PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

RESEARCH REPORT

Effects of the AVACEN Treatment Method on the Brain and Microcirculation of Participants with Type 2 diabetes: Pilot study

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Goal and

This is a pilot project to examine differences in brain mapping and microcirculation of 6 participants with type 2 diabetes before and after a treatment with the AVACEN device.

Statement of Work

Brain mapping scans were performed on 6 participants with type 2 diabetes using a 19 channels neuro-imaging system (Appendix D) before and after a 20-minute session with the AVACEN device. Likewise, MenlaScan Pro scans were performed on the participants to determine the health of their microcirculation (Appendix E). Finally, the Gas Discharge Visualization device (GDV; Appendix F) was used to determine the bio-energetic state of the participants.

Participants

Participants were 6 people between 18 and 75 years old with a clear medical diagnostic of type 2 diabetes from a physician. Recruitment of participants was done using electronic marketing, asking health practitioners in private practice and by word of mouth.

The inclusion criteria are:

- Medical diagnostic of type 2 diabetes
- Between 18 and 75 years old
- Must have all 10 fingers (have short nails, no artificial nails; this is to perform GDV scans)

The exclusion criteria are:

- Pregnancy
- Diagnostic of mental disorder within the past 2 years
- Taking medication for blood pressure or cardiovascular problems
- Taking any painkiller medication (prescribed or over the counter)
- Smoking, vaping, consumption alcohol (less than 24 hours before the session), or any other intoxicant such as recreational drugs, marijuana, CBD

- Simultaneously participating in any other research project
- Consumption of caffeine or other stimulants within 2 hours prior to a visit
- Exercising 24 hours or less before each visit

Summary and conclusion

All six participants experienced an improvement in brain function after the AVACEN treatment. All of them also showed an increase in bioenergy. In light of these positive results, the fact that only 2 participants showed a change in cardiovascular function (one an improvement while the other experienced a degradation) is an indication that the impact of AVACEN on the cardiovascular system is likely a long-term effect and so a longitudinal study, where people are followed for longer period of time, is the only way to know the impact of AVACEN technology on the cardiovascular system.

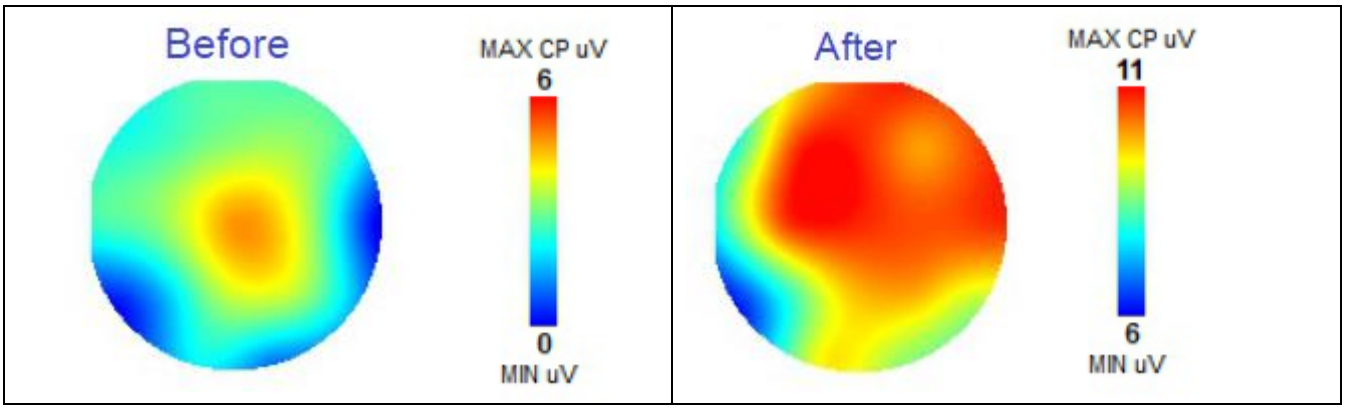
Results

Brain Mapping

Participant 1

Male, 70, expert in marketing. Before the AVACEN Treatment, he indicated that he feels relaxed and that he had some of his muscles feeling sore. There was tightness and lack of flexibility mainly in the hips and thighs. The VAS pain scale indicated low pain at about 0.5 on a scale from 0 to 10. After the treatment, he indicated that he was more relaxed and that he felt a mild change in his muscles throughout the entire body. The VAS pain scale still indicated 0.5 but he commented "Great Time! ".

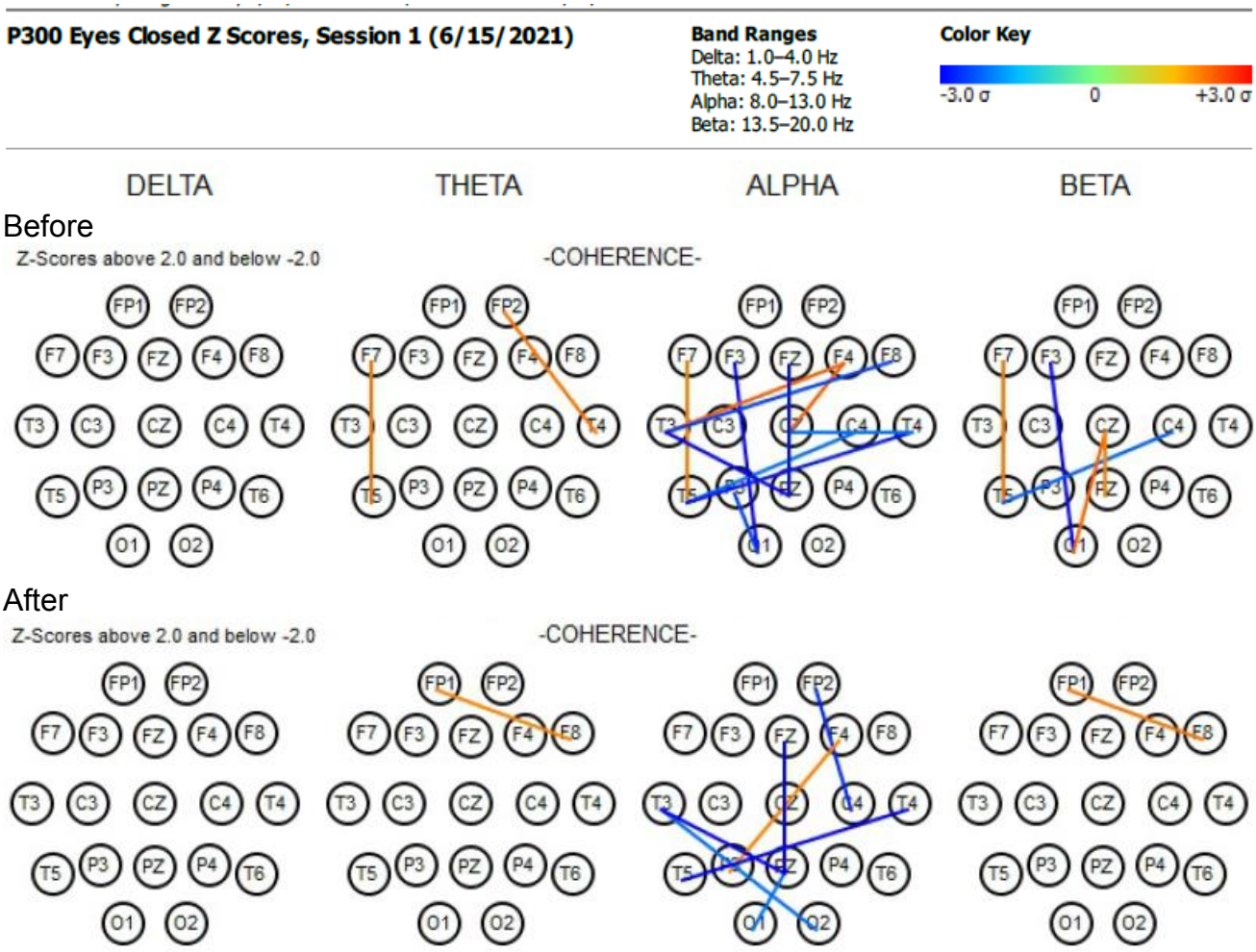
Scalp Topography Map



These scalp topographical maps were computed from the 19 EEG channels recorded by the brain mapping system (frontal part of the brain at the top and back of the head at the bottom of each circle). These maps show the amplitude of the P300 recording for each channel (in

microvolts or µV) using a color-coding scale presented on the right side of each topographical map (notice the scale is different before vs. after; red is for the maximum amplitude and dark blue for the minimum amplitude). It can be noted that when he came in, his brain was calm and became very active after the session (the max of the scale before the AVACEN treatment is the minimum on the scale after the treatment).

Coherence



The coherence diagrams above show a perspective where we are looking down at the top of the head from above (FP1 and FP2 are on the forehead while O1 and O2 are at the back of the head). EEG coherence can be defined as the normalized cross-power spectrum per frequency of two signals recorded simultaneously at different sites of the scalp. It is a measure of the synchronization between the two signals and may be interpreted as an expression of their functional interaction (1). Coherence reflects how stable the phase relationship is between two electrode sites. Coherence quantifies the degree of interaction or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, they are overly connected or locked together. Hypocoherence is called poor inter-site

interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence (orange lines represent mild hypercoherence) while blue lines represent hypocoherence. Note that when there is no line between sites, the coherence level between those sites is in the normal range. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3).

Participants were awake with eyes closed during their brain scans and so the most relevant results are those presented in the Alpha (relaxation) band. As expected, Alpha was dominant since this participant had his eyes closed. He was calm, aware, and quietly alert. What is of note here is that Participant 1 had about half of his brain sites in hypocoherence in the Alpha band before the AVACEN treatment and that improved with less brain sites in hypocoherence after the treatment. This result suggests an improvement in cognitive efficiency.

Screening Scores

Assessment Scores	Session 1 (6/15/2021)	Session 2 (6/15/2021)	Target Range
Performance Assessments			
Physical Reaction Time	372 (±87) ms	450 (±128) ms	273–393 ms
Trail Making Test A	60 sec	67 sec	73–123 sec
Trail Making Test B	99 sec	96 sec	69–135 sec
Evoked Potentials			
Audio P300 Delay	356 ms	432 ms	300–390 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	4.9 µV	11.3 µV	6–15 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	2.0	1.8	0.6–1.5
F3/F4 Eyes Closed Alpha (Magnitude)	1.0	1.5	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score result follows.

Physical Reaction time

It is a measure of functional speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. Physical Reaction Time became slow after the treatment, probably due to increased relaxation as the participant mentioned greater relaxation after the AVACEN treatment.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, Trail Making Test A was faster than the target range and stayed faster after the treatment. Trail Making B was in the normal range before and after the treatment. This participant has excellent visual/psychomotor coordination which stays excellent even while relaxed.

Evoked Potentials - Auditory P300 Delay

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Participant 1 presents an increase in the Auditory P300 delay and an increase in voltage increased after the treatment. The voltage range was too low before the treatment and in the normal range after the treatment indicating and improvement in cognitive function. For more information on P300, see https://en.wikipedia.org/wiki/P300_(neuroscience) and the references section.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Because of the initial high Theta/Beta ratio at CZ that decreased after the treatment, the participant ś brain ś cortical arousal decreased to some extent, again indicating better attention.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present substantial increase likely means that a more positive way of processing information after the treatment.

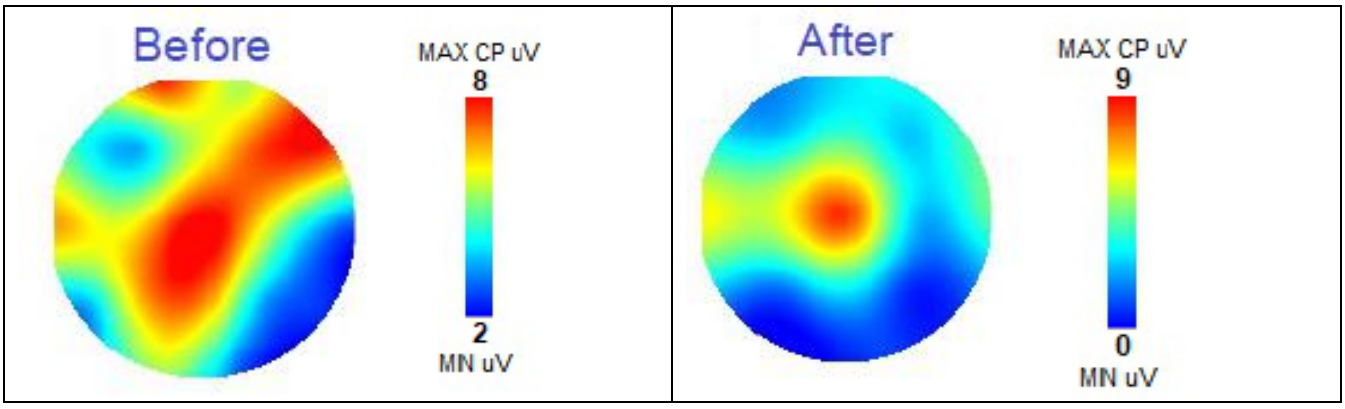
In conclusion, Participant 1 brain was activated in a way that it was not overwhelming and that did not prevent the brain from improving its functioning, instead improving alertness and its cognitive functions. His brain processed information in a much more positive way after the AVACEN treatment.

Non-Invasive Scanning and Subtle Energy Testing Lab

Participant 2

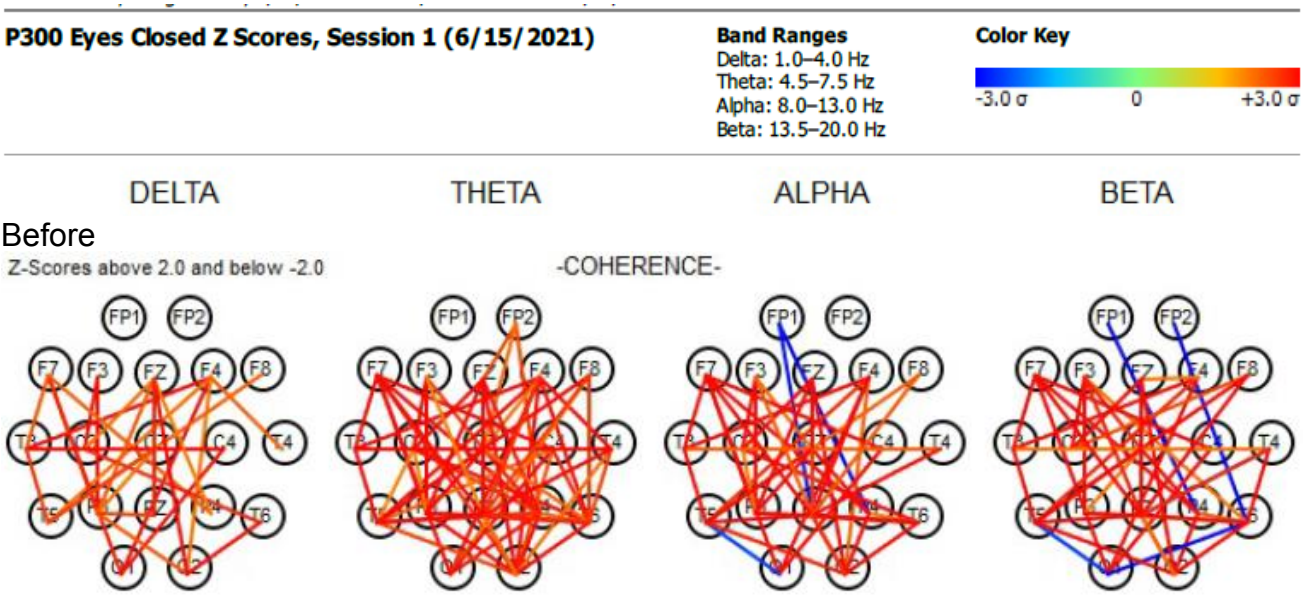
Female, 74. This participant indicated that she takes medformin for her diabetes and levothyroxine for her thyroid. Before the AVACEN Treatment, she indicated that she feels relaxed and that she had no pain.

Scalp Topography Map

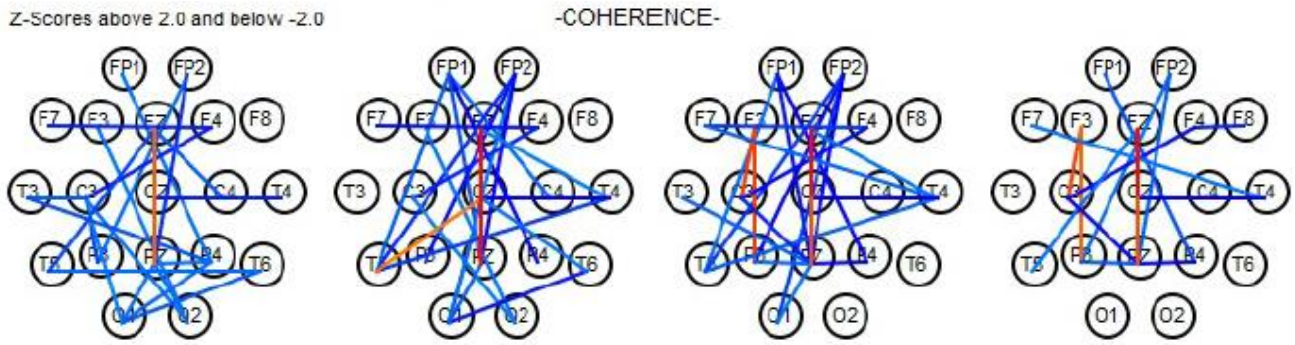


These scalp topographical maps were computed from the 19 EEG channels recorded by the brain mapping system (frontal part of the brain at the top and back of the head at the bottom of each circle). These maps show the amplitude of the P300 recording for each channel (in microvolts or μV) using a color-coding scale presented on the right side of each topographical map (notice the scale is different before vs. after; red is for the maximum amplitude and dark blue for the minimum amplitude). It can be noted that when she came in, her brain was quite activated and became calmer after the session (the scale of the maps is almost the same before and after the treatment).

Coherence



After



The coherence diagrams above show a perspective where we are looking down at the top of the head from above (FP1 and FP2 are on the forehead while O1 and O2 are at the back of the head). EEG coherence can be defined as the normalized cross-power spectrum per frequency of two signals recorded simultaneously at different sites of the scalp. It is a measure of the synchronization between the two signals and may be interpreted as an expression of their functional interaction (1). Coherence reflects how stable the phase relationship is between two electrode sites. Coherence quantifies the degree of interaction or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, they "talk" to each other as if they are overly connected or locked together. Hypocoherence is called poor inter-site interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence while blue lines reflect hypocoherence. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3). Participants were awake with eyes closed during their brain scans and so the most relevant results are those presented in the Alpha (relaxation) and Beta (normal brain activity) bands.

Before the AVACEN treatment, the brain of this participant was in extreme hypercoherence involving most of the brain sites measured and for all frequency bands. The brain was so much in hypercoherence that there was no clear dominance of any frequency band. After the treatment, the brain became hypocoherent, allowing the brain to calm down. Hypocoherence was a bit more pronounced in the Alpha and Theta band an indication of brain relaxation. This enormous change in brain coherence suggests an improvement in cognitive efficiency and attention.

Screening Scores

Assessment Scores	Session 1 (6/22/2021)	Session 2 (6/22/2021)	Target Range
Performance Assessments			
Physical Reaction Time	471 (±155) ms	364 (±81) ms	280–404 ms
Trail Making Test A	90 sec	90 sec	80–136 sec
Trail Making Test B	173 sec	134 sec	77–149 sec
Evoked Potentials			
Audio P300 Delay	240 ms	484 ms	308–400 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	7.6 µV	9.1 µV	6–14 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	1.8	0.8	0.6–1.5
F3/F4 Eyes Closed Alpha (Magnitude)	0.4	1.1	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score follows.

Physical Reaction time

It is a measure of functional speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. Physical Reaction Time was slow before the treatment and went into the normal range after the session, indicating an improvement in physical reaction time.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, Trail Making Test A was in the low side of the normal range before and after the treatment (there was no change at all, staying at 90 sec). Trail Making B was slower than normal before the treatment and went into the normal range after the treatment. This participant ś visual/psychomotor coordination improved after the AVACEN treatment.

Evoked Potentials - Auditory P300 Delay

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Participant 1 presents an increase in the Auditory P300 delay and an increase in voltage increased after the treatment. The Audio P300 Delay was too low before the treatment, an indication of faster than normal reaction, and went into the normal range after the treatment indicating

and improvement in cognitive function. For more information on P300, see https://en.wikipedia.org/wiki/P300_(neuroscience) and the references section.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Because of the initial high Theta/Beta ratio at CZ that decreased after the treatment, the participant's brain cortical arousal decreased to some extent, indicating better attention.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

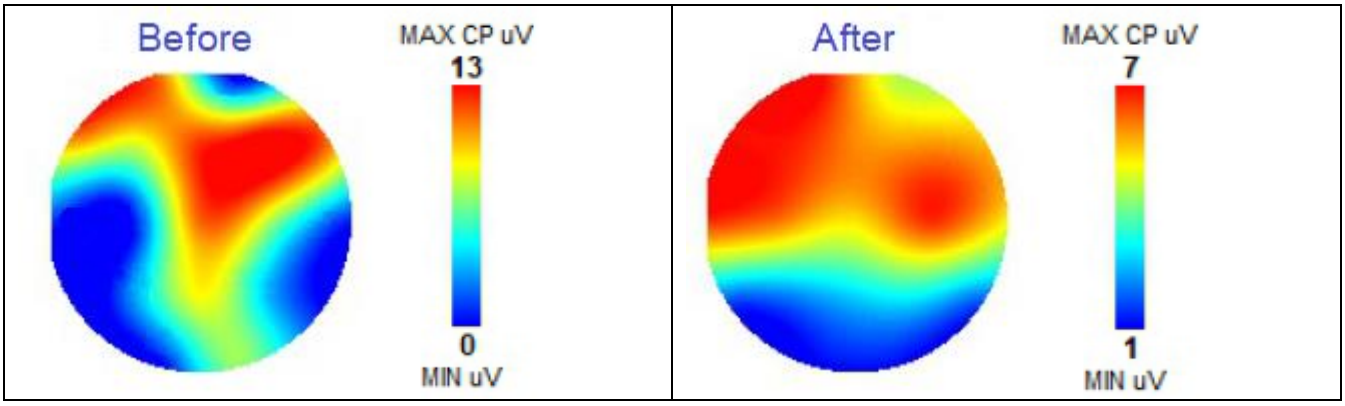
Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present substantial increase likely means that a more positive way of processing information after the treatment.

In conclusion, Participant 2 brain was in overdrive and inefficient before the AVACEN treatment and improved tremendously in cognitive function and in visual/psychomotor coordination. It also processed information in a much more positive way after the AVACEN treatment.

Participant 3

Male, 64. His highest level of education is at the doctorate level, and he works as a consultant. He indicated that he experiences problems or pain in his bones, joints, or muscles as well as back or neck discomfort and that he is under the care of a healthcare professional for other health/medical problems. Before the AVACEN Treatment, he indicated that he feels relaxed and that he had pain in all body parts. He did not fill the VAS so his level of pain is unknown. He indicated that he sustained injuries as a strongman.

