIED

Baseline cardiac risk ratios (CRR = triglycerides/HDL),, weight, waist circumference, HgA1C, Fasting Insulin, C-reactive Protein, and depression and anxiety scores were calculated and compared from baseline, 12 weeks and 24 weeks.

WHAT THE RESULTS TOLD US

Clinically significant results were found when baseline biomarker results and scales were compared with 12-week results. Positive trends were seen for all variables at 24 weeks. Improvements in health biomarkers, including HbAlC, high sensitivity C-reactive protein (hs-CRP), triglycerides, fasting insulin, weight loss, waist circumference and cardiac risk were observed at 12 and 24 weeks. Some improvements in scores on an anxiety scale were seen.

INTERESTED TO STUDY NEXT

This case study requires that future clinical trial studies with larger sample sizes are needed for more generalizable results.

CONSIDER THE RESEARCH... ...what could...

...Exercising...

...12 Weeks on a LCHF/Ketogenic Diet...

...24 Weeks on a LCHF/Ketogenic Diet...

...DO FOR SOMEONE WITH PARKINSON'S?

2024-2025

NOW RECRUITING!

Sleep, Fatigue, Cognition & Parkinson's: A 36 Week Pilot Study

EFFECTS OF THREE DIETARY APPROACHES ON BIOMARKERS, COGNITION, SLEEP AND FATIGUE IN PARKINSON'S DISEASE: A 36 WEEK CROSSOVER PILOT STUDY

Tidman, White & White

QR CODE

Scan or Click the QR Code to Sign Up for this **CURRENTLY OCCURING STUDY!**

VARIABLES UNDER INVESTIGATION

SLEEP QUALITY

FATIGUE LEVEL

COGNITION LEVEL

BIOMARKERS OF HEALTH

- Triglycerides
- HgA1C
- Fasting Insulin
- Hs-C-Reactive Protein
- Weight
- Waist Measurement

PROCEDURES

BASELINE

- Surveys & lab work.

PHASE I

- Eat normally for 8 weeks.
- Repeat surveys & lab work.
- 4 week washout - go back to normal baseline eating patterns.

PHASE II

- Eat normally, but add up to 5 tbsp. of Coconut Oil or MCT Oil daily for 8 weeks.
- Test blood sugar and ketone levels every morning before eating or drinking.
- Repeat surveys & lab work.
- 4 week washout - go back to normal baseline eating patterns.

PHASE III

- Eat LCHF/Ketogenic Diet for 8 weeks.
- Continue to add 5 tbsp. of Coconut Oil or MCT Oil Daily.
- Test blood sugar and ketone levels every morning before eating or drinking.
- Repeat surveys & lab work.

UPDRS SURVEY

CESD-R-20 SURVEY

PAS SURVEY

SURVEY RESOURCES

DIMINISHING TREMORS

With addition of MCT/Coconut Oil in Phase II & Phase III

IMPROVEMENT OF GAIT & MOBILITY

With addition of MCT/Coconut Oil in Phase II & Phase III

IMPROVEMENT IN SLEEP QUALITY

With addition of MCT/Coconut Oil in Phase II & Phase III

IMPROVEMENT IN Daily Fatigue Level

With addition of MCT/Coconut Oil in Phase II & Phase III

IMPROVED BLOOD SUGAR CONTROL

Those with Diabetes at baseline are no longer in the Diabetic range after Phase III.

WEIGHT & WAIST MEASURMENT

Weight loss & decrease in inches around waist seen in participants whose baseline weight was categorized as overweight.

REDUCED PARKINSON'S DISEASE SYMPTOMS

Symptoms that interfere with ADL's seen in Phase II & Phase III

REDUCED INFLAMMATORY MARKERS

Reductions in Hs-CRP Levels..

IMPROVED COGNITION

Reported feeling less "brain fog" in Phase II & Phase III

IMPROVEMENT IN KETONES

Production of Ketones indicates maintaining Natural Ketosis.

REDUCED CARDIAC RISK RATIOS

Ratio estimated the likelihood of having a cardiac event in the next 5 years.