Scalp Topography Map



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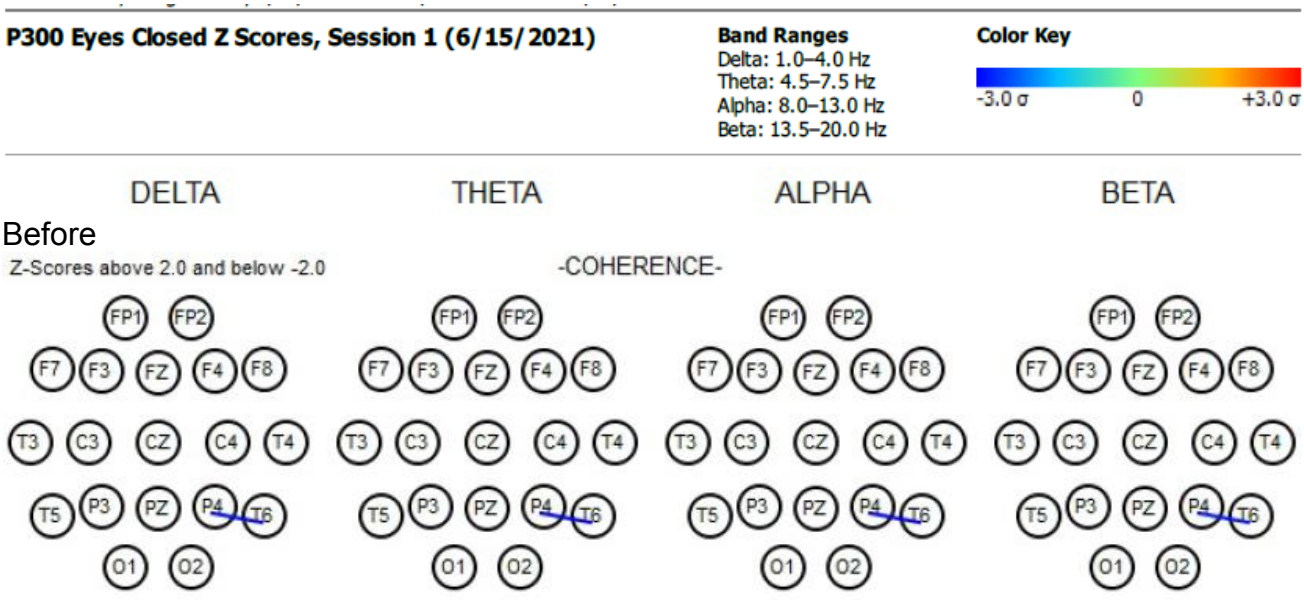
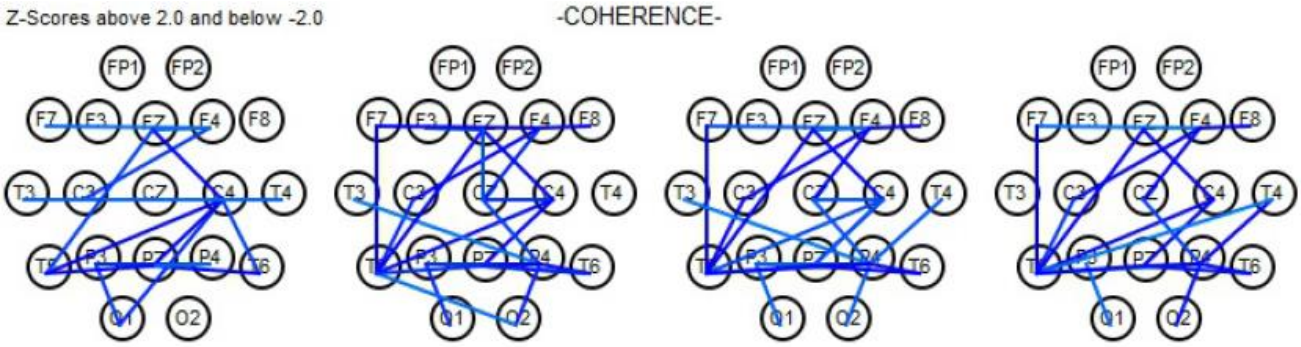
Coherence



After



The coherence diagrams above show a perspective where we are looking down at the top of the head from above (FP1 and FP2 are on the forehead while O1 and O2 are at the back of the head). EEG coherence can be defined as the normalized cross-power spectrum per frequency of two signals recorded simultaneously at different sites of the scalp. It is a measure of the synchronization between the two signals and may be interpreted as an expression of their functional interaction (1). Coherence reflects how stable the phase relationship is between two electrode sites. Coherence quantifies the degree of interaction or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, the y h a v e t o s- tmau lc kh ” ,“ c they are overly connected or locked together. Hypocoherence is called poor inter-site interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence while blue lines reflect hypocoherence. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3). Participants were awake with eyes closed during their brain scans and so the most relevant results are those presented in the Alpha (relaxation) and Beta (normal brain activity) bands.

Before the AVACEN treatment, the brain of this participant was in normal coherence involving one line of hypocoherence for all brain frequencies (Beta, Alpha, Theta and Delta). most of the brain sites measured and for all frequency bands. There was no clear dominance oat any frequency band. After the treatment, the brain became hypocoherent, allowing the brain to become calmer. After the treatment, hypocoherence was quite similar at all frequency bands. This enormous change in brain coherence suggests a relaxation of the brain.

Screening Scores

Assessment Scores	Session 1 (8/20/2021)	Session 2 (8/20/2021)	Target Range
Performance Assessments			
Physical Reaction Time	395 (±105) ms	385 (±133) ms	264–380 ms
Trail Making Test A	68 sec	78 sec	63–107 sec
Trail Making Test B	82 sec	86 sec	60–117 sec
Evoked Potentials			
Audio P300 Delay	⬓ 240 ms	292 ms	289–375 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	⬓ 12.8 µV	6.7 µV	6–15 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	⬓ 2.3	1.2	0.7–1.6
F3/F4 Eyes Closed Alpha (Magnitude)	1.0	1.2	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score follows.

Physical Reaction time

It is a measure of speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. Physical Reaction Time was slow before the treatment and improved a tiny bit after the treatment, possibly due to increased relaxation.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, these measures are in the target range before and stayed in that range after the treatment. This participant has normal visual/psychomotor coordination.

Evoked Potentials - Auditory P300

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Here we have that the Auditory P300 Delay was too fast before the treatment and slowed down to be in the normal range after the treatment, an indication of brain relaxation. At the same time the Audio P300 voltage decreased by almost a factor of 2 after the treatment, again indication of brain relaxation. There was clearly a change in cognitive function for the better.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Because of the initial very high Theta/Beta ratio at CZ that decreased by almost a factor of 2 after the treatment, the participant benefited from a relaxation effect already mentioned with other parameters.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

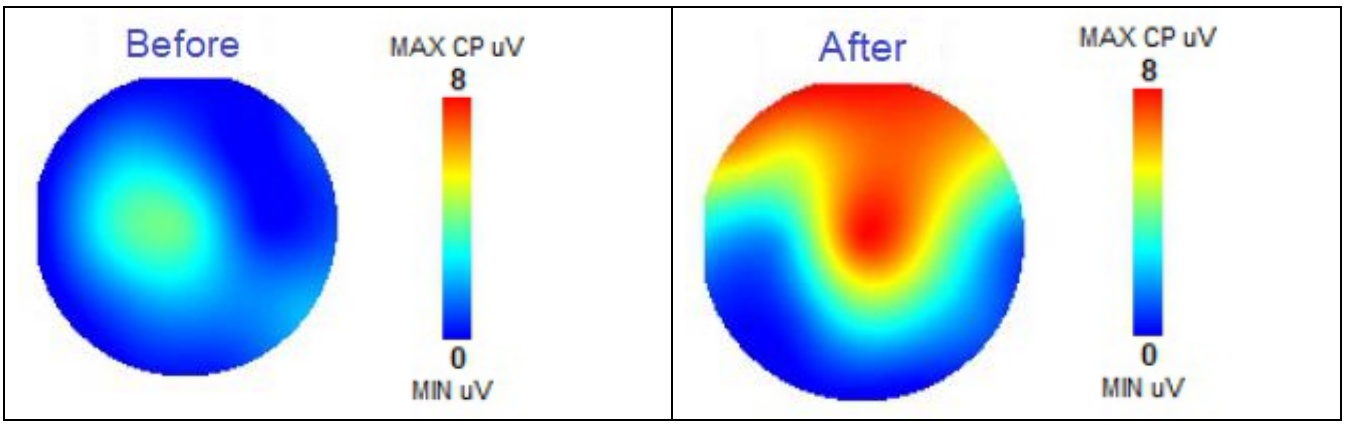
Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present increase likely means that a more positive way of processing information after the treatment.

In conclusion, the brain of Participant 3 was in active mode before the AVACEN treatment and improved in cognitive function and processed information in a more positive way after the AVACEN treatment.

Participant 4

Female, 47 working in sales She indicated that in the past 12 months, she was told by a healthcare professional that she has an elevated cholesterol level or abnormal lipid profile. She also indicated that she has high blood pressure and an elevated blood glucose level. Before the AVACEN treatment she indicated that she feels relaxed and that she has no pain.

Scalp Topography Map



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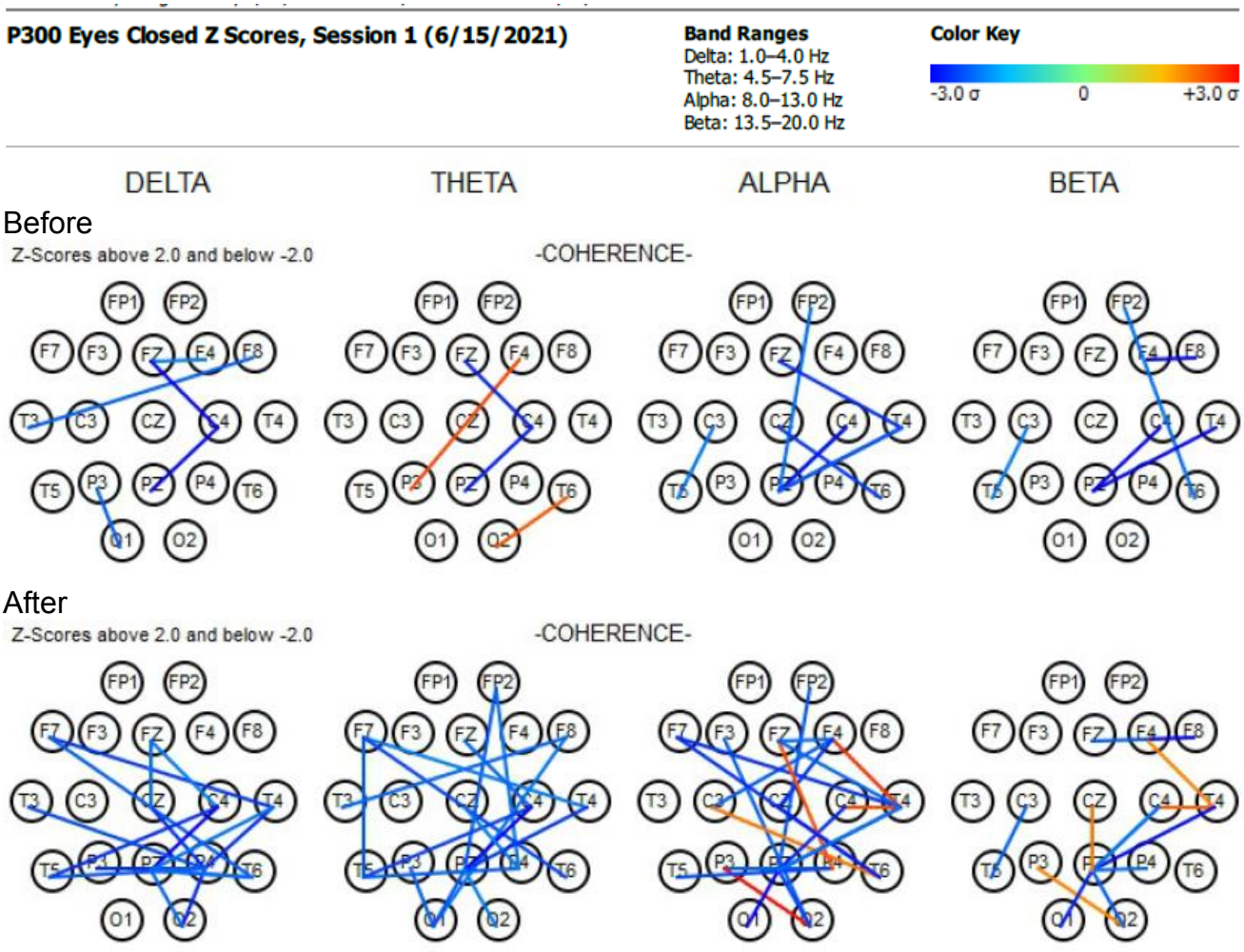
Coherence



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or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, they are overly connected or locked together. Hypocoherence is called poor inter-site interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence while blue lines reflect hypocoherence. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3). Participants were awake with eyes closed during their brain scans and so the most relevant results are those presented in the Alpha (relaxation) and Beta (normal brain activity) bands.

Before the AVACEN treatment, the brain of this participant was mainly in normal coherence, there are very few lines of hypocoherence for all brain frequencies (Beta, Alpha, Theta and Delta) and only 2 lines of mild hypercoherence in the Theta band (orange lines).After the treatment there was a clear increase in hypocoherence in Alpha, Theta and Delta bands and a bit of increase in hypercoherence in Beta and Alpha. It can be concluded that the brain relaxed after the treatment.

Screening Scores

Assessment Scores	Session 1 (9/28/2021)	Session 2 (9/28/2021)	Target Range
Performance Assessments			
Physical Reaction Time	372 (±47) ms	316 (±63) ms	251–361 ms
Trail Making Test A	37 sec	28 sec	43–74 sec
Trail Making Test B	58 sec	50 sec	45–87 sec
Evoked Potentials			
Audio P300 Delay	244 ms	296 ms	261–339 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	3.9 µV	7.7 µV	8–19 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	1.3	0.9	0.8–1.9
F3/F4 Eyes Closed Alpha (Magnitude)	1.2	1.0	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score follows.

Physical Reaction time

It is a measure of speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. The Physical Reaction

Time was too slow before the treatment and came to the normal range after, probably due to increased relaxation.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, Trail Making A was faster than normal and became still faster after the treatment, while Trail Making B was in the normal range at the start and stayed in the normal range after the treatment. This participant has excellent visual/psychomotor coordination.

Evoked Potentials - Auditory P300

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Participant 4 started with a very fast Audio P300 Delay that went to the normal range after the treatment. The Audio P300 Voltage was too low to start with and went into the normal range after the treatment. Both results are probably an indication of a more relaxed state.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Both the initial and final values were in the normal range with a notable decrease after the treatment, again probably an effect of relaxation.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

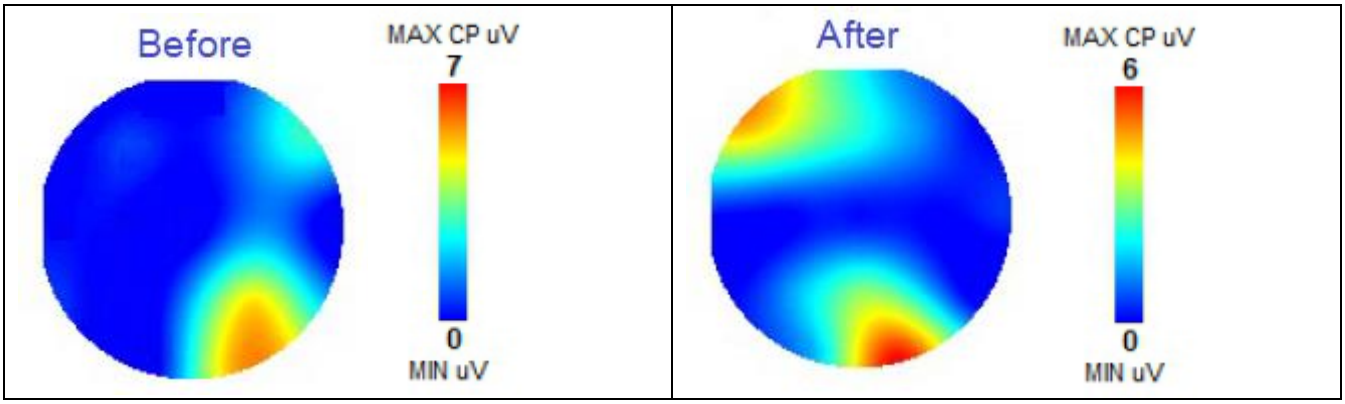
Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present small decrease to come down to the normal range likely means very little change in the way the brain is processing information after the treatment.

In conclusion, the brain of Participant 4 was rather inactive before the AVACEN treatment and became more active and relaxed probably showing an improved alertness of the brain after the AVACEN treatment.

Participant 5

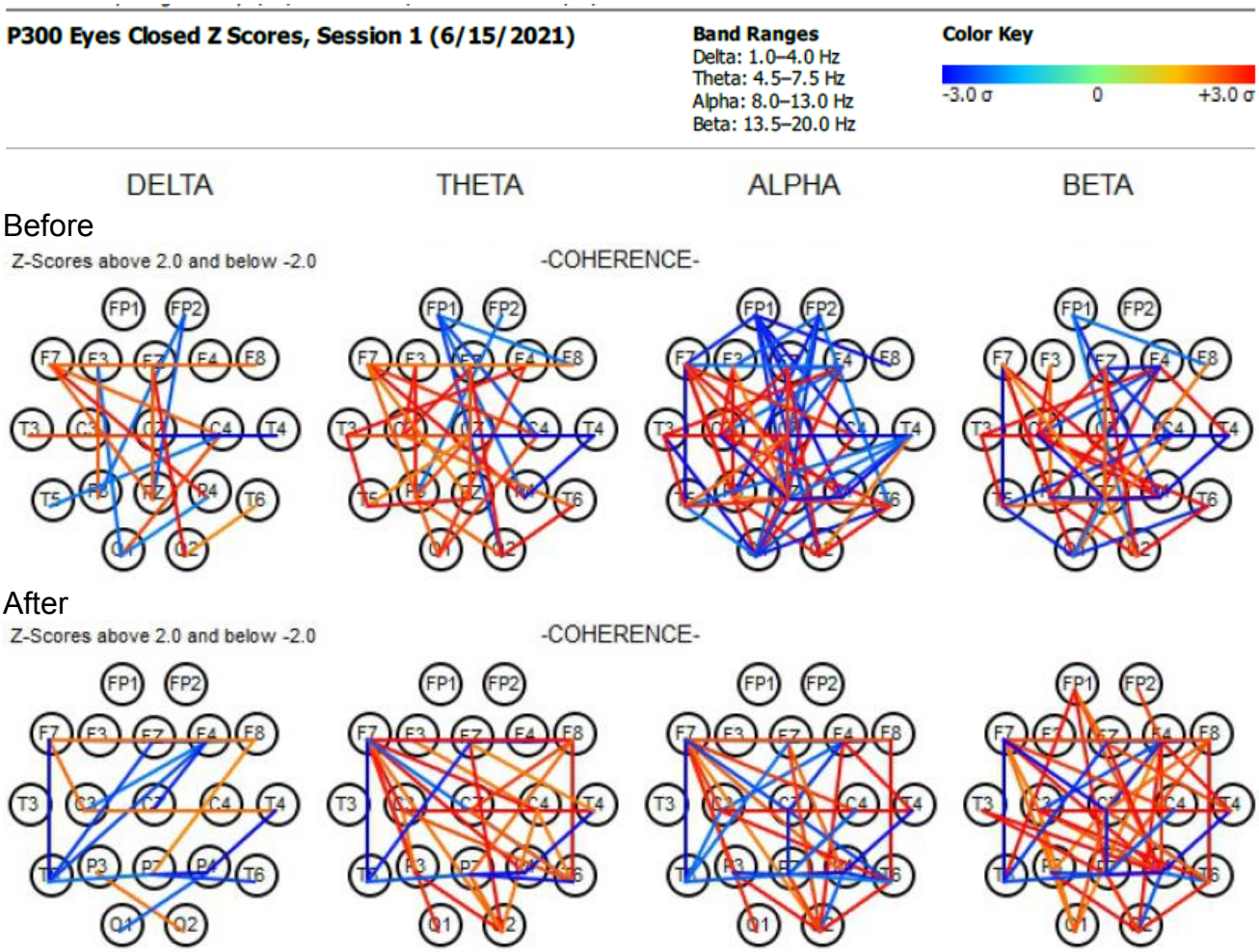
Female, 71, retired computer programmer. Before the AVACEN Treatment, she indicated that she has some unexplained dizziness or fainting and that she has difficulty breathing at night, except in an upright position. She also indicated that she has high blood pressure and that she was told by a healthcare professional that she has an elevated fasting blood glucose level. She is also under the care of a healthcare professional for other health/medical problems. She indicated before the treatment that she feels relaxed and that she had a little bit of back pain. She indicated on the VAS pain scale a level of "1."

Scalp Topography Map



These scalp topographical maps were computed from the 19 EEG channels recorded by the brain mapping system (frontal part of the brain at the top and back of the head at the bottom of each circle). These maps show the amplitude of the P300 recording for each channel (in microvolts or μV) using a color-coding scale presented on the right side of each topographical map (notice the scales are almost the same with before max being only one point higher than after). It can be noted that when she came in, her brain was not only calm but maybe hypo-functioning (except for the lower occipital area) and became more active after the treatment. That was more specially the case for the left frontal and right occipital parts of the brain.

Coherence



The coherence diagrams above show a perspective where we are looking down at the top of the head from above (FP1 and FP2 are on the forehead while O1 and O2 are at the back of the head). EEG coherence can be defined as the normalized cross-power spectrum per frequency of two signals recorded simultaneously at different sites of the scalp. It is a measure of the synchronization between the two signals and may be interpreted as an expression of their functional interaction (1). Coherence reflects how stable the phase relationship is between two electrode sites. Coherence quantifies the degree of interaction or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, they have too much "sidetalk", they are overly connected or locked together. Hypocoherence is called poor inter-site interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence while blue lines reflect hypocoherence. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3). Participants were awake with eyes closed during their brain scans and so the

most relevant results are those presented in the Alpha (relaxation) and Beta (normal brain activity) bands.

As expected, Alpha was dominant both in hyper and hypo-coherence since this participant had her eyes closed. This means the brain was not only attentive but hypervigilant before the AVACEN treatment. After the treatment the vigilance decreased and for most bands except the Beta, where there was a slight increase in hypercoherence in the frontal parts of the brain. These results suggest an improvement in brain relaxation and cognitive efficiency.

Screening Scores

Assessment Scores	Session 1 (9/30/2021)	Session 2 (9/30/2021)	Target Range
Performance Assessments			
Physical Reaction Time	489 (±78) ms	407 (±53) ms	275–395 ms
Trail Making Test A	76 sec	77 sec	74–127 sec
Trail Making Test B	68 sec	74 sec	71–138 sec
Evoked Potentials			
Audio P300 Delay	⬓ 396 ms	N/A	302–393 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	⬓ 7.1 µV	1.4 µV	6–14 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	⬓ 1.2	1.2	0.6–1.5
F3/F4 Eyes Closed Alpha (Magnitude)	0.5	1.3	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score follows.

Physical Reaction time

It is a measure of speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. The Physical Reaction Time was too slow before the AVACEN treatment and came to be almost in the normal range after, probably due to increased relaxation of the brain resulting in more efficient physical reactions.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, Trail Making A was on the fast side of the normal range at the start and stayed the same after the treatment. Trail Making B was also faster than normal

and went into the fast normal range after the treatment. This participant has excellent visual/psychomotor coordination.

Evoked Potentials - Auditory P300

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Participant 5 started with a very slightly Audio P300 Delay that could be considered normal. Unfortunately, there was no value presented after the treatment, so we do not know if the Audio P300 Delay improved or not. The Audio P300 Voltage went down from the normal range to low, an indication of changes in cognitive function, probably an indication of a more relaxed state.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Both the initial and final values were the same and in the normal range, indicating little change in arousal or attention level.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

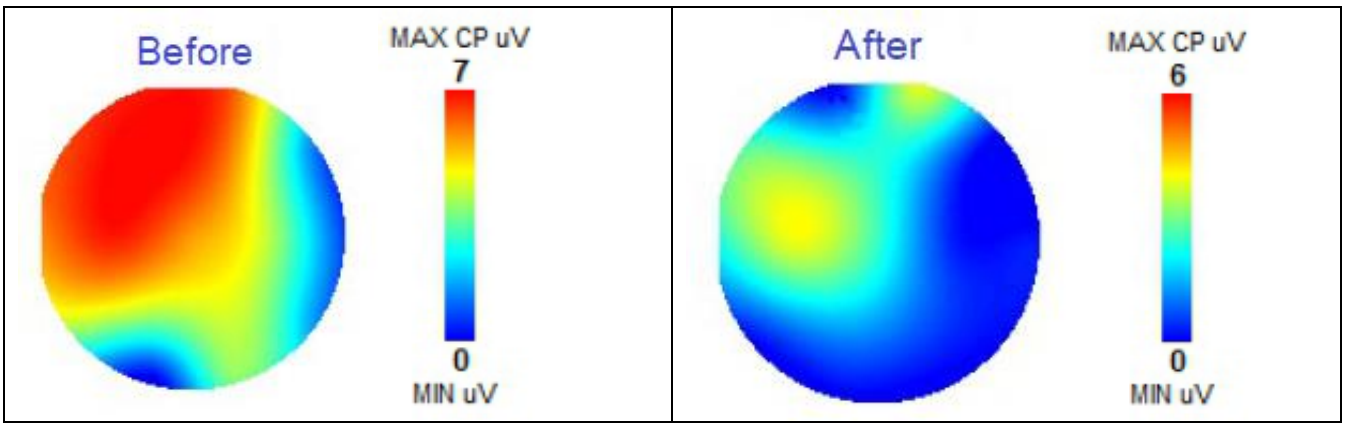
Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present substantial increase, from below the normal range to above the normal range, likely means that the brain is processing information in a much more positive way after the AVACEN treatment.

In conclusion, the brain of Participant 5 was rather in an inefficient state before the AVACEN treatment and became more efficient and processed information in a much more positive way after the AVACEN treatment.

Participant 6

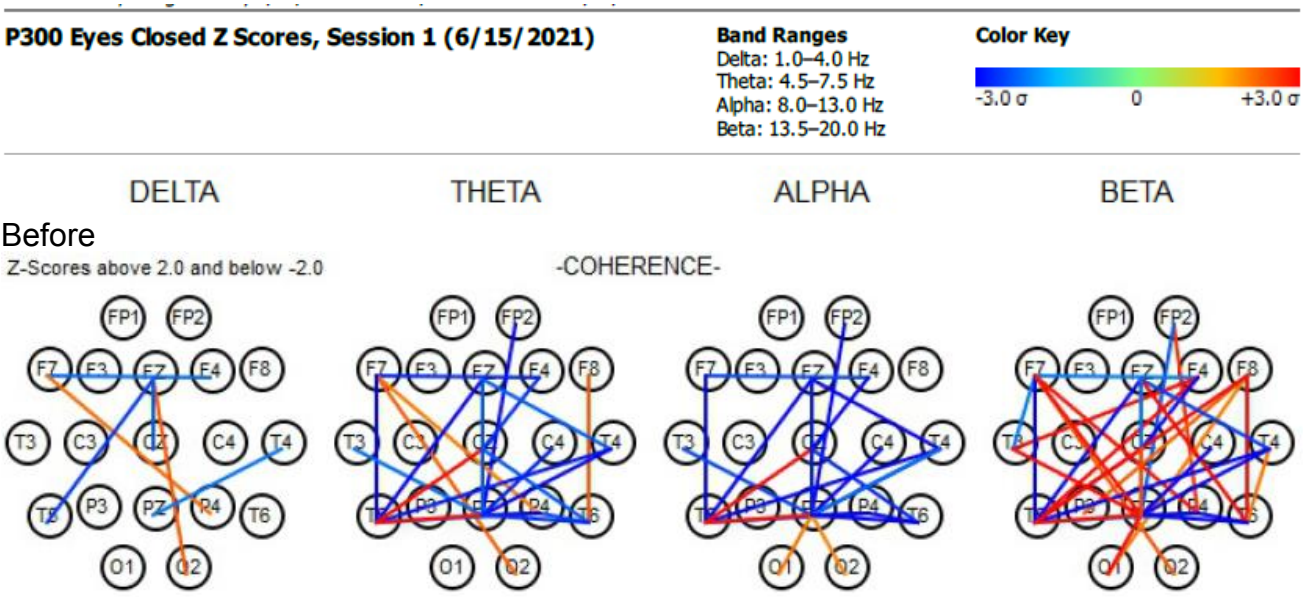
Female, 71. Before the AVACEN Treatment, she indicated that she has high blood pressure and that she was is experiencing problems or pain in her bones, joints, or muscles that maybe aggravated with exercise. She also indicated that she feels in between relaxed and stressed and that she has pain in her hip and neck. She indicated on the VAS pain scale a pain level of "2 "out of 10.

Scalp Topography Map

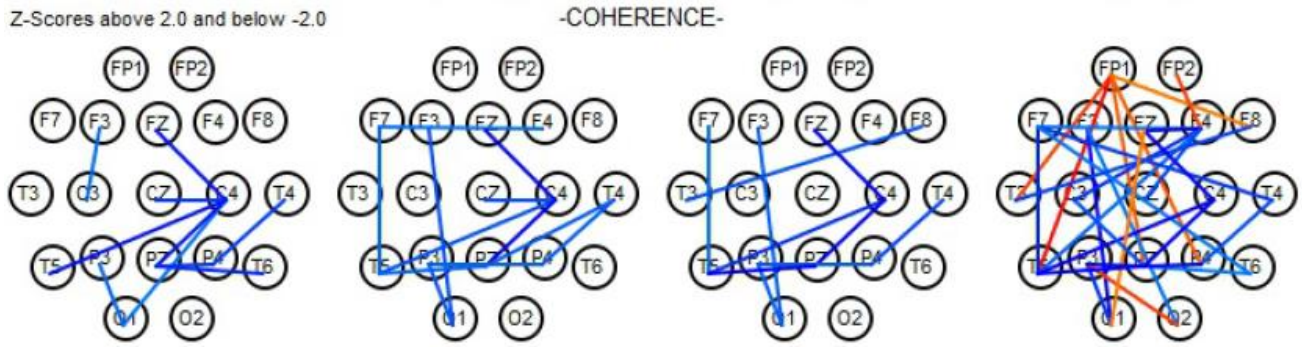


These scalp topographical maps were computed from the 19 EEG channels recorded by the brain mapping system (frontal part of the brain at the top and back of the head at the bottom of each circle). These maps show the amplitude of the P300 recording for each channel (in microvolts or μV) using a color-coding scale presented on the right side of each topographical map (notice the scale is slightly different before vs. after, the max of the scale is 7 before and 6 after the treatment; red is for the maximum amplitude and dark blue for the minimum amplitude). It can be noted that when she came in, her brain was somewhat activated and became less active after the session.

Coherence



After



The coherence diagrams above show a perspective where we are looking down at the top of the head from above (FP1 and FP2 are on the forehead while O1 and O2 are at the back of the head). EEG coherence can be defined as the normalized cross-power spectrum per frequency of two signals recorded simultaneously at different sites of the scalp. It is a measure of the synchronization between the two signals and may be interpreted as an expression of their functional interaction (1). Coherence reflects how stable the phase relationship is between two electrode sites. Coherence quantifies the degree of interaction or communication, shared information, between brain sites. Hypercoherence is when brain sites are not functioning in efficient interdependent fashion, they have too much "stress talk" they are overly connected or locked together. Hypocoherence is called poor inter-site interaction and is associated with diminished cognitive efficiency (2). The red lines between two sites indicate hypercoherence while blue lines reflect hypocoherence. Beta brain waves are normally dominant in a person awake, alert, with normal level of consciousness and brain function. Theta brain waves show up in deep relaxation, meditation and mental imagery (3). Participants were awake with eyes closed during their brain scans and so the most relevant results are those presented in the Alpha (relaxation) and Beta (normal brain activity) bands.

Unexpectedly, Beta was dominant in hypercoherence before the AVACEN treatment. This participant's brain looks more like someone processing information with open eyes. After the treatment the Beta hypercoherence decreased markedly, indicating a more relaxed and efficient brain.

Screening Scores

Assessment Scores	Session 1 (9/29/2021)	Session 2 (9/29/2021)	Target Range
Performance Assessments			
Physical Reaction Time	318 (±50) ms	325 (±36) ms	275–395 ms
Trail Making Test A	95 sec	93 sec	74–127 sec
Trail Making Test B	239 sec	170 sec	71–138 sec
Evoked Potentials			
Audio P300 Delay	332 ms	344 ms	302–393 ms
Test/Retest Change	-	-	±11 ms
Audio P300 Voltage	7.3 µV	3.9 µV	6–14 µV
Test/Retest Change	-	-	±2 µV
State			
CZ Eyes Closed Theta/Beta (Power)	0.7	⬓ 0.7	0.6–1.5
F3/F4 Eyes Closed Alpha (Magnitude)	2.2	1.2	0.9–1.1

The goal is for each screening score to be inside the target range. If a score is below or above the target range it is considered abnormal (too fast if below or too slow if above the target time). An explanation of each screening score follows.

Physical Reaction time

It is a measure of speed in response to an audible odd tone. This relies on different pathways than the Auditory P300, so physical reaction time may be different than the brain speed and more connected to brain/body communication speed. The Physical Reaction Time was in the normal range before the AVACEN treatment and remain in the normal range after the treatment, an indication of normal level of physical reaction time processing.

Trail Making

A standard measure of brain function and includes measures of psychomotor and visual scanning. For this participant, Trail Making A was in the normal range before the treatment and stayed in the normal range after the treatment. Trail Making B was much too slow before the treatment and decreased to come closer to the normal range after the treatment. This is an indication of improvement in visual/psychomotor coordination after the AVACEN treatment.

Evoked Potentials - Auditory P300

Auditory P300 is a measure of brain response speed and attentional resources. P300 slowing and/or a reduction in voltage may signal changes in cognitive function. Participant 6 started in the normal range and stayed in the normal range after the treatment, having changed very little. On the other hand, the Audio P300 Voltage went down from the normal

range to low, an indication of changes in cognitive function, probably an indication of a more relaxed state.

State - CZ Theta/Beta

Theta and Beta frequency bands are affected by cortical arousal and can give insight into how the brain functions. In some people high Theta/Beta ratios at CZ may present as inattention, while others may benefit from cortical arousal. Both the initial and final values were the same and in the normal range, indicating little change in arousal or attention level.

Researchers have shown that calculating the relative power ratio Theta/Beta at CZ can be used to determine slow-wave disorders, ADHD, interpersonal detachment with qualitative aspects of autistic or Asperger's behavior (3, 4, 5).

State - F3/F4 Alpha

Researchers discovered that calculating F3/F4 relative power ratio in the Alpha band means processing information in a positive way for an increase while a decrease in the ratio indicated a more negative processing mode (6, 7). The present substantial decrease, from way above to almost in the normal range likely means that the brain is processing information in a much less super positive way to a normal positive way after the AVACEN treatment.

In conclusion, the brain of Participant 6 was rather in an inefficient state before the AVACEN treatment, probably because Participant 6 was a bit anxious maybe because of the unknown nature of the experiment (she indicated that she feels in between relaxed and stressed before the treatment). She relaxed and her brain became somewhat more efficient after the AVACEN treatment.

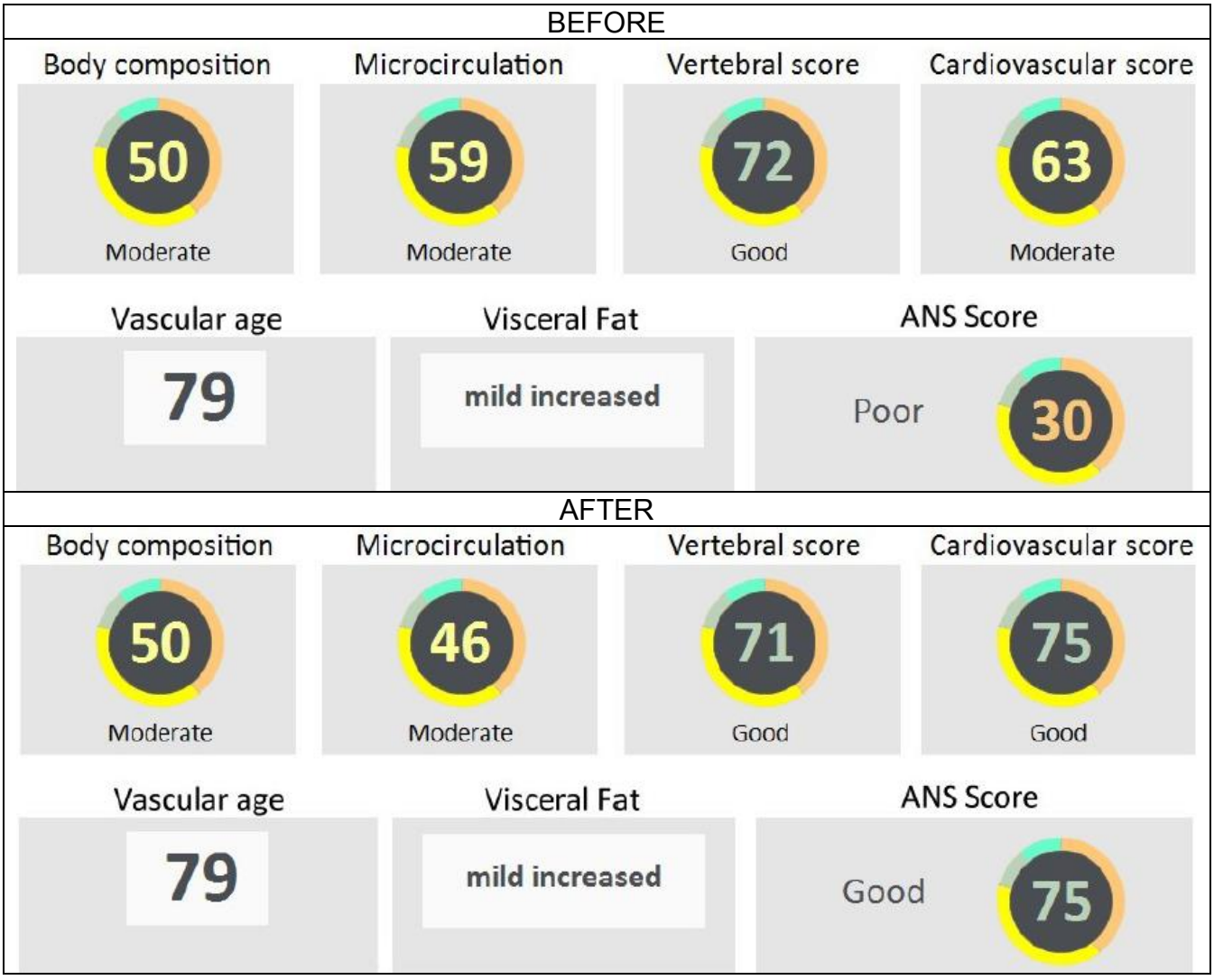
MenlaScan

Participant 1

Male, 70, expert in marketing. Before the AVACEN Treatment, he indicated that he feels relaxed and that he had some of his muscles feeling sore. There was tightness and lack of flexibility mainly in the hips and thighs. The VAS pain scale indicated low pain at about 0.5 on a scale from 0 to 10. After the treatment, he indicated that he was more relaxed and that he felt a mild change in his muscles throughout the entire body. The VAS pain scale still indicated 0.5 but he commented "Great Time! ".

PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab



Notables are the improvements in the cardiovascular score (from Moderate to Good) and the autonomic nervous system (ANS) score (from Poor to Good). The most important result is the cardiovascular score as the ANS is prone to rapid changes with emotions.

Non-Invasive Scanning and Subtle Energy Testing Lab

Participant 2

Female, 74. This participant indicated that she takes medformin for her diabetes and levothyroxine for her thyroid. Before the AVACEN Treatment, she indicated that she feels relaxed and that she had no pain.

The only notable change after the treatment is a degradation in the autonomic nervous system (ANS) score (from Excellent to Poor). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person ṡ emotions. As such a snapshot measurement of the ANS has limited value (the person could have a sad memory coming back and show such a change in ANS).

Participant 3

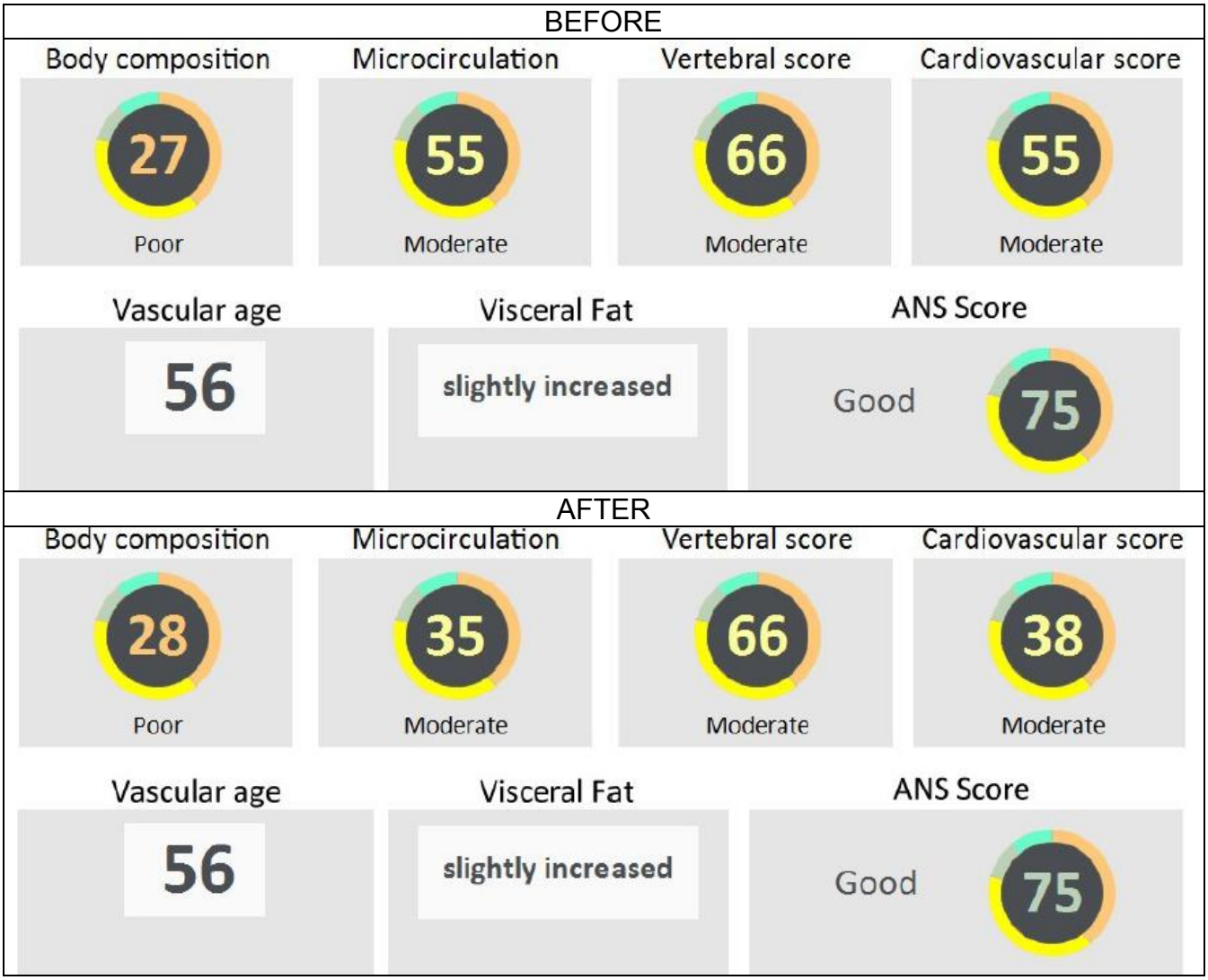
Male, 64. His highest level of education is at the doctorate level, and he works as a consultant. He indicated that he experiences problems or pain in his bones, joints, or muscles as well as back or neck discomfort and that he is under the care of a healthcare professional for other health/medical problems. Before the AVACEN Treatment, he indicated that he feels relaxed and that he had pain in all body parts. He did not fill the VAS so his level of pain is unknown. He indicated that he sustained injuries as a strongman.

The only notable change after the treatment is an improvement in the autonomic nervous system (ANS) score (from Poor to Good). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person ṡ emotions. As such a snapshot measurement of the ANS has limited value (the person could be happy about her participation and show such a change in ANS).

Non-Invasive Scanning and Subtle Energy Testing Lab

Participant 4

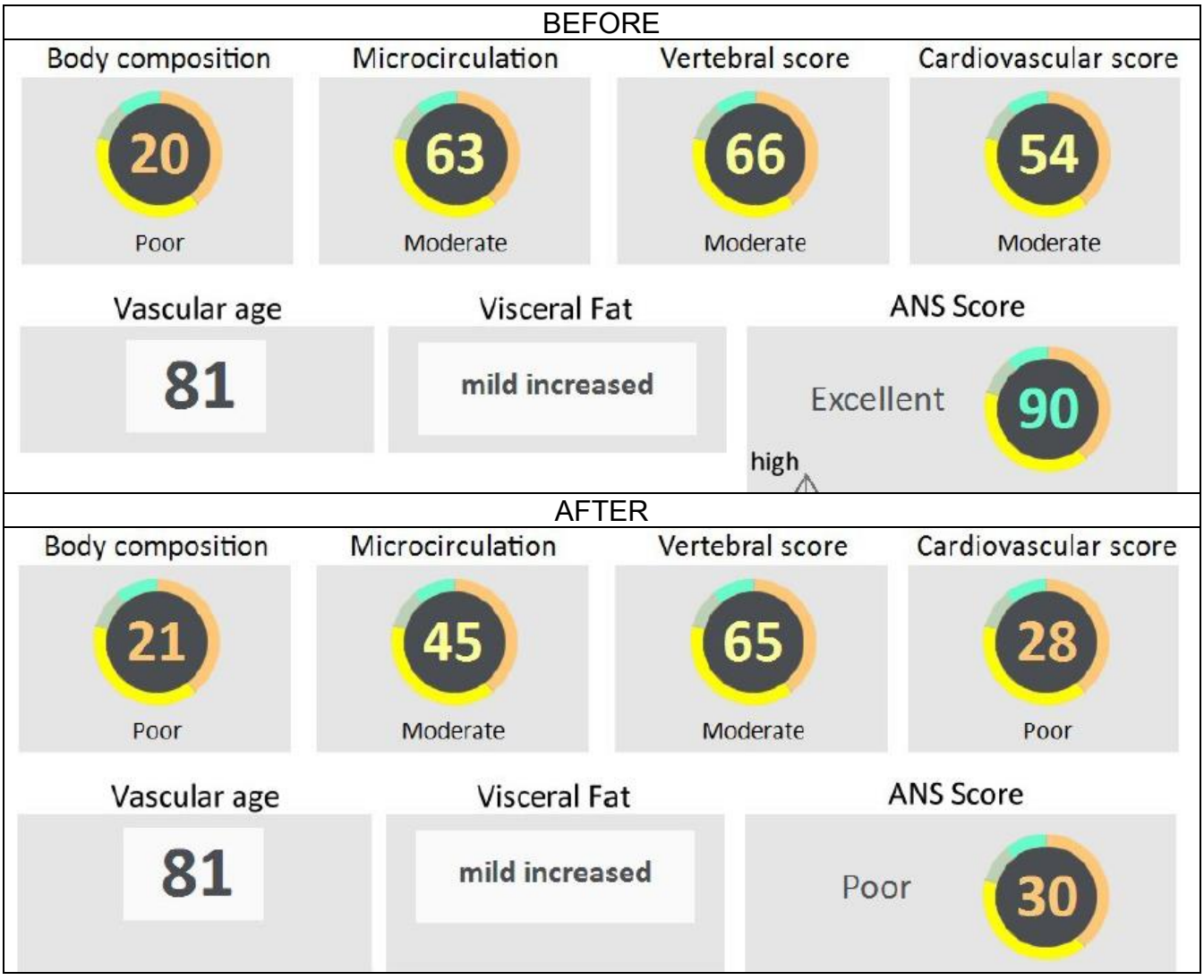
Female, 47 working in sales She indicated that in the past 12 months, she was told by a healthcare professional that she has an elevated cholesterol level or abnormal lipid profile. She also indicated that she has high blood pressure and an elevated blood glucose level. Before the AVACEN treatment she indicated that she feels relaxed and that she has no pain.



There are no notable changes for this participant.

Participant 5

Female, 71, retired computer programmer. Before the AVACEN Treatment, she indicated that she has some unexplained dizziness or fainting and that she has difficulty breathing at night, except in an upright position. She also indicated that she has high blood pressure and that she was told by a healthcare professional that she has an elevated fasting blood glucose level. She is also under the care of a healthcare professional for other health/medical problems. She indicated before the treatment that she feels relaxed and that she had a little bit of back pain. She indicated on the VAS pain scale a level of "1."



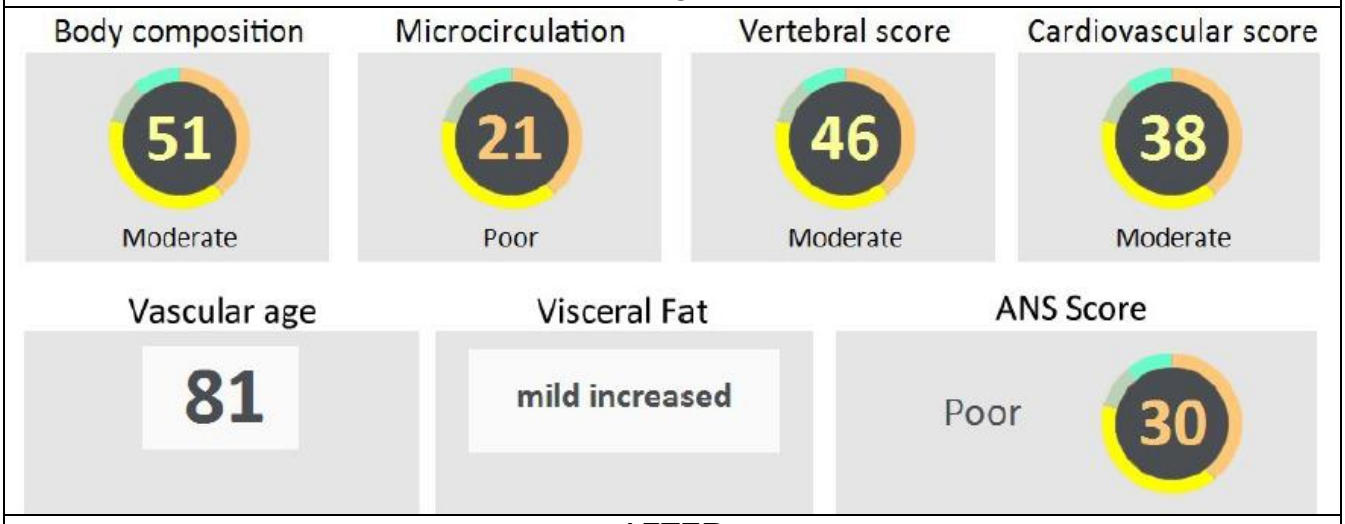
The only notable change after the treatment is a degradation in the cardiovascular score (from Moderate to Poor). Participant 5 was also a participant in our previous project with AVACEN and got great benefits from it but over time. This person has many health problems and this decrease in cardiovascular score reflects in our opinion a transient phenomenon that we have seen with other research participants, particularly those with

several health problems. It would be interesting to follow this participant to see what happens to the cardiovascular score over time.