IMPROVED ENERGY

Reported feeling more energy in Phase II & Phase III

PRELIMINARY RESULTS

WHO SHOULD JOIN

WHAT I AM AIMING TO STUDY THROUGH THE STUDY

The effects of Phase I: the Standard American Diet versus the effects of Phase II: The Standard American Diet + MCT Oil versus the effects of Phase III: The Ketogenic Diet + MCT OIL on sleep quality, fatigue, and cognition as well as biomarkers of health, and symptoms of Parkinson's Disease

WHY AM I DOING THE STUDY

To investigate the use of low carbohydrate/ketogenic nutrition on symptoms of Parkinson's Disease, sleep quality, fatigue and cognition in a crossover trial design, for 36 weeks.

WHO SHOULD JOIN THE STUDY

Persons with Parkinson’s Disease, any stage, ages 30-90 yrs.

JOIN THE STUDY!

Use the QR Code to access a form to complete if you have interest in joining the Parkinson's & Cognition: 36 Week Pilot Study that is currently recruiting!

Click on the lightbulb icon to navigate back to this slide.

Click on a study's icon below to navigate to the information about that study.

RESEARCH TIMELINE

2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025

PARKINSON'S DISEASE AND EXERCISE

A Community Partnership Pilot Study

KETO & PARKINSON'S: DEPRESSION & ANXIETY

Parkinson's Depression & Anxiety Pilot Study

PARKINSON'S DISEASE CASE STUDY

Effects of Keto on Parkinson's

KETO & PARKINSON'S: LONGITUDINAL STUDY

Parkinson's Depression & Anxiety 6 Month Study

METABOLIC SYNDROME CASE STUDY

Keto & MetSyn in Parkinson's Disease

NOW RECRUITING!

Sleep, Fatigue, Cognition & Parkinson's: A 36 Week Pilot Study

2025-?

FUTURE PLANS IN RESEARCH

Looking Ahead, Moving Forward

RESOURCES

SOCIETY OF METABOLIC HEALTH PRACTITIONERS

COLORADO PARKINSON FOUNDATION

DR. TIDMAN'S CONTACT FORM

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2018-2019 PARKINSON'S DISEASE & EXERCISE

Tidman M, Skotzke E. Effects of a community-based exercise program on mobility, balance, cognition, sleep, activities of daily living, and quality of life in PD: a pilot study. Neurodegener Dis Manag. 2020 Feb;10(1):27-39. doi: 10.2217/nmt-2019-0027. Epub 2020 Feb 7. PMID: 32031050.

2020-2022 KETO & PARKINSON'S: DEPRESSION & ANXIETY

Tidman MM, White D, White T. Effects of an low carbohydrate/healthy fat/ketogenic diet on biomarkers of health and symptoms, anxiety and depression in Parkinson's disease: a pilot study. Neurodegener Dis Manag. 2022 Apr;12(2):57-66. doi: 10.2217/nmt-2021-0033. Epub 2022 Feb 18. PMID: 35179078.

2022 PARKINSON'S DISEASE CASE STUDY

Tidman M. Effects of a Ketogenic Diet on Symptoms, Biomarkers, Depression, and Anxiety in Parkinson's Disease: A Case Study. Cureus. 2022 Mar 31;14(3):e23684. doi: 10.7759/cureus.23684. PMID: 35505754; PMCID: PMC9055978.

2023-2024 KETO & PARKINSON'S: LONGITUDINAL STUDY

Tidman MM, White DR, White TA. Impact of a keto diet on symptoms of Parkinson's disease, biomarkers, depression, anxiety and quality of life: a longitudinal study. Neurodegener Dis Manag. 2024 Jun 13:1-14. doi: 10.1080/17582024.2024.2352394. Epub ahead of print. PMID: 38869924.

2024 METABOLIC SYNDROME CASE STUDY

Tidman, Melanie. "The ketogenic diet and MetSyn in Parkinson's disease – Symptoms, biomarkers, depression and anxiety: A case study." Journal of Metabolic Health [Online], 7.1 (2024): 6 pages. Web. 13 Sep. 2024

THANK YOU!

Please use the QR Code to Contact
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