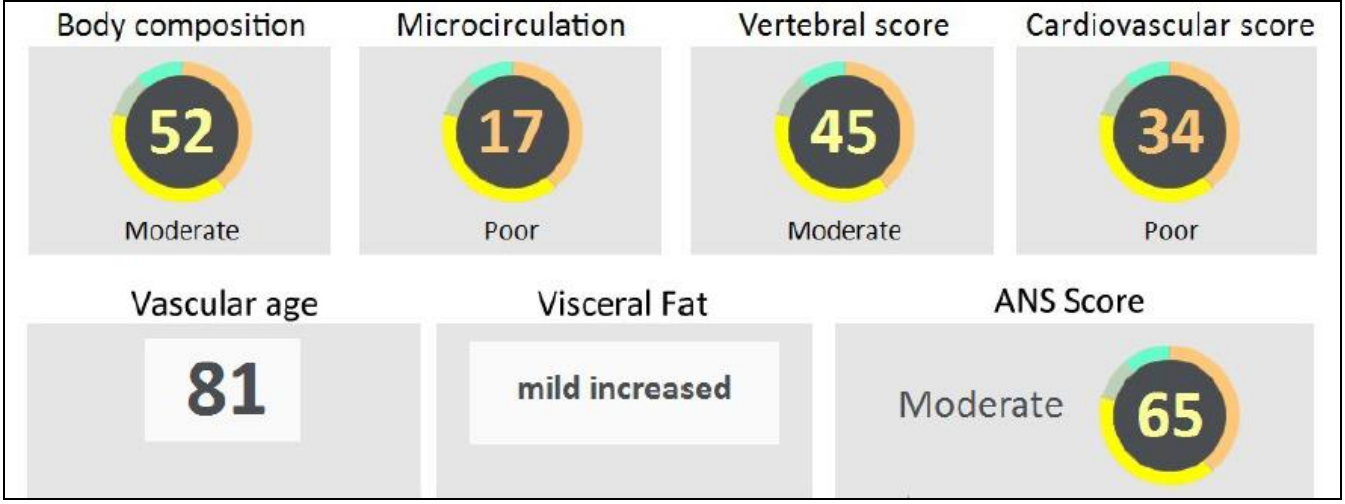
Participant 6

Female, 71. Before the AVACEN Treatment, she indicated that she has high blood pressure and that she was is experiencing problems or pain in her bones, joints, or muscles that maybe aggravated with exercise. She also indicated that she feels in between relaxed and stressed and that she has pain in her hip and neck. She indicated on the VAS pain scale a pain level of "2" out of 10.

BEFORE



AFTER



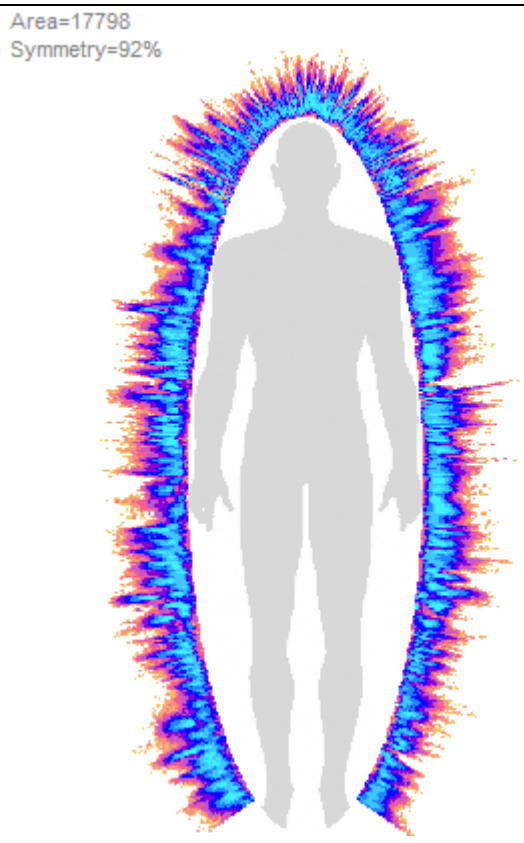
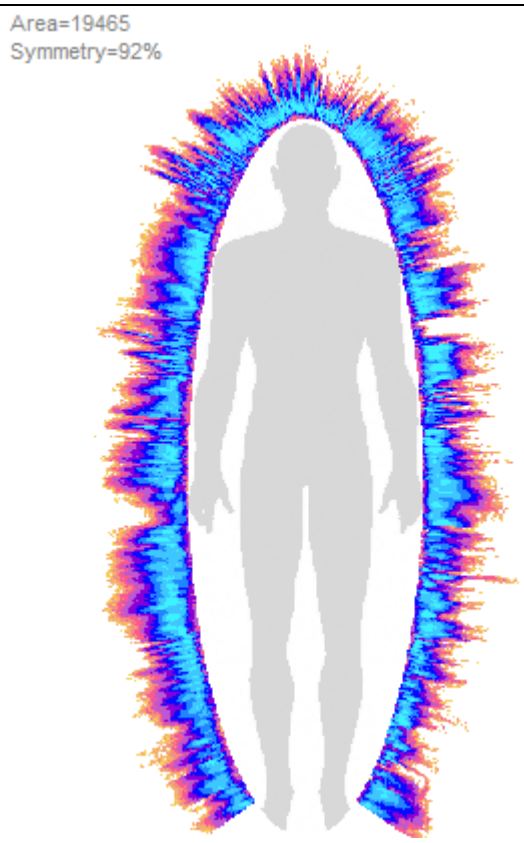
The only notable change after the treatment is an improvement in the autonomic nervous system (ANS) score (from Poor to Good). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person's emotions. As such a snapshot measurement of the ANS has limited value (the person could be happy about her participation and show such a change in ANS). The decrease in cardiovascular score is only 4 points and even if it is changing from Moderate to Poor, it is not a significant change.

GDV

Participant 1

Male, 70, expert in marketing. Before the AVACEN Treatment, he indicated that he feels relaxed and that he had some of his muscles feeling sore. There was tightness and lack of flexibility mainly in the hips and thighs. The VAS pain scale indicated low pain at about 0.5 on a scale from 0 to 10. After the treatment, he indicated that he was more relaxed and that he felt a mild change in his muscles throughout the entire body. The VAS pain scale still indicated 0.5 but he commented "Great Time! ".

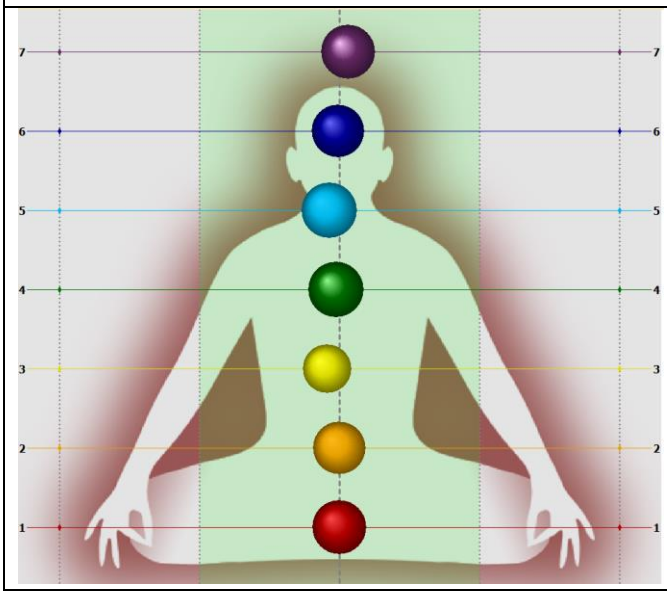
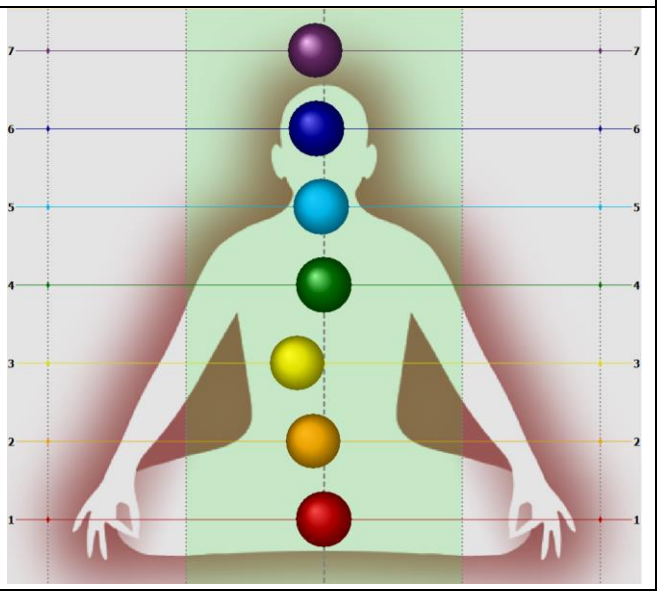
The figure below shows Participant 1 ' Area and Symmetry results.

BEFORE	AFTER
	

Participant 1 ' frontal Area value before treatment is 17,798 (in camera pixels) and it increases to 19,465, an increase by 9.4%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after

the treatment is very close to be significant. Before the treatment, the Symmetry value was 92%, which is considered excellent on the scale of normative healthy range, and it did not change after the treatment. Symmetry is considered normal when its value is above 80%.

The next two images present Participant 1 ' s chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

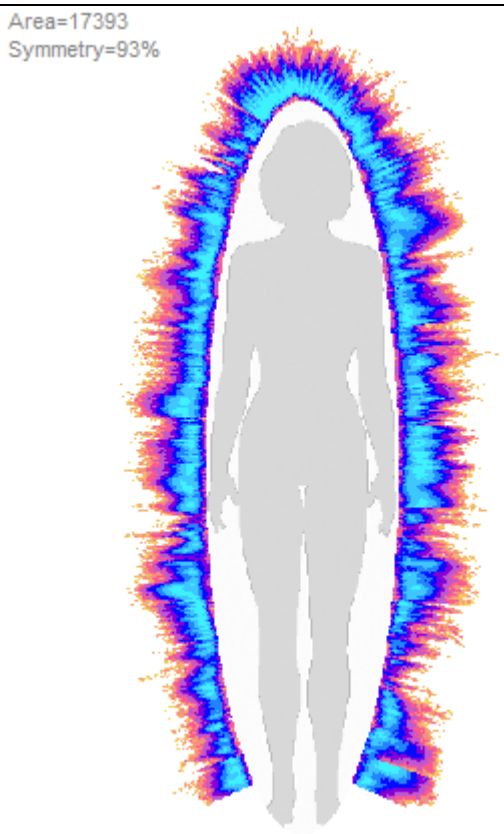
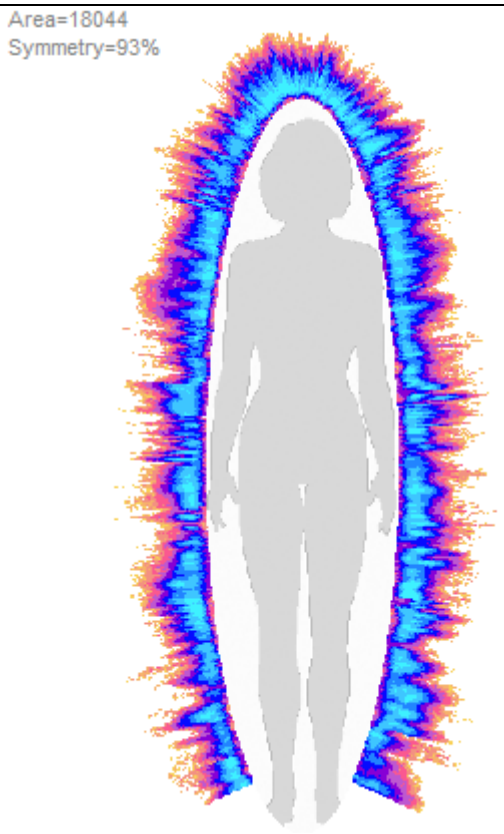
For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 1 before the treatment, all chakras were quite well balanced. That was also the case after the treatment. Since this participant started with very well balanced and energized chakras, little improvements are possible.

In conclusion, Participant 1 had very well-balanced energy (from both the images of Symmetry and Chakras) but had an almost significant increase in bioenergy after the treatment.

Participant 2

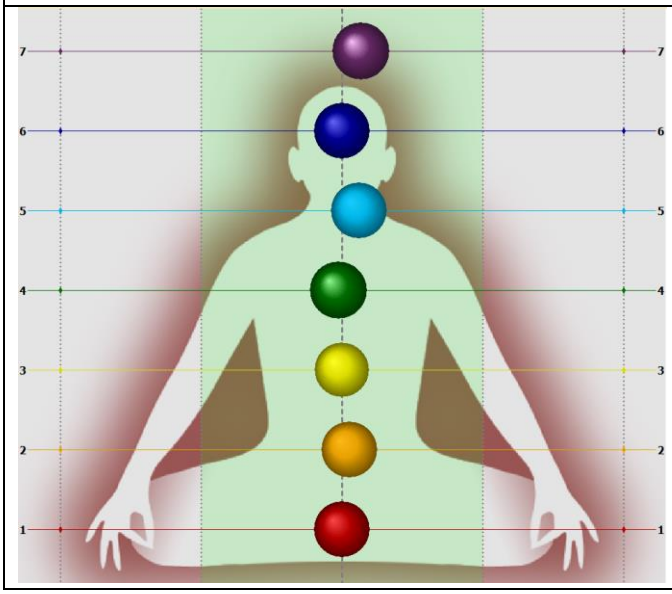
Female, 74. This participant indicated that she takes medformin for her diabetes and levothyroxine for her thyroid. Before the AVACEN Treatment, she indicated that she feels relaxed and that she had no pain.

The figure below shows Participant 2's Area and Symmetry results.

BEFORE	AFTER
	

Participant 2's frontal Area value before treatment is 17,393 (in camera pixels) and it increases to 18,044, an increase by about 4%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after the treatment is not very close to be significant. Before the treatment, the Symmetry value was 93%, which is considered excellent on the scale of normative healthy range, and it did not change after the treatment. Symmetry is considered normal when its value is above 80%.

The next two images present Participant 2 ' s chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 2 before the treatment, all chakras were quite well balanced. That was also the case after the treatment, but a slight improvement is visible. Since this participant started with very well balanced and energized chakras, only little improvements are possible.

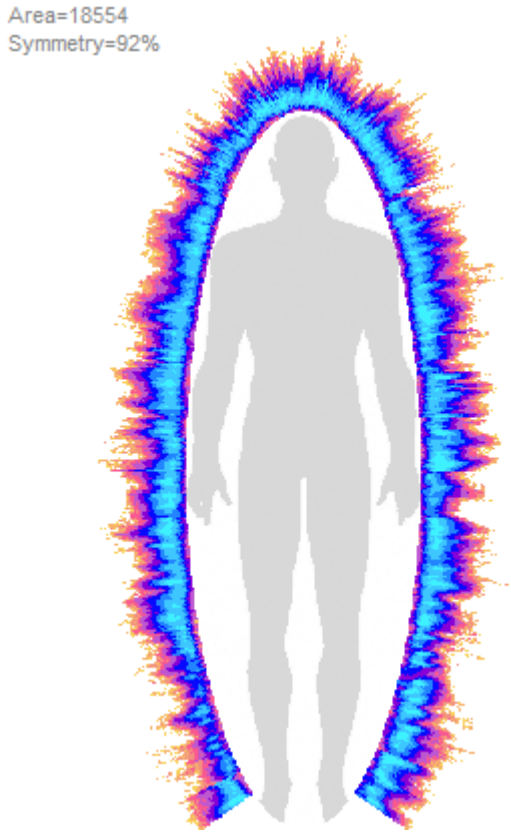
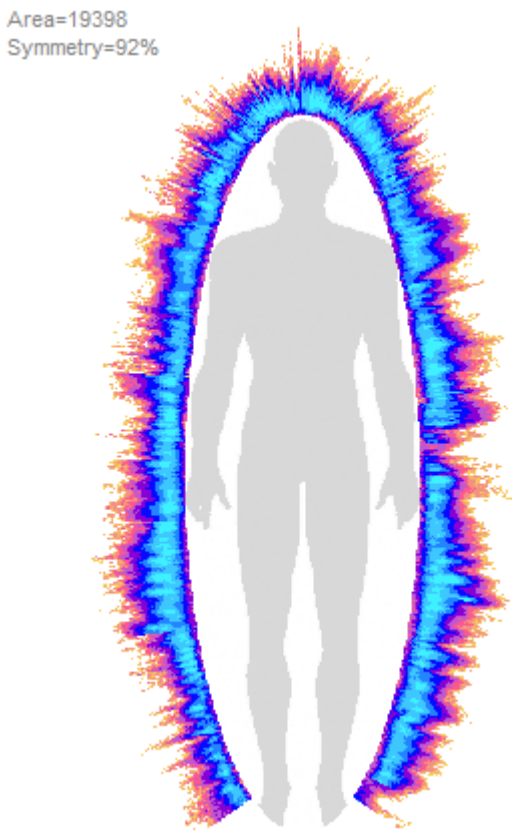
In conclusion, Participant 2 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible increase in balance after the AVACEN treatment. There was an increase in bioenergy that was not significant after the treatment.

Participant 3

Male, 64. His highest level of education is at the doctorate level, and he works as a consultant. He indicated that he experiences problems or pain in his bones, joints, or muscles as well as back or neck discomfort and that he is under the care of a healthcare professional for other health/medical problems. Before the AVACEN Treatment, he indicated

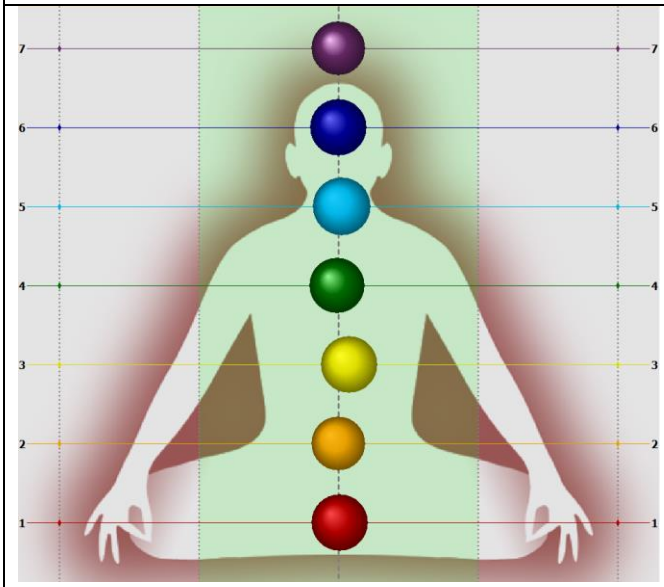
that he feels relaxed and that he had pain in all body parts. He did not fill the VAS so his level of pain is unknown. He indicated that he sustained injuries as a strongman.

The figure below shows Participant 3's Area and Symmetry results.

BEFORE	AFTER
	

Participant 3's frontal Area value before treatment is 18,554 (in camera pixels) and it increases to 19,398, an increase by about 5%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after the treatment is not very close to be significant. Before the treatment, the Symmetry value was 92%, which is considered excellent on the scale of normative healthy range, and it did not change after the treatment. Symmetry is considered normal when its value is above 80%.

The next two images present Participant 3's chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 3 before the treatment, all chakras were quite well balanced. That was also the case after the treatment, but a slight improvement is visible. Since this participant started with very well balanced and energized chakras, only little improvements are possible.

In conclusion, Participant 3 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible increase in balance after the AVACEN treatment. There was an increase in bioenergy that was not significant after the treatment.

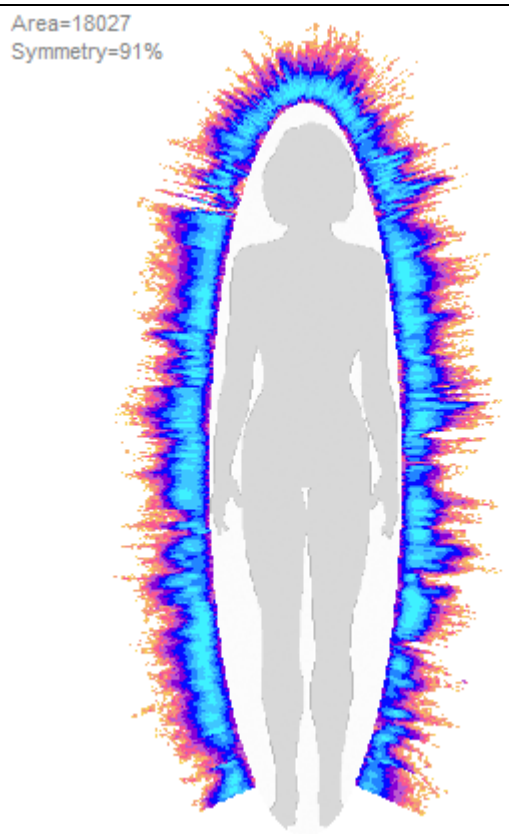
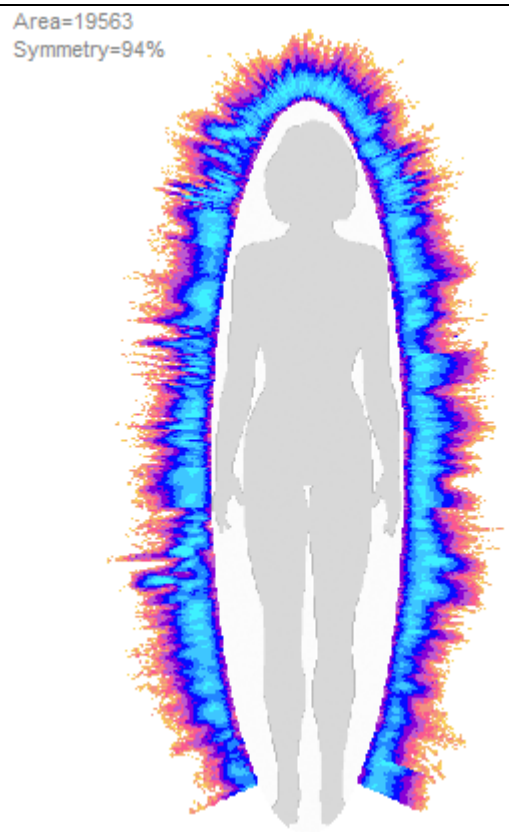
Participant 4

Female, 47 working in sales She indicated that in the past 12 months, she was told by a healthcare professional that she has an elevated cholesterol level or abnormal lipid profile. She also indicated that she has high blood pressure and an elevated blood glucose level. Before the AVACEN treatment she indicated that she feels relaxed and that she has no pain.

The figure below shows Participant 4 ṡ Area and Symmetry results.

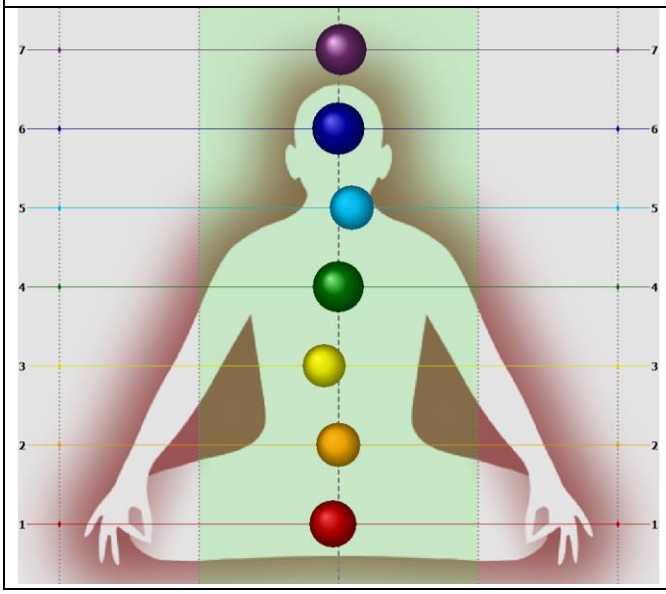
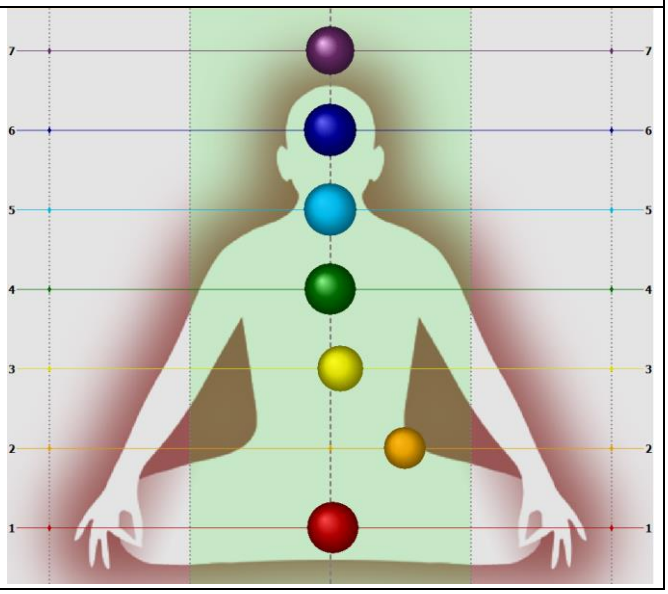
PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

BEFORE	AFTER
	

Participant 4 ' frontal Area value before treatment is 18,027 (in camera pixels) and it increases to 19,563, an increase by about 9%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after the treatment is very close to be significant. Before the treatment, the Symmetry value was 91%, which is considered excellent on the scale of normative healthy range, and it increased to 94% after the treatment, a 3% increase. Symmetry is considered normal when its value is above 80%.

The next two images present Participant 4 ' chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 4 before the treatment, all chakras were quite well balanced. That was also the case after the treatment but the second chakra from the bottom (Svadhisthana, the Sacral Chakra in orange) is displaced to the right indicating a withdrawal of the qualities corresponding to this chakra (passion, self-appraisal, fear, authority, aggressiveness, contempt, egoism, thrift).

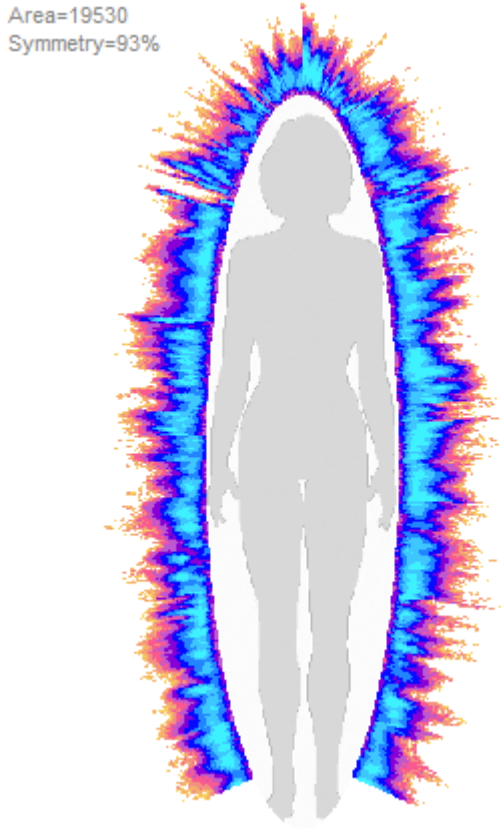
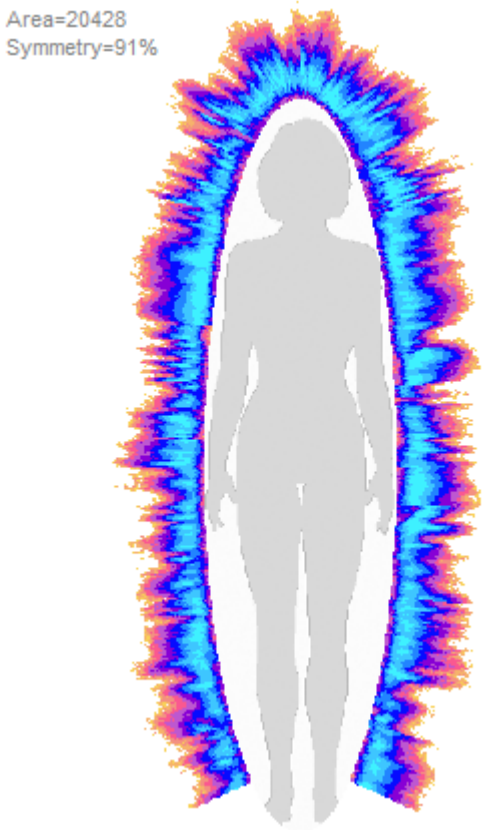
In conclusion, Participant 4 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible displacement of the second chakra after the AVACEN treatment indicating a withdrawal of the qualities corresponding to this chakra (passion, self-appraisal, fear, authority, aggressiveness, contempt, egoism, thrift). There was an increase in bioenergy that was close to being significant after the AVACEN treatment.

Participant 5

Female, 71, retired computer programmer. Before the AVACEN Treatment, she indicated that she has some unexplained dizziness or fainting and that she has difficulty breathing at night, except in an upright position. She also indicated that she has high blood pressure and that she was told by a healthcare professional that she has an elevated fasting blood glucose level. She is also under the care of a healthcare professional for other

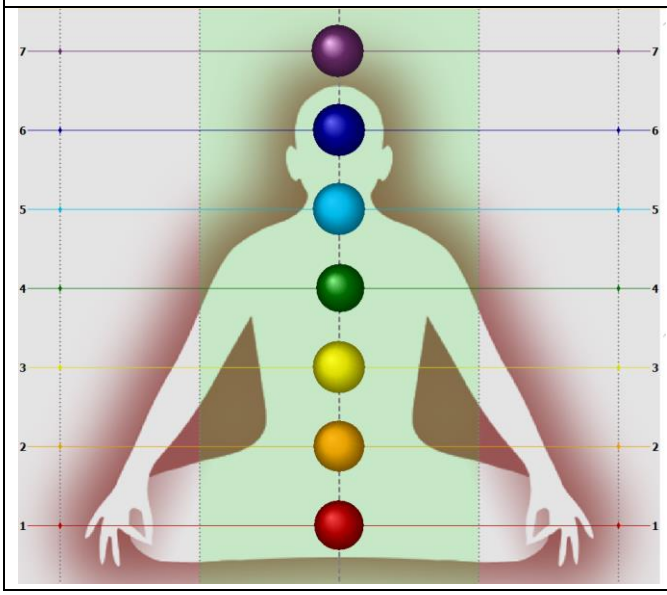
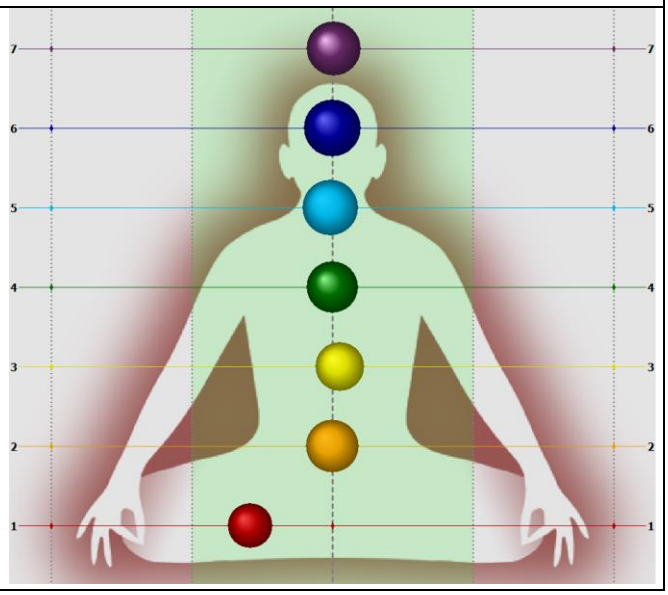
health/medical problems. She indicated before the treatment that she feels relaxed and that she had a little bit of back pain. She indicated on the VAS pain scale a level of "1."

The figure below shows Participant 5's Area and Symmetry results.

BEFORE	AFTER
	

Participant 5's frontal Area value before treatment was 19,530 (in camera pixels) and it increases to 20,428, an increase by about 5%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after the treatment is not very close to be significant. Before the treatment, the Symmetry value was 93%, which is considered excellent on the scale of normative healthy range, and it decreased to 91% after the treatment, an insignificant 2% decrease. Symmetry is considered normal when its value is above 80%.

The next two images present Participant 5's chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 5 before the treatment, all chakras were perfectly centered so no improvement can be expected. After the treatment, there was a displacement to the left of the first chakra at the bottom (Muladhara (Base Chakra in red) is displaced to the right indicating an increased manifestation of the qualities corresponding to this chakra (safety, prudence, patience, vigilance, selfishness, self-defense, struggle).

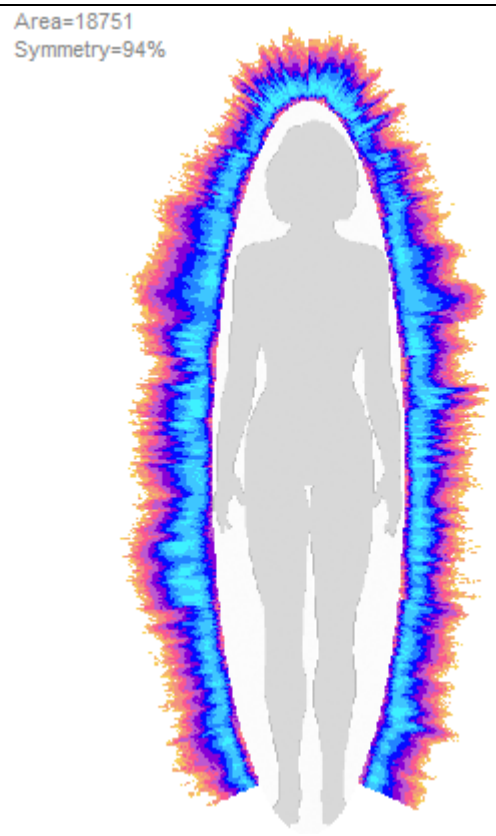
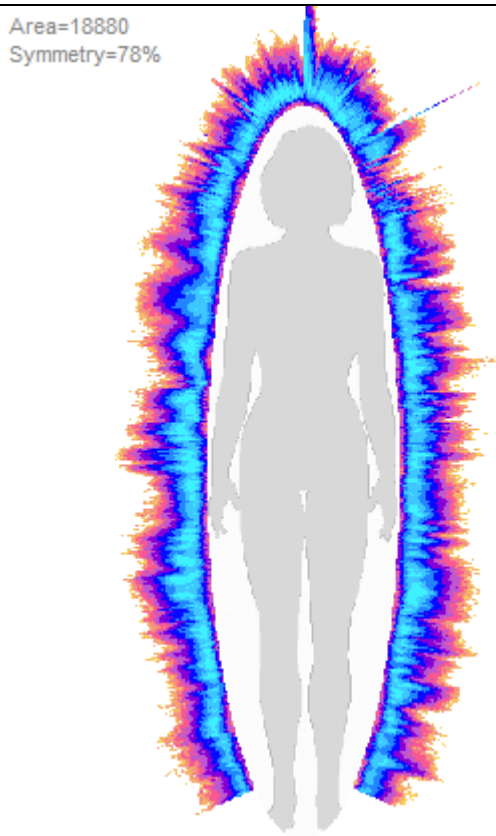
In conclusion, Participant 5 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible displacement of the first chakra to the right after the AVACEN treatment indicating an increase of the manifestation of the qualities corresponding to this chakra (safety, prudence, patience, vigilance, selfishness, self-defense, struggle). There was an increase in bioenergy that was not close to being significant after the AVACEN treatment.

Participant 6

Female, 71. Before the AVACEN Treatment, she indicated that she has high blood pressure and that she was is experiencing problems or pain in her bones, joints, or muscles that maybe aggravated with exercise. She also indicated that she feels in between relaxed and

stressed and that she has pain in her hip and neck. She indicated on the VAS pain scale a pain level of "2" out of 10.

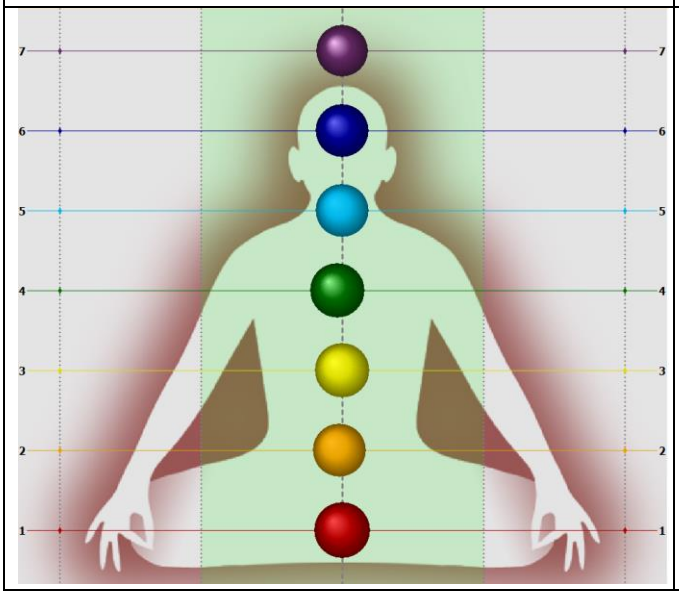
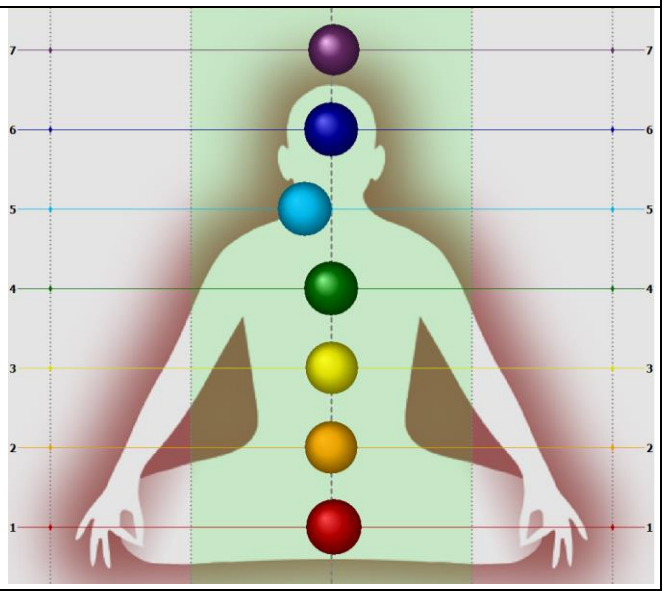
The figure below shows Participant 6's Area and Symmetry results.

BEFORE	AFTER
	

Participant 6's frontal Area value before treatment was 18,751 (in camera pixels) and it increases to 18,880, a very small increase by about 1%. Each of the two images above are a composite of the corona discharge around the fingertips of all 10 fingers generated by the GDV and Area represents the overall strength and coherence of the bio-field, as explained in more details in Appendix F. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant and consequently the present increase in Area after the treatment is not very close to be significant. Before the treatment, the Symmetry value was 94%, which is considered excellent on the scale of normative healthy range, and it decreased to 78% after the treatment, a significant decrease by17%. It is clearly visible on the biofield image after the treatment that the bioenergy field is bigger on the left (which is the right side of the person in the image) than on the left. Since Symmetry is considered normal when its value is above 80%, it is clear that perturbations of the bioenergy of this person were produced by the AVACEN treatment.

Non-Invasive Scanning and Subtle Energy Testing Lab

The next two images present Participant 6 ' s chakras energy levels and balance for before and after the treatment.

BEFORE	AFTER
	

For each of the two images above, the normal position is contained within the green area. Any ball outside of that region is considered to be off-balance. The size of the balls indicates the relative outpouring of energy from each chakra while Balance is represented by the position of the balls relative to the middle line. In these images, if the balls are left of the middle line, the position indicates a physical, masculine focus and if the balls are on the right an emotional, feminine focus is indicated. In the case of Participant 6 before the treatment, all chakras were almost perfectly centered so very little improvement can be expected. After the treatment, there was a small but clear displacement to the left of the fifth chakra (Vishuddha or Throat Chakra in light blue) indicating an increased manifestation of the qualities corresponding to this chakra (emotion, inspiration, creation, sociability, emotional-spiritual activity).

In conclusion, Participant 6 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible asymmetry in the biofield as well as a displacement of the fifth chakra to the right after the AVACEN treatment indicating an increase of the manifestation of the qualities corresponding to this chakra (emotion, inspiration, creation, sociability, emotional-spiritual activity). There was a very small increase in bioenergy that was not close to being significant after the AVACEN treatment.

Discussion

Brain Mapping

Participant 1 brain was activated in a way that it was not overwhelming and that did not prevent the brain from improving in alertness and cognitive functions. His brain processed information in a much more positive way after the AVACEN treatment.

Participant 2 brain was in overdrive and inefficient before the AVACEN treatment and improved tremendously in cognitive function and in visual/psychomotor coordination. It also processed information in a much more positive way after the AVACEN treatment.

The brain of Participant 3 was in active mode before the AVACEN treatment and improved in cognitive function and processed information in a more positive way after the AVACEN treatment.

The brain of Participant 4 was rather inactive before the AVACEN treatment and became more active and relaxed probably showing an improved alertness of the brain after the AVACEN treatment.

The brain of Participant 5 was rather in an inefficient state before the AVACEN treatment and became more efficient and processed information in a much more positive way after the AVACEN treatment.

Participant 6 ś brain was rather in an inefficient state before the AVACEN treatment, probably because Participant 6 was a bit anxious maybe because of the unknown nature of the experiment (she indicated that she feels in between relaxed and stressed before the treatment). She relaxed and her brain became somewhat more efficient after the AVACEN treatment.

MenlaScan

Participant 1 notable results are the improvements in the cardiovascular score (from Moderate to Good) and the autonomic nervous system (ANS) score (from Poor to Good). The most important result is the cardiovascular score as the ANS is prone to rapid changes with emotions.

For Participant 2, the only notable change after the treatment is a degradation in the autonomic nervous system (ANS) score (from Excellent to Poor). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person ś emotions. As such a snapshot measurement of the ANS has limited value (the person could have a sad memory coming back and show such a change in ANS).
For Participant 3, the only notable change after the treatment is an improvement in the autonomic nervous system (ANS) score (from Poor to Good). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person ś

emotions. As such a snapshot measurement of the ANS has limited value (the person could be happy about her participation and show such a change in ANS).

There are no notable changes for Participant 4.

The only notable change after the treatment for Participant 5, is a degradation in the cardiovascular score (from Moderate to Poor). Participant 5 was also a participant in our previous project with AVACEN and got great benefits from it but over time. This person has many health problems and this decrease in cardiovascular score reflects in our opinion a transient phenomenon that we have seen with other research participants, particularly those with several health problems. It would be interesting to follow this participant to see what happens to the cardiovascular score over time.

For Participant 6, the only notable change after the treatment is an improvement in the autonomic nervous system (ANS) score (from Poor to Good). The ANS is very dependent on the way the person feels at the moment of measurement; it varies with a person ś emotions. As such a snapshot measurement of the ANS has limited value (the person could be happy about her participation and show such a change in ANS). The decrease in cardiovascular score is only 4 points and even if it is changing from Moderate to Poor, it is not a significant change.

GDV

Participant 1 had very well-balanced energy (from both the images of Symmetry and Chakras) but had an almost significant increase in bioenergy after the treatment.

Participant 2 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible increase in balance after the AVACEN treatment. There was an increase in bioenergy that was not significant after the treatment.

Participant 3 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible increase in balance after the AVACEN treatment. There was an increase in bioenergy that was not significant after the treatment.

Participant 4 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible displacement of the second chakra after the AVACEN treatment indicating a withdrawal of the qualities corresponding to this chakra (passion, self-appraisal, fear, authority, aggressiveness, contempt, egoism, thrift). There was an increase in bioenergy that was close to being significant after the AVACEN treatment.

Participant 5 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible displacement of the first chakra to the right after the

AVACEN treatment indicating an increase of the manifestation of the qualities corresponding to this chakra (safety, prudence, patience, vigilance, selfishness, self-defense, struggle). There was an increase in bioenergy that was not close to being significant after the AVACEN treatment.

Participant 6 had very well-balanced energy before the treatment (from both Symmetry and Chakras Balance) but showed a visible asymmetry in the biofield as well as a displacement of the fifth chakra to the right after the AVACEN treatment indicating an increase of the manifestation of the qualities corresponding to this chakra (emotion, inspiration, creation, sociability, emotional-spiritual activity). There was a very small increase in bioenergy that was not close to being significant after the AVACEN treatment.

Discussion of each participant combined results

Participant 1 ś brain reacted positively by improving its alertness and cognitive functions as well as processing information in a more positive way after the AVACEN treatment. At the same time, there was an improvement in cardiovascular score. This participant also had an almost significant increase in bioenergy. It is clear that this participant benefited from the AVACEN treatment.

Participant 2 brain was in overdrive and inefficient before the AVACEN treatment and improved tremendously in cognitive function and in visual/psychomotor coordination as well as processing information in a much more positive way after the AVACEN treatment. This participant had no important change in cardiovascular score but showed an increase in bioenergy that was not significant after the treatment. This participant too benefited from the AVACEN treatment.

Participant 3 ś brain was in active mode before the AVACEN treatment and improved in cognitive function and processed information in a more positive way after the AVACEN treatment. There was an improvement in the autonomic nervous system (ANS) score. There was an increase in bioenergy that was not significant after the treatment.

Participant 4 ś brain was rather inactive before the AVACEN treatment and became more active and relaxed probably showing an improved alertness of the brain after the AVACEN treatment. There was no notable change in cardiovascular score for this participant. There was an increase in bioenergy that was close to being significant after the AVACEN treatment.

Participant 5 ś brain was rather in an inefficient state before the AVACEN treatment and became more efficient and processed information in a much more positive way after the AVACEN treatment. This participant showed a degradation in the cardiovascular score (from Moderate to Poor). Participant 5 was also a participant in our previous project with AVACEN

and got great benefits from it. This person has many health problems and this decrease in cardiovascular score reflects in our opinion a transient phenomenon that we have seen with other research participants, particularly those with several health problems. It would be interesting to follow this participant to see what happens to the cardiovascular score over time. There was an increase in bioenergy that was not close to being significant after the AVACEN treatment. The fact that there was an increase in bioenergy indicates that the degradation in cardiovascular score is probably due to a temporary perturbation of the body systems, including the cardiovascular system since all body systems need bioenergy to function properly.

Participant 6's brain was rather in an inefficient state before the AVACEN treatment, probably because Participant 6 was a bit anxious maybe because of the unknown nature of the experiment (she indicated that she feels in between relaxed and stressed before the treatment). She relaxed and her brain became somewhat more efficient after the AVACEN treatment. For this participant, the only notable change after the treatment is an improvement in the autonomic nervous system (ANS) score. There was a very small increase in bioenergy that was not close to being significant after the AVACEN treatment. Despite her apprehensions, this participant benefited from the AVACEN treatment.

Conclusion

All six participants experienced an improvement in brain function after the AVACEN treatment. All of them also showed an increase in bioenergy. In light of these positive results, the fact that only 2 participants showed a change in cardiovascular function (one an improvement while the other experienced a degradation) is an indication that the impact of AVACEN on the cardiovascular system is likely a long-term effect and so a longitudinal study, where people are followed for longer period of time, is the only way to know the impact of AVACEN technology on the cardiovascular system.

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APPENDIX A

Gaétan Chevalier, Ph.D.,

Biographical Sketch

Dr. Gaétan Chevalier received his Ph.D. from the University of Montréal in Atomic Physics and Laser Spectroscopy in 1988. After 4 years of research at UCLA in the field of nuclear fusion, he became professor and Director of Research at the California Institute for Human Science (CIHS) in 1993 where, for 10 years, he conducted research projects on human physiology and electrophysiology as well as being Director of the Life Physics Department and being Research Director. Dr. Chevalier is currently Lead Faculty at CIHS, Visiting Scholar in the Department of Family Medicine and Public Health at UCSD, and he has been Director of Research at Psy-Tek Labs since June 2010.

APPENDIX B
Mary D. Clark, Ph.D.,
Biographical Sketch

Mary D. Clark, Ph.D. is a licensed psychologist in Arizona, and is a licensed marriage family therapist and licensed educational psychologist in California. She maintains both a private practice and a healing practice in Encinitas, California. Mary is a Certified Energy Healing Instructor, a Senior Certified Energy Healer, and past coordinator of the Energy Healing Certification Program for the central and western states. She has practiced and taught Energy Healing for over 10 years,

APPENDIX C

Stefan J. Kasian, N.M.D., Ph.D.

Dr. Stefan J. Kasian is a Licensed Doctor of Naturopathic Medicine who completed a Residency in General Practice from Bastyr University in San Diego, CA. After earning an undergraduate degree Computer Science from Duke University in Durham, NC, he earned a Ph.D. from Saybrook University in San Francisco, CA, in Transpersonal Psychology specializing in the neurophysiology of peak experiences and self-actualization. He has conducted and published research in conjunction with teams at various prestigious institutions: Monroe Institute, University of Virginia, Rockefeller Institute, Duke University Medical Center, Arizona State University, and Akamai University. He maintains a concierge practice focusing on state-of-the-art multi-dimensional assessments, brain rejuvenation, home health makeovers, international retreats, and conscious sustainable communities. A Near-Death Experience (NDE) survivor of multiple life-threatening invasive neurosurgeries after being struck by a reckless driver, Dr. Kasian brings unparalleled passion and compassion to healthcare and brain rejuvenation as a result of his arduous recovery.

APPENDIX D

P300 Brain Mapping System

Data collected per measurement via the P3 system:

B , Andrew — Male, 41 — ID: N/A — Generated: 11/6/2018 6:37 PM

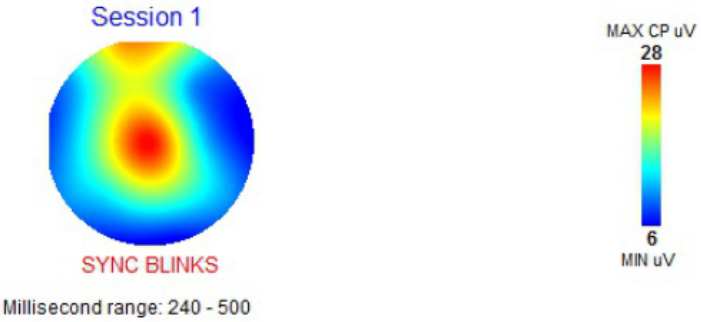
Session Number (Created Date)	Original Title	Reason for Visit	Followup	Change	Hrs. of Sleep | Hrs. Since Meal
Session 1 (4/16/2018)	Routine	Age-Related Cognitive Evaluation	No	N/A	7-9 | 1-3

Symbol Key: ⬓ = Low Data Yield, ∗ = Sync Blinks which may affect accuracy of reported P300 depth

Screening Scores	Session 1 (4/16/2018)	Ref. Range (40 yrs)
Hamilton Anxiety Rating Scale (HAM-A) For all ages.	N/A	≤ 17
Patient Health Questionnaire-9 (PHQ-9) For ages 13+.	N/A	< 5
Adult ADHD Self-Report Scale (ASRS-v1.1) For ages 18+. (Part A only)	N/A	≤ 16
Bipolar Spectrum Diagnostic Scale (BSDS)	N/A	< 6
Performance Assessments		
Physical Reaction Time	252 (±35) ms	303–373 ms
Trail Making Test A	54 sec	33–49 sec
Trail Making Test B	111 sec	54–98 sec
Evoked Potentials (Best Central Parietal)		
Audio P300 Delay	328 ms	278–326 ms
Test/Retest Change	-	±6%
Audio P300 Voltage	27.5 µV	10–20 µV
Test/Retest Change	-	±12%
State (Power)		
CZ Eyes Open Theta/Beta	⬓ N/A	0.8–2.8
CZ Eyes Closed Theta/Beta	1.2	0.8–2.8
F3/F4 Eyes Closed Alpha	1.7	0.8–1.2

Maximum P300 Test Depth (µV)

SYNC BLINKS REPORTED IF MAXIMUM DEPTH OF FP1 or FP2 > 20 uV. SYNC BLINKS AFFECT FRONTAL DEPTH VALUES.



PSY TEK LABS

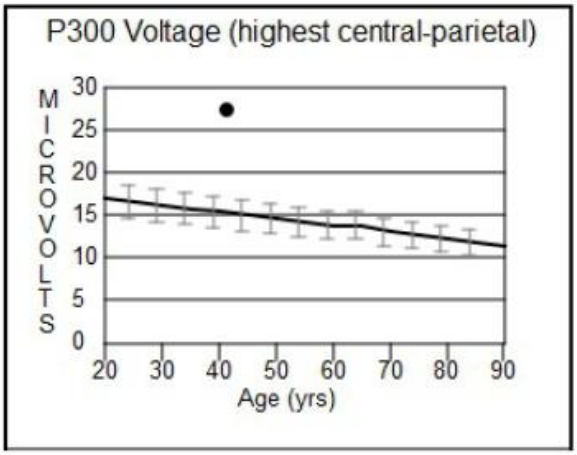
Non-Invasive Scanning and Subtle Energy Testing Lab

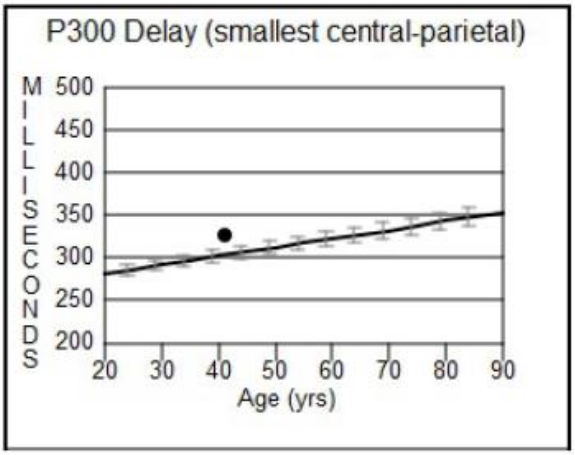
Trend Graphs

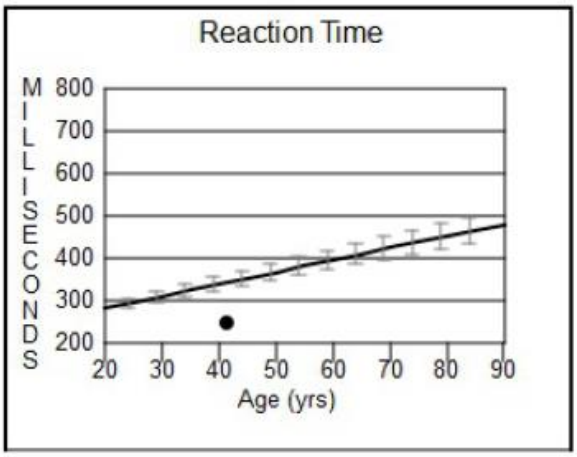
I indicates test-retest ranges.

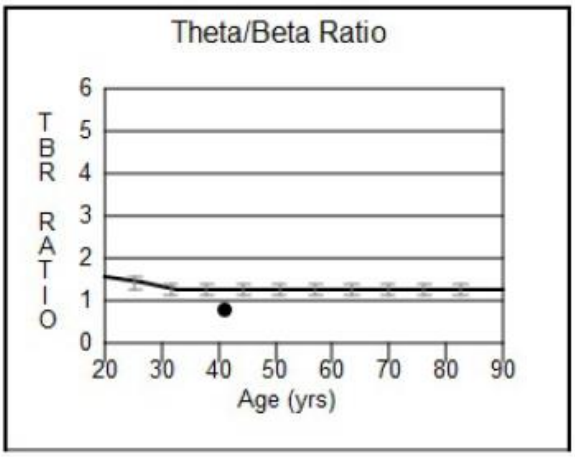
Color Key

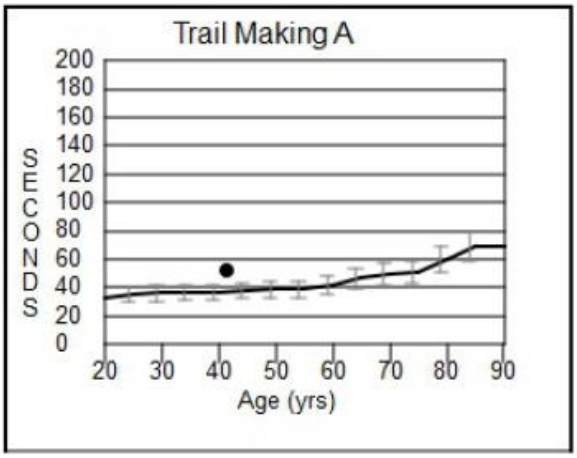
Session 1

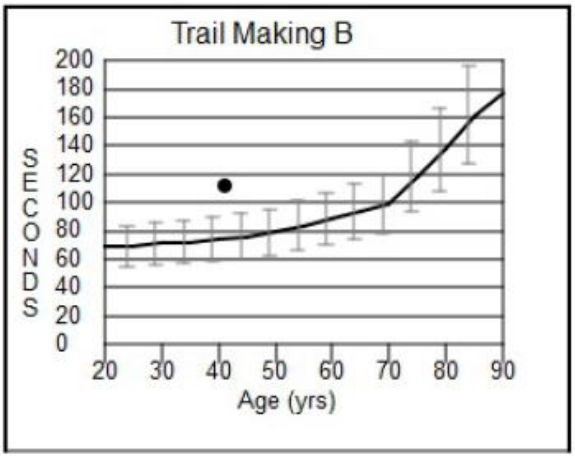












P300 Common/Rare Comparison - Session 1 (4/16/2018)

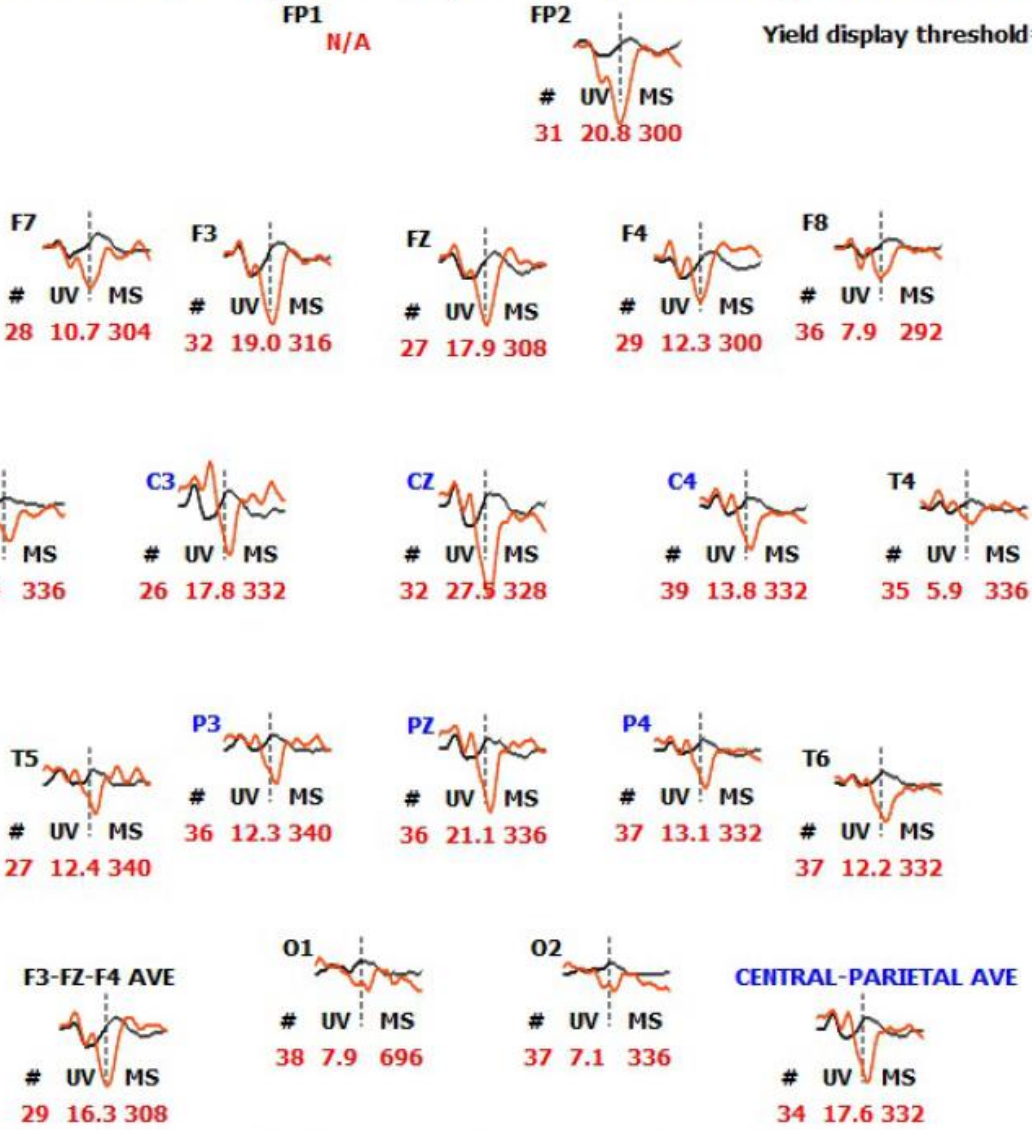
For only one session, the common responses are compared to the rare responses.

Color Key

Common Rare

Largest depths between 200-700 msec are reported. P300s typically occur between 240 and 450 msec. Probable depth and latency of true P300 is indicated on 1st page of report. Sync-blinks are reported here when depth of FP1 or FP2 > 20 uV and is also larger than the depth at all other locations with a data yield >= 20. Sync-blinks may affect the depth at other locations.

Yield display threshold=20

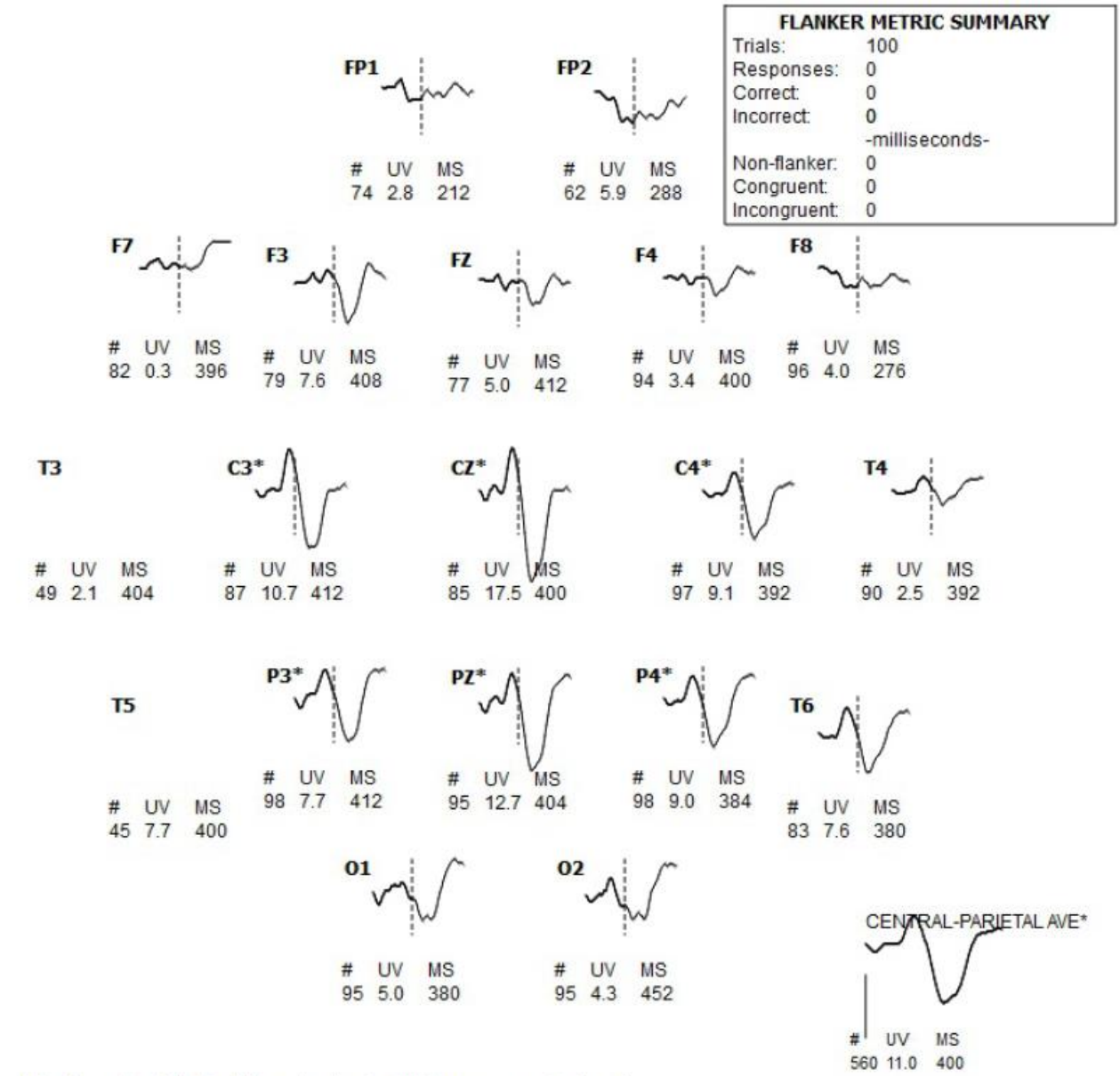


Black dotted lines at 300 msec post stimulus.

Flanker ERP & Metrics - Session 1 (4/16/2018)

Color Key

Session 1



Black vertical dotted lines indicate 300 msec post stimulus.
Solid vertical line(s) indicate physical response time average(s).

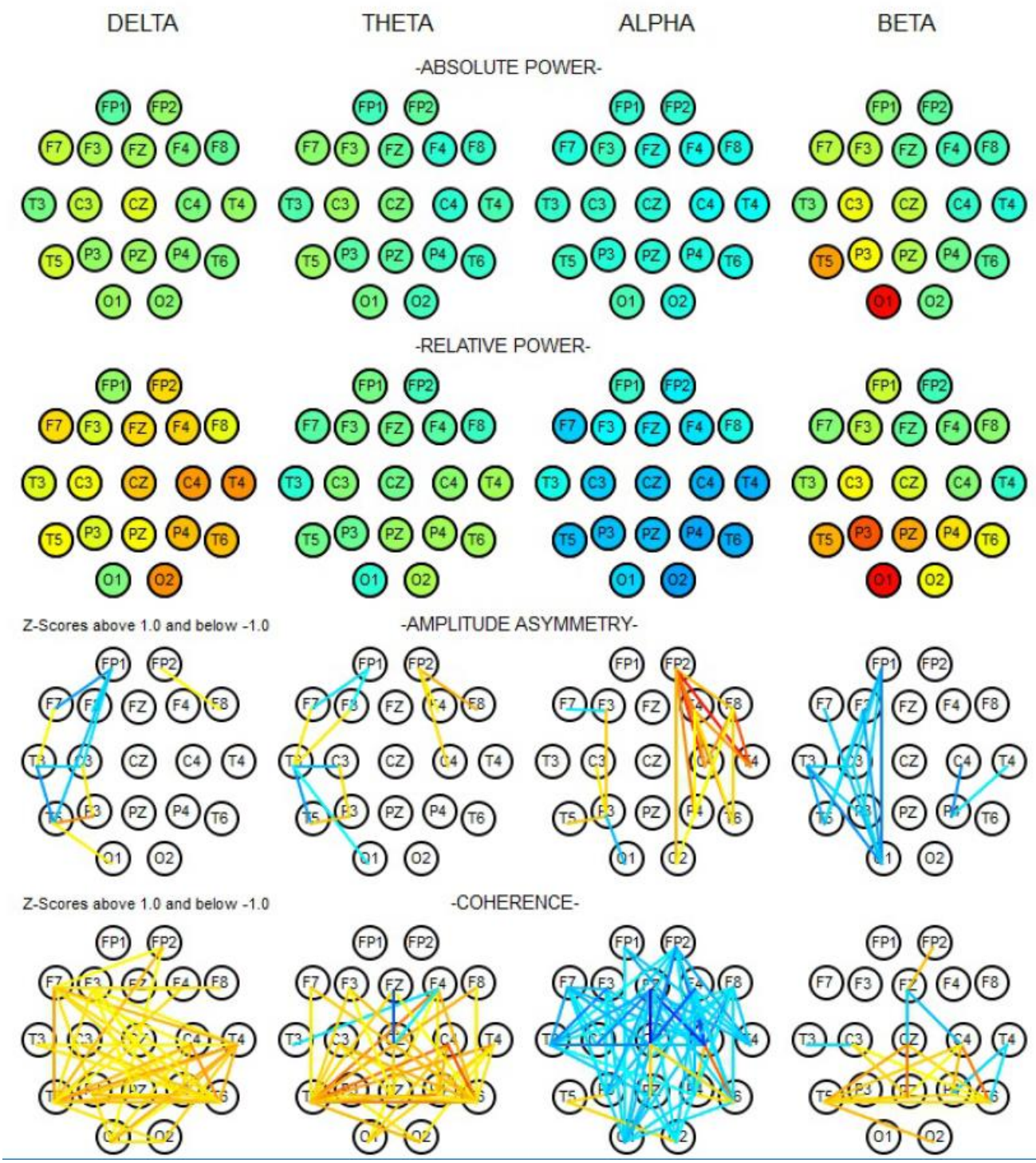
PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

Eyes Closed P300 Z Scores
Session 1 (4/16/2018)

Band Ranges
Delta: 1.0–4.0 Hz | Theta: 4.5–7.5 Hz
Alpha: 8.0–13.0 Hz | Beta: 13.5–20.0 Hz

Color Key
-3.0 0 +3.0



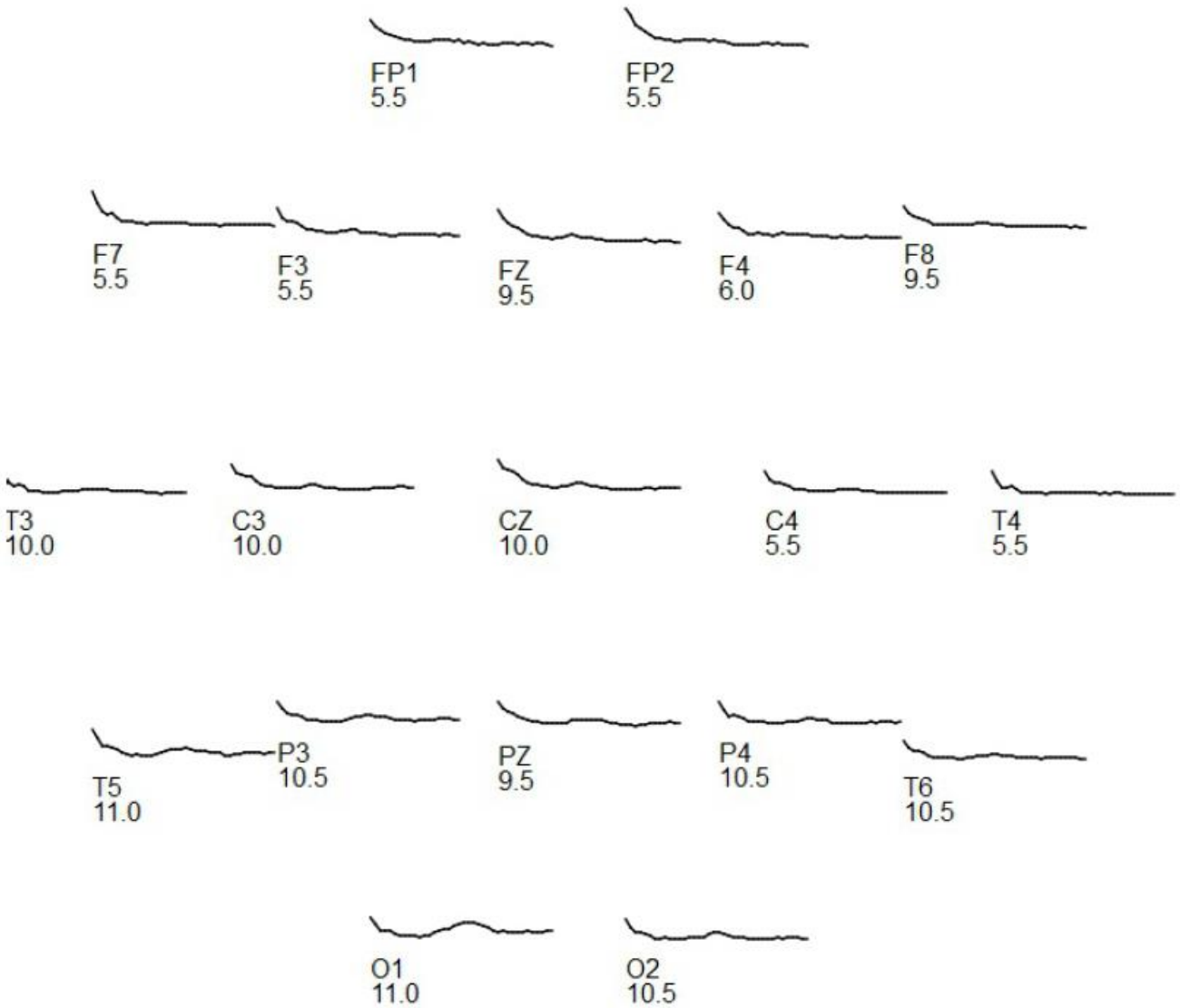
PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

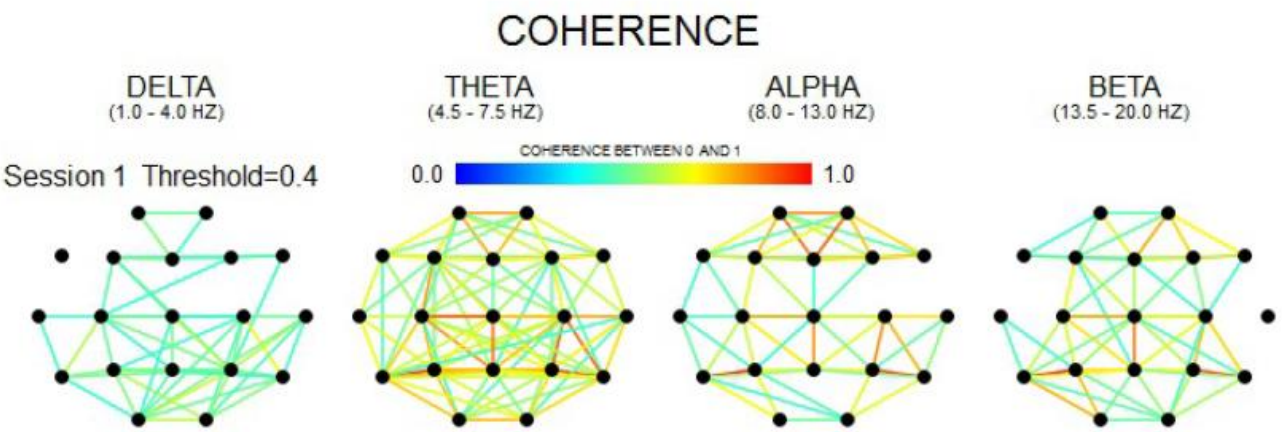
Eyes Closed P300 Alpha Peaks

Color Key

Session 1
(4/16/2018)



Coherence Network Graphs
Row shows color-mapped coherence between head locations.



PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

Magnitude Band Tables, Eyes Closed P300
UNITS: Total peak-peak microvolts within each band

Band Ranges
Delta: 1.0–4.0 Hz
Theta: 4.5–7.5 Hz
Alpha: 8.0–13.0 Hz
Beta: 13.5–20.0 Hz

Color Key
(Difference from reference session)

≤ -100% 0% ≥ +100%

Session 1 (4/16/2018)

LOC	DELTA	THETA	ALPHA	BETA	NUMINC
FP1	99	10	13	28	85
FP2	73	11	13	22	169
F3	68	12	14	29	194
F4	82	9	11	21	179
F7	83	10	11	29	167
F8	68	8	9	19	211
C3	82	13	15	35	157
C4	64	8	9	22	234
P3	65	9	15	45	216
P4	69	8	12	30	228
O1	56	9	23	83	228
O2	62	8	13	35	229
T3	92	7	9	24	115
T4	63	6	7	20	205
T5	87	10	16	45	138
T6	63	7	11	27	224
FZ	83	12	14	24	162
CZ	84	14	15	33	188
PZ	71	11	15	36	204

PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab

Coherence Band Table, Eyes Closed P300
Session 1 (4/16/2018)

Abbreviation Key
D = Delta (1.0–4.0 Hz)
T = Theta (4.5–7.5 Hz)
A = Alpha (8.0–13.0 Hz)
B = Beta (13.5–20.0 Hz)
N = Number of included locations

Color Key
(Difference from reference session)

≤ -100% 0% ≥ +100%

PAIR	D	T	A	B	N	PAIR	D	T	A	B	N	PAIR	D	T	A	B	N	PAIR	D	T	A	B	N
FP1-FP2	.48	.81	.83	.45	71	F3-O2	.18	.18	.02	.15	191	F8-T3	.20	.16	.04	.08	101	P4-T4	.56	.69	.46	.11	201
FP1-F3	.36	.68	.77	.47	71	F3-T3	.29	.49	.25	.26	102	F8-T4	.38	.60	.39	.30	180	P4-T5	.49	.68	.34	.35	134
FP1-F4	.34	.60	.58	.38	67	F3-T4	.29	.32	.14	.07	167	F8-T5	.23	.22	.02	.11	121	P4-T6	.51	.95	.94	.92	213
FP1-F7	.25	.66	.65	.40	67	F3-T5	.34	.48	.16	.27	119	F8-T6	.35	.37	.05	.16	202	P4-FZ	.32	.36	.05	.25	159
FP1-F8	.25	.48	.47	.28	78	F3-T6	.29	.37	.05	.20	186	F8-FZ	.36	.67	.70	.59	149	P4-CZ	.56	.68	.49	.56	183
FP1-C3	.30	.44	.29	.28	57	F3-FZ	.49	.81	.85	.77	132	F8-CZ	.30	.39	.36	.37	174	P4-PZ	.48	.80	.69	.67	197
FP1-C4	.25	.27	.04	.15	82	F3-CZ	.46	.70	.58	.59	152	F8-PZ	.22	.30	.14	.25	187	O1-O2	.58	.76	.47	.47	223
FP1-P3	.19	.27	.04	.11	84	F3-PZ	.31	.56	.30	.42	169	C3-C4	.43	.70	.42	.45	154	O1-T3	.24	.37	.18	.29	112
FP1-P4	.30	.20	.04	.08	82	F4-F7	.37	.50	.36	.23	134	C3-P3	.47	.77	.61	.62	140	O1-T4	.51	.36	.05	.03	197
FP1-O1	.11	.12	.02	.04	82	F4-F8	.45	.89	.93	.87	160	C3-P4	.50	.65	.34	.38	151	O1-T5	.41	.74	.67	.78	135
FP1-O2	.07	.07	.10	.06	84	F4-C3	.41	.54	.33	.36	113	C3-O1	.33	.42	.17	.30	150	O1-T6	.47	.53	.17	.16	213
FP1-T3	.22	.35	.19	.18	34	F4-C4	.37	.67	.31	.51	174	C3-O2	.33	.38	.11	.28	150	O1-FZ	.22	.14	.01	.13	158
FP1-T4	.27	.19	.02	.04	70	F4-P3	.28	.33	.05	.17	167	C3-T3	.40	.61	.43	.34	82	O1-CZ	.41	.35	.12	.29	184
FP1-T5	.20	.30	.07	.08	48	F4-P4	.31	.49	.10	.24	172	C3-T4	.39	.39	.21	.08	128	O1-PZ	.43	.51	.28	.49	198
FP1-T6	.14	.16	.08	.07	82	F4-O1	.19	.19	.01	.09	172	C3-T5	.57	.73	.57	.58	94	O2-T3	.26	.26	.06	.19	111
FP1-FZ	.51	.78	.87	.62	46	F4-O2	.29	.20	.02	.13	175	C3-T6	.35	.55	.21	.29	146	O2-T4	.43	.44	.14	.08	199
FP1-CZ	.32	.32	.23	.24	64	F4-T3	.20	.19	.07	.13	83	C3-FZ	.37	.58	.37	.47	102	O2-T5	.37	.64	.41	.46	134
FP1-PZ	.25	.28	.08	.15	79	F4-T4	.37	.60	.33	.25	155	C3-CZ	.48	.90	.78	.77	123	O2-T6	.50	.72	.64	.55	216
FP2-F3	.32	.51	.64	.47	136	F4-T5	.26	.33	.06	.14	94	C3-PZ	.41	.82	.69	.70	126	O2-FZ	.11	.16	.04	.15	160
FP2-F4	.34	.66	.74	.72	122	F4-T6	.26	.45	.07	.22	167	C4-P3	.41	.60	.26	.34	211	O2-CZ	.22	.34	.14	.33	183
FP2-F7	.27	.52	.45	.26	125	F4-FZ	.39	.78	.80	.74	115	C4-P4	.48	.91	.82	.77	223	O2-PZ	.30	.50	.37	.53	200
FP2-F8	.38	.64	.72	.67	152	F4-CZ	.33	.55	.45	.49	138	C4-O1	.46	.44	.10	.18	223	T3-T4	.28	.21	.04	.03	95
FP2-C3	.31	.29	.21	.27	110	F4-PZ	.22	.42	.19	.33	156	C4-O2	.45	.53	.32	.41	224	T3-T5	.41	.65	.47	.43	69
FP2-C4	.20	.31	.10	.30	164	F7-F8	.38	.39	.28	.17	147	C4-T3	.30	.34	.05	.18	113	T3-T6	.29	.31	.03	.13	114
FP2-P3	.15	.17	.02	.12	154	F7-C3	.33	.54	.46	.35	109	C4-T4	.48	.79	.71	.31	201	T3-FZ	.26	.34	.17	.23	77
FP2-P4	.31	.23	.02	.15	159	F7-C4	.27	.35	.09	.16	162	C4-T5	.38	.60	.22	.31	135	T3-CZ	.25	.38	.14	.28	89
FP2-O1	.18	.11	.01	.06	160	F7-P3	.30	.39	.12	.16	156	C4-T6	.65	.88	.77	.73	219	T3-PZ	.23	.36	.15	.31	96
FP2-O2	.12	.11	.07	.09	162	F7-P4	.30	.29	.05	.12	162	C4-FZ	.28	.47	.16	.42	160	T4-T5	.35	.41	.09	.05	115
FP2-T3	.14	.23	.07	.15	77	F7-O1	.24	.24	.01	.07	161	C4-CZ	.40	.75	.65	.68	183	T4-T6	.43	.72	.51	.12	193
FP2-T4	.27	.29	.10	.16	150	F7-O2	.28	.19	.03	.08	165	C4-PZ	.38	.75	.64	.65	199	T4-FZ	.30	.37	.16	.14	149
FP2-T5	.17	.15	.02	.09	93	F7-T3	.29	.62	.41	.30	81	P3-P4	.58	.70	.39	.38	209	T4-CZ	.38	.40	.36	.13	168
FP2-T6	.18	.23	.02	.14	163	F7-T4	.29	.31	.05	.03	145	P3-O1	.51	.74	.63	.76	210	T4-PZ	.36	.38	.28	.11	177
FP2-FZ	.41	.76	.89	.78	116	F7-T5	.25	.44	.13	.18	89	P3-O2	.57	.63	.45	.48	215	T5-T6	.38	.61	.25	.26	130
FP2-CZ	.29	.26	.24	.34	140	F7-T6	.24	.25	.04	.11	155	P3-T3	.35	.64	.44	.41	111	T5-FZ	.22	.31	.07	.21	100
FP2-PZ	.17	.19	.08	.22	147	F7-FZ	.30	.66	.57	.43	112	P3-T4	.39	.37	.09	.06	186	T5-CZ	.35	.61	.34	.49	111
F3-F4	.40	.70	.66	.51	142	F7-CZ	.24	.37	.29	.29	131	P3-T5	.49	.96	.99	.99	127	T5-PZ	.34	.73	.54	.67	114
F3-F7	.35	.68	.73	.60	139	F7-PZ	.19	.28	.16	.21	145	P3-T6	.46	.61	.28	.29	208	T6-FZ	.18	.33	.03	.22	148
F3-F8	.44	.52	.54	.37	176	F8-C3	.26	.38	.23	.26	135	P3-FZ	.25	.32	.06	.23	149	T6-CZ	.33	.57	.36	.45	179
F3-C3	.45	.81	.64	.64	134	F8-C4	.36	.56	.28	.41	206	P3-CZ	.39	.66	.40	.53	175	T6-PZ	.41	.68	.51	.52	194
F3-C4	.38	.55	.22	.36	189	F8-P3	.27	.22	.02	.13	196	P3-PZ	.49	.79	.64	.72	192	FZ-CZ	.35	.46	.41	.56	141
F3-P3	.33	.50	.18	.29	182	F8-P4	.42	.39	.08	.18	203	P4-O1	.59	.57	.21	.23	220	FZ-PZ	.26	.35	.16	.39	141
F3-P4	.46	.43	.09	.24	190	F8-O1	.24	.13	.01	.07	203	P4-O2	.52	.72	.63	.57	222	CZ-PZ	.49	.87	.82	.86	174
F3-O1	.25	.22	.04	.13	186	F8-O2	.25	.14	.03	.09	205	P4-T3	.28	.33	.05	.15	108						

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P300:

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Theta Beta Ratio:

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Snyder, S., & Hall, J. (2006). A meta-analysis of quantitative EEG power associated with attention-deficit hyperactivity disorder. *Journal of Clinical Neurophysiology, 23*(5), 440-455.

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APPENDIX E

Menlascan PRO

Features

- Body composition assessment
- Sudomotor function assessment
- ANS/Stress/Fatigue assessment
- Vascular assessment
- Disease screening score

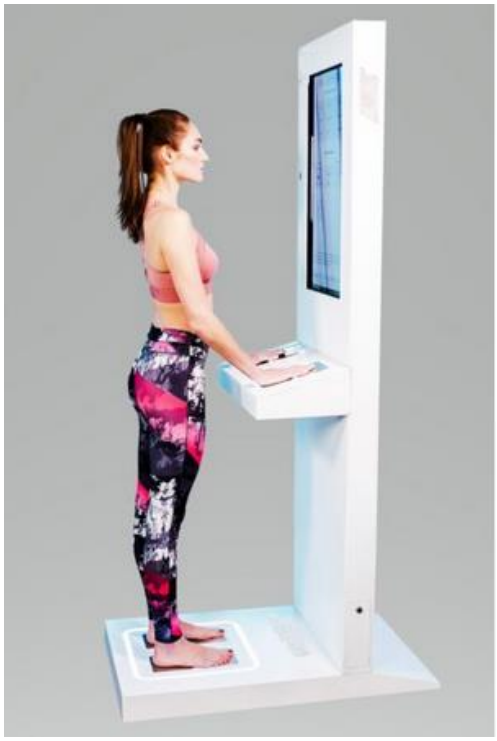
Devices

- Hand plates electrodes
- Foot plates electrodes
- Digital pulse oximeter
- Head electrodes

+ extended software for interpretation with functional 3D modeling

Description

Menlascan PRO is a health screen physiological analyzer, a unique combination of medical applications for obtaining a quick overview of the most important regulatory mechanisms of the human body



Non-Invasive Scanning and Subtle Energy Testing Lab

Features & Specifications

Features

- Segmental Body composition 3D Analyzer *
- Body composition assessment (FM, FFM, TBW, ECW, ICW, BMI, Muscular mass, Phase angle)
- Microcirculation assessment
- Body composition 3D modeling (fat mass color code)
- Diet and micro nutrition advisor including visceral fat 3D modeling and acid base balance
- Vertebral Score
- Recommendations for SPA / Fitness / Sport training
- Heart Rate variability and extended ANS testing
- Extended 3D body modeling
- Risk screening
- And more

  Measurement time: 2-6 minutes

SPECIFICATION

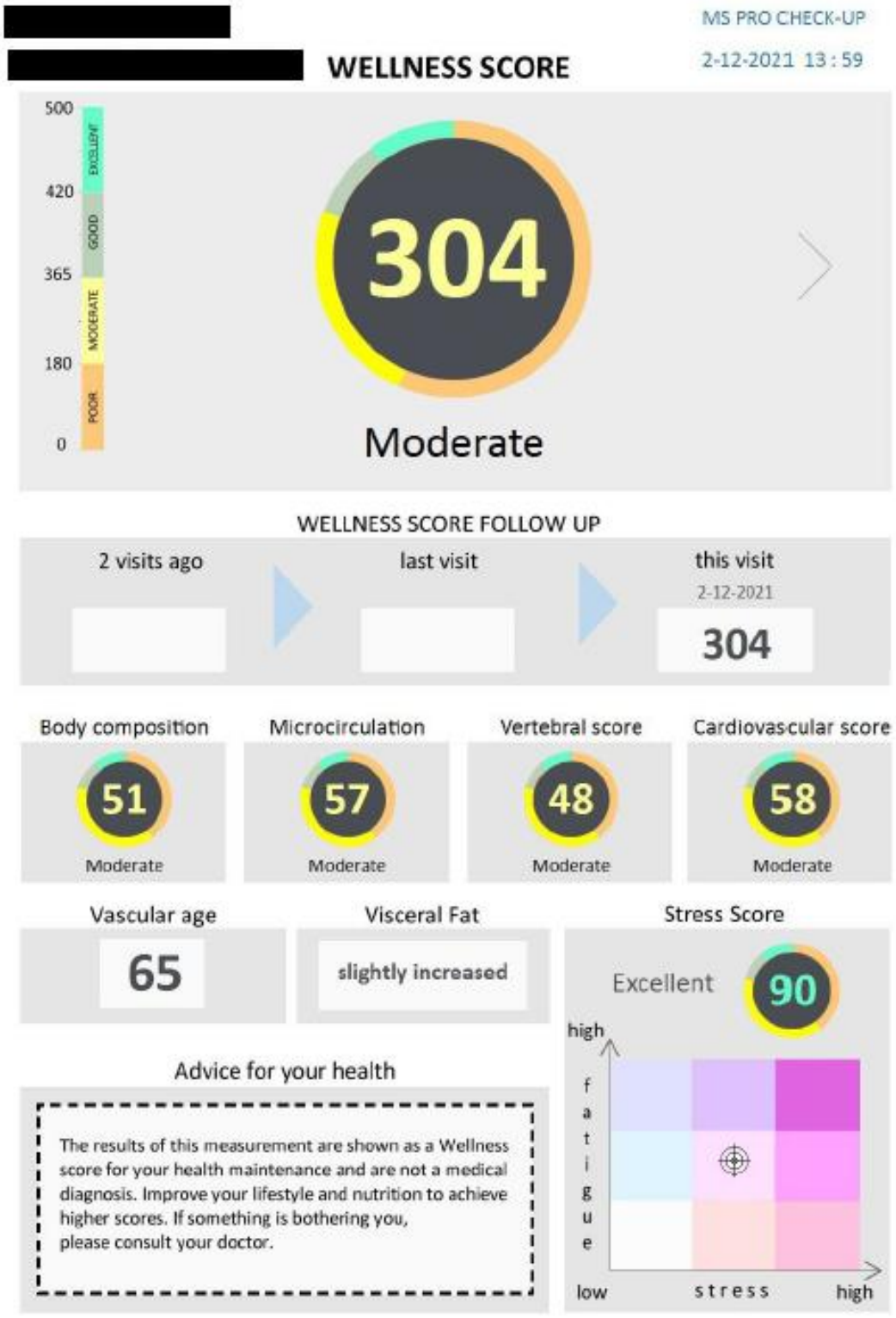
- USB ready Scanning Hub
- Tetrapolar stainless steel hand plates
- Tetrapolar stainless steel foot plates
- 4-Lead MenlaScan Pro Wellness foot plate cable
- 4-Lead MenlaScan Pro Wellness hand plate cable
- 4-Lead forehead electrodes
- Pulse Oximeter
- USB cable
- MenlaScan Pro Wellness Software (2x licenses)
- Transport bag

**** Parameters depend on the equipment configuration***

PSY TEK LABS

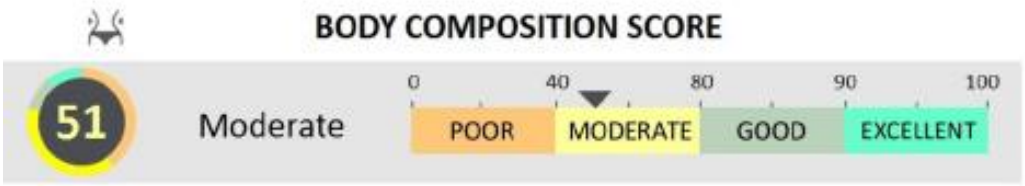
Non-Invasive Scanning and Subtle Energy Testing Lab

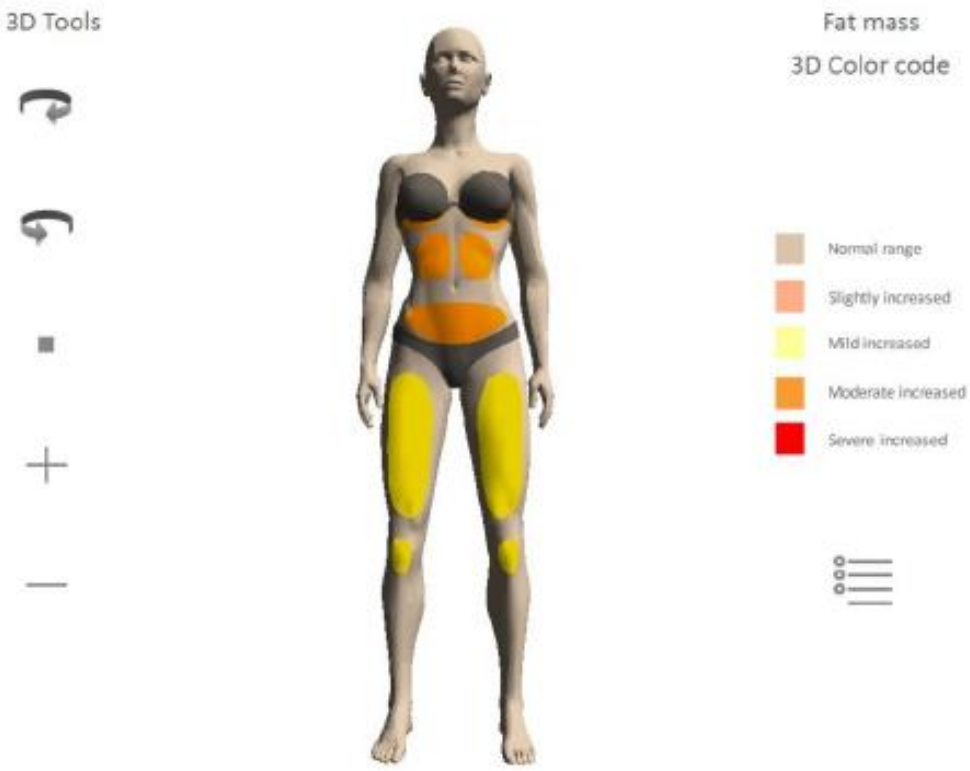
MENLASCAN REPORT EXAMPLE



PSY TEK LABS

Non-Invasive Scanning and Subtle Energy Testing Lab





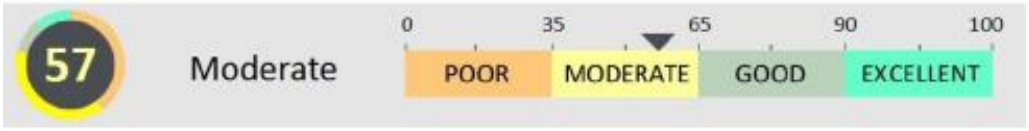
Body Fat Mass	Fat Free Mass	Body Cell Mass	Muscular mass	Visceral Fat Level
41.4 %	58.6 %	27.3 %	29.6 %	9.3 %
Increased	Normal	Decreased	Normal	Increased

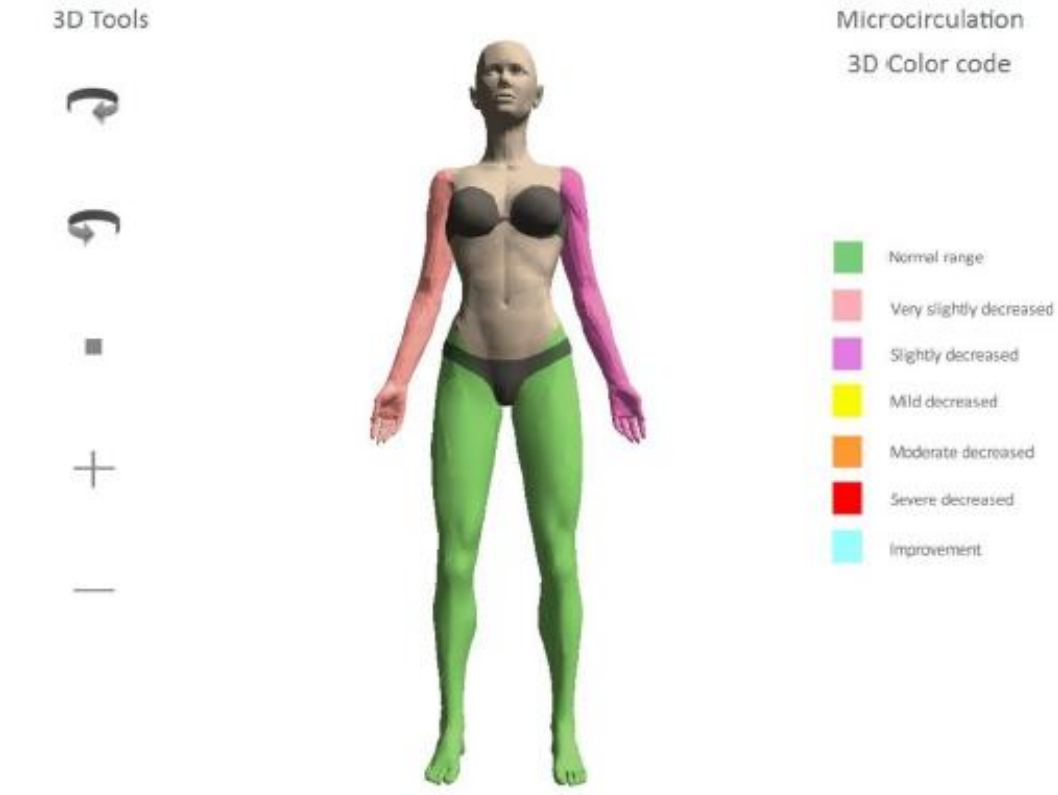
Total Body Water	Extra Cellular Water	Intra Cellular Water	Waist / Hip Ratio	Basal Metabolic Rate
46.4 %	40.2 %	59.8 %	0.86 C.U	1370 Kcal
Decreased	Increased	Normal	Increased	Increased

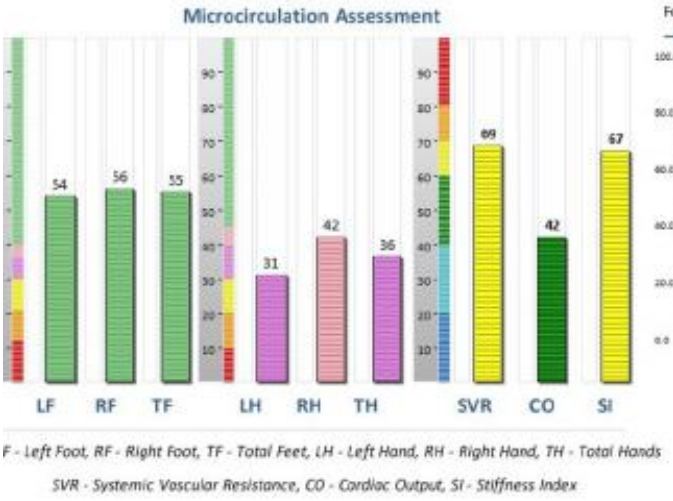
Daily Activity Level:
Very light: stay at home, no activity
Height: 5; Feet 2 inch
Weight : 156.5 Pounds (Norms: 101.1 - 136.1 Pounds)
Body Mass Index: 28.6 (Norms: 18.5 - 24.9)
Fat free mass: 91.7 Pounds (Norms: 79.8 - 101.7 Pounds)
Fat mass: 64.8 Pounds (Norms: 34.6 - 50.2 Pounds)
Muscular mass: 46.4 Pounds (Norms: 44.0 - 56.1 Pounds)
TBW(Total Body Water): 32.9 L (Norms: 33.1 - 40.5 L)
Extra Cellular Water: 13.25 L (Norms: 9.9 - 13.2 L)
Intra Cellular Water: 19.70 L (Norms: 16.5 - 21.7 L)
Body Cell Mass: 42.7 Pounds (Norms: 47.0 - 62.6 Pounds)
Bone Mineral Content: 5.5 Pounds (Norms: 4.5 - 5.7 Pounds)

Fat mass of the left arm: 3.22 Pounds
Fat mass of the right arm: 3.02 Pounds
Fat mass of the left leg: 11.94 Pounds
Fat mass of the right leg: 16.32 Pounds
Trunk Fat mass: 34.47 Pounds
TBW Control: 3.8 L
Basal Metabolic Rate / 24 Hours: 1370 Kcal - (Increased)
Visceral adipose tissue (VAT) = 101.8 cm2 (Norms < 100 cm2)
Visceral Fat Level = 9.3% (Norms < 9%)
Phase Angle (Whole Body) = 9.8
Phase Angle (Right Arm) = 9.2
Phase Angle (Left Arm) = 8.8
Phase Angle (Right Leg) = 9.9
Phase Angle (Left Leg) = 9.7

MICROCIRCULATION SCORE



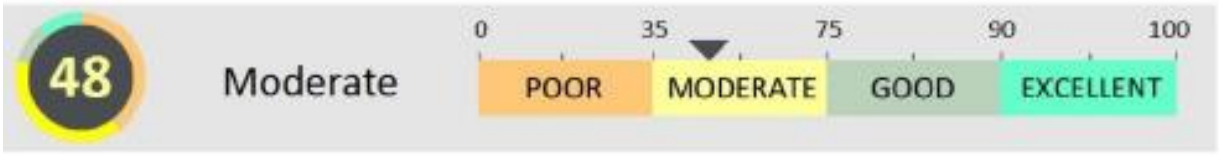


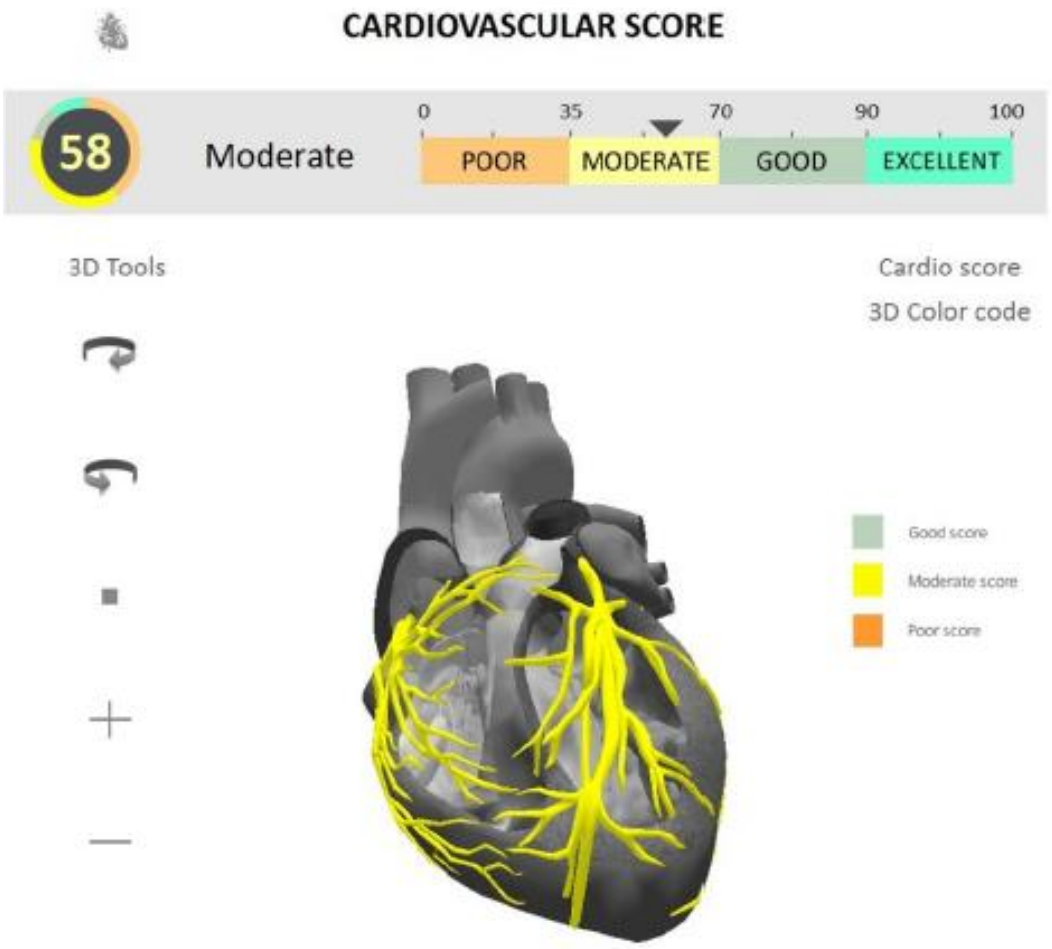


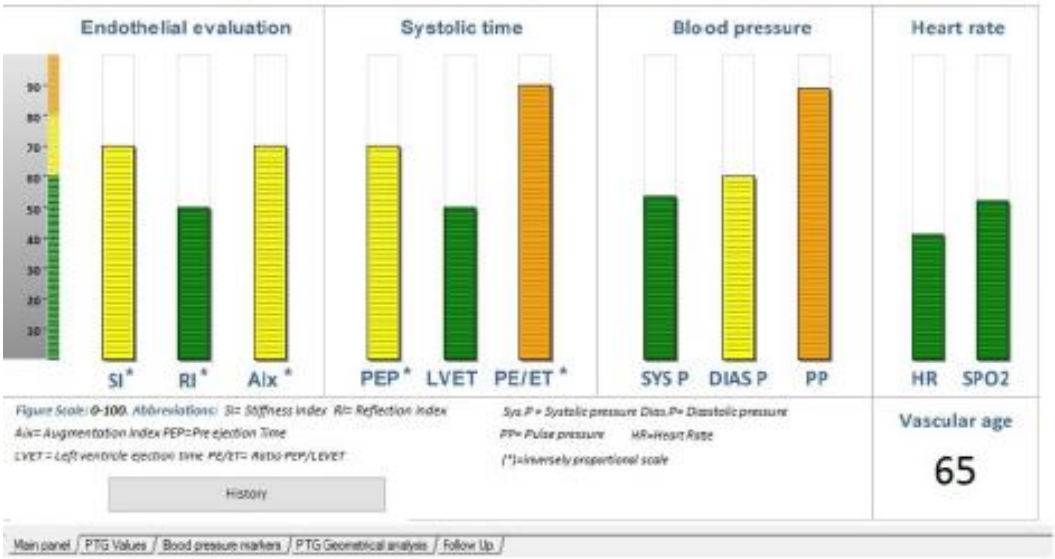
PSY TEK LABS

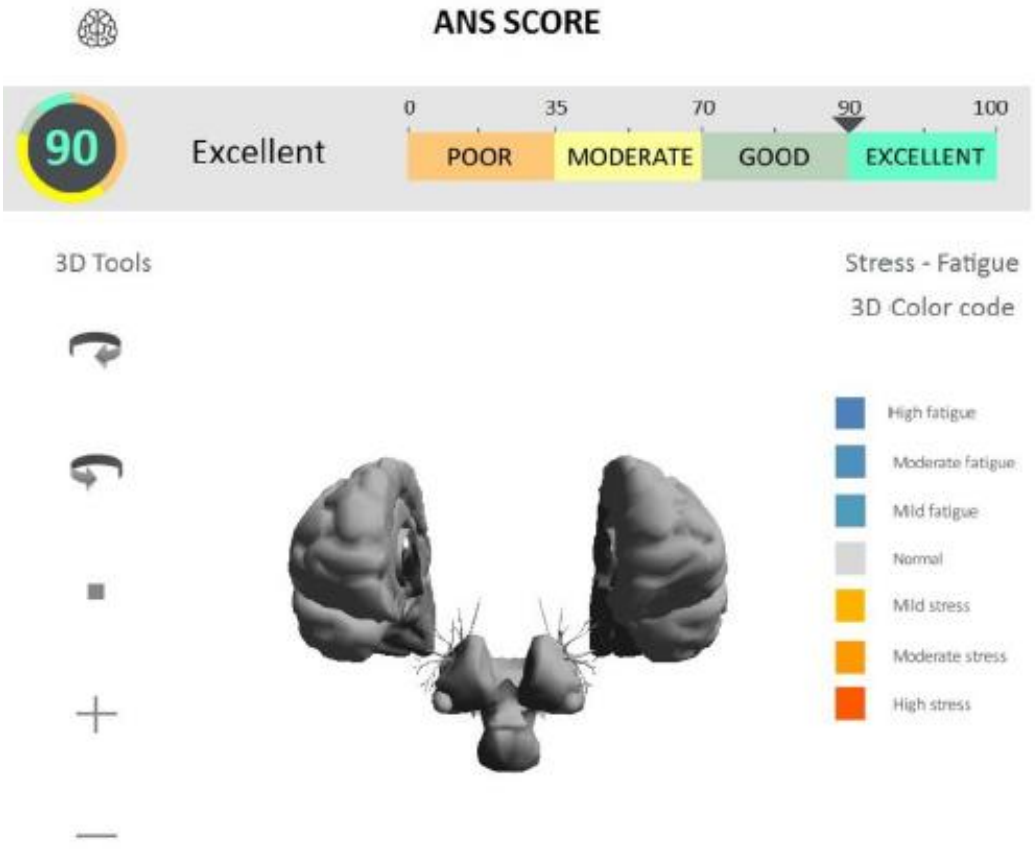
Non-Invasive Scanning and Subtle Energy Testing Lab

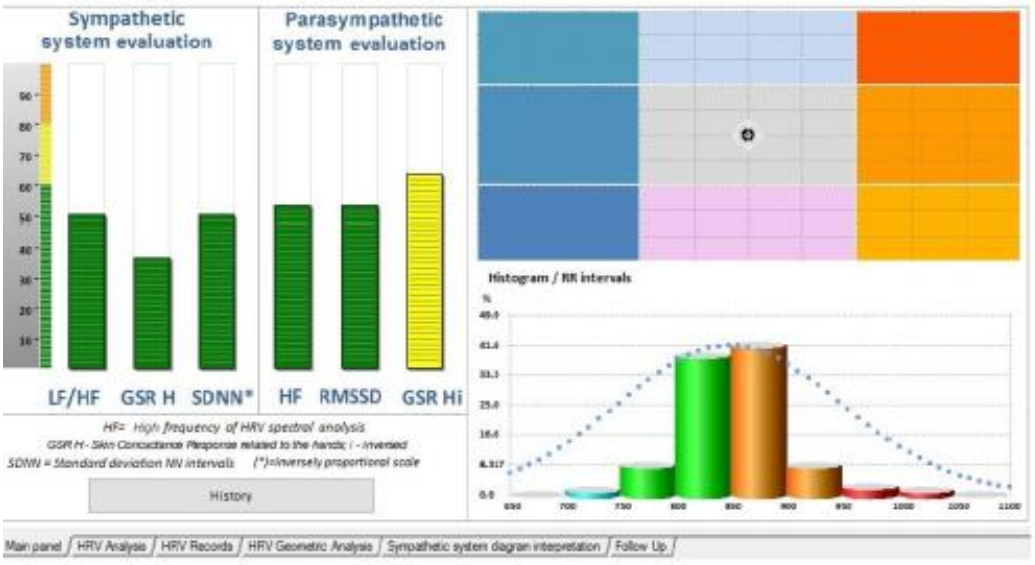
VERTEBRAL SCORE




CARDIOVASCULAR SCORE
58
Moderate
0
35
70
90
100
POOR
MODERATE
GOOD
EXCELLENT
3D Tools
Cardio score
3D Color code
Good score
Moderate score
Poor score


Endothelial evaluation
Systolic time
Blood pressure
Heart rate
SI *
RI *
AIx *
PEP *
LVET
PE/ET *
SYS P
DIAS P
PP
HR
SPO2
Vascular age
65
History
Main panel
PTG Values
Blood pressure markers
PTG Geometrical analysis
Follow Up


ANS SCORE
90
Excellent
0
35
70
90
100
POOR
MODERATE
GOOD
EXCELLENT
3D Tools
Stress - Fatigue
3D Color code
High fatigue
Moderate fatigue
Mild fatigue
Normal
Mild stress
Moderate stress
High stress


Sympathetic system evaluation
Parasympathetic system evaluation
LF/HF
GSR H
SDNN*
HF
RMSSD
GSR Hi
Histogram / RR intervals
History
Main panel
HRV Analysis
HRV Records
HRV Geometric Analysis
Sympathetic system diagram interpretation
Follow Up

APPENDIX F

EPI/GDV (Electro-Photonic Imaging/Gas Discharge Visualization)

The Electro-Photonic Imaging (EPI), also known as Gas Discharge Visualization (GDV), is an advanced form of Kirlian photography developed by Dr. Konstantin Korotkov. This technology produces an electric impulse, which generates a response of the subject in the form of electron & photon emission. The glow of the photon radiation owing to the gas discharge generated from the electromagnetic field is captured by a digital camera and processed by sophisticated software where a report can be generated. Subjects will be required to put each fingertip on a quartz plate and an image displaying the photons emissions will be analyzed according to the Korean Su Jok and Mendel meridian systems, which are possibly related to the Bonghan duct system described by the Koreans and is referenced in contemporary medical texts as the Primo-Vascular System. **Figure F-1** shows a picture of the device that will be used to measure each finger separately. **Figure F-2** shows an image of a fingerprint and the corresponding glow produced by the GDV/EPI software. The photonic emission of the ten fingertips is analyzed by the software and is shown in **Figure F-3**.

Figure F-1: Photograph of GDV Camera pro version 3 designed for measuring one finger at a time.

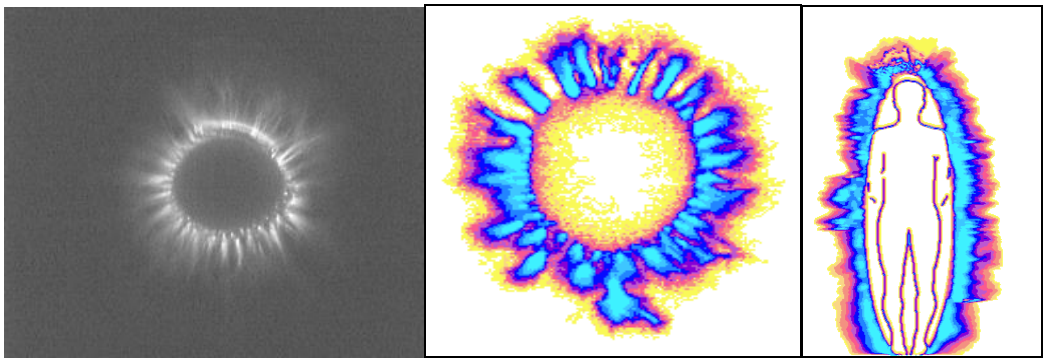


Figure F-2: Example of EPI/GDV image captures: **Left)** photonic emissions captured from a fingertip; **Middle)** photonic emission interpretation by GDV software; **Right)** biofield analysis based on photonic discharge and the Korean Su Jok meridian system.

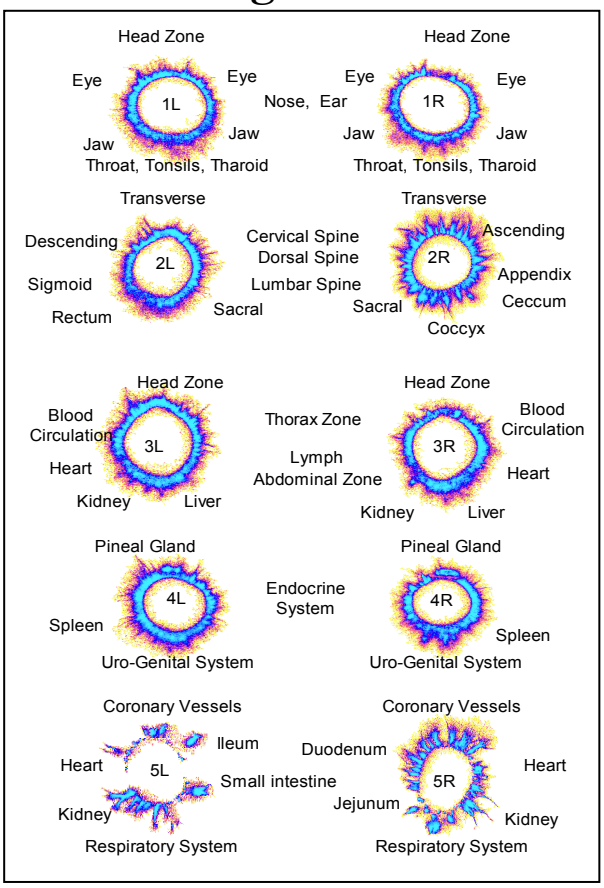


Figure F-3: Software analysis of photonic emissions with respect to the Su Jok and Mendel meridian systems.

We will measure 3 parameters of the photonic emissions around fingers:

1. **Area**

   Area definition: The Area represents the overall strength and coherence of the energy emissions of the biofield as emitted from the corona discharge around the fingertips. The normative range is considered healthy above 14,000; and a change of more than 10% is considered significant.

2. **Symmetry**

   Symmetry definition: The Symmetry of the emission area measures the uniformity of the biofield as emitted from the left and right sides.

   The normative ranges for Symmetry are: > 80%; and Left and Right difference of less than 10%.

3. **Activation Coefficient** (AC):

   AC definition: AC is the measure of physical stress of the body -- the higher the number the greater the stress in the body.

   The normative ranges for low, average and highs of the Activation Coefficients are as follows:

   Pink range: 0 –2.0

Green range: > 2.0 and < = 4.0
Yellow range: > 4.0

Also included in the report will be results related to the Radial Diagrams (**Figure F-4**) and Virtual Chakras (**Figure F-5**) of each subject.

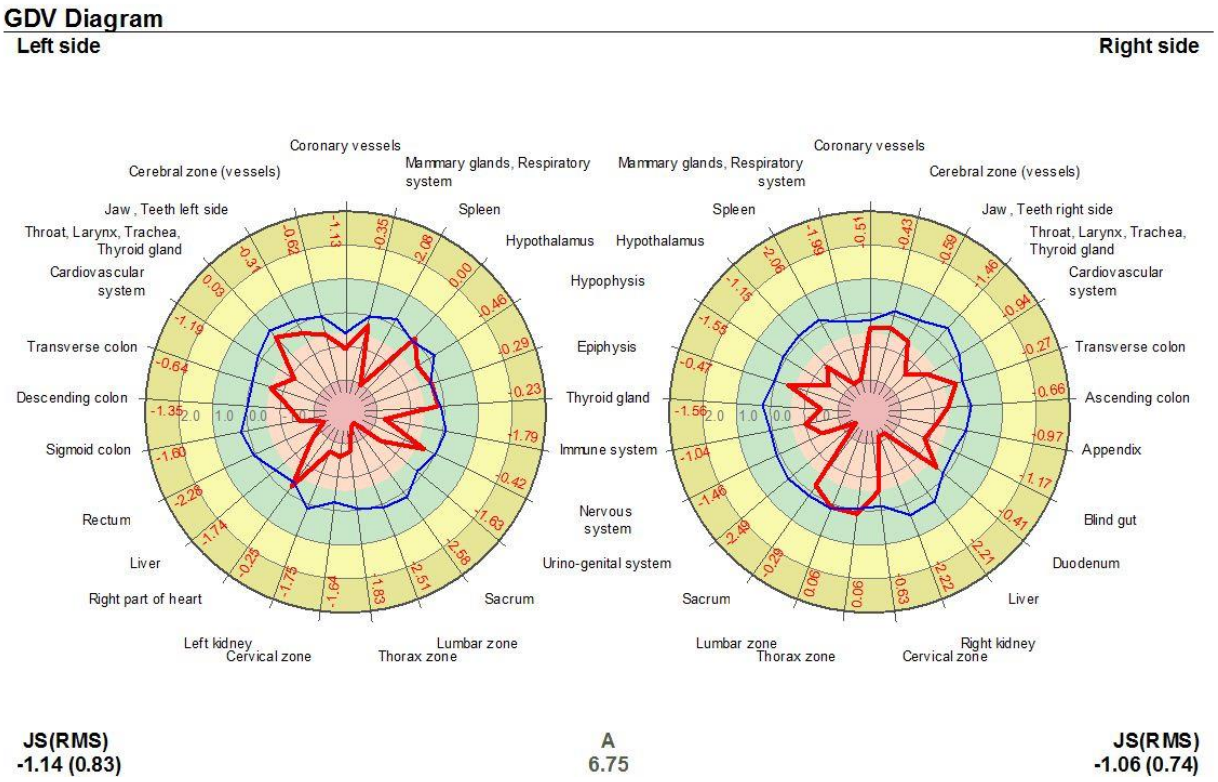


Figure F-4: In the radial charts above, the concentric circles represent the following levels of energy: Pink = Deficient Energy, Green = Normal Energy (for a person of that age and gender) and Yellow = Excessive Energy. The left circle represents the bioenergy of the corresponding organs of the left side while the right circle represents the bioenergy of the corresponding organs of the right side. The red lines connect the measured bioenergy values without filter (numbers in red inside the outer rim of the radials charts) which are related to the psychological state of the subject while the blue circles (connecting bioenergy values with filter) represent the physical state of the subject. The number below the letter A in the bottom middle represents the value of the Activation Coefficient which is an index of stress. For these radial charts, because there were many values in the Pink area for the red bioenergy values, it can be concluded that there were some emotional or psychological imbalances while the blue circles indicate normal physical energy overall. The Activation Coefficient value (6.75) indicates a high level of stress for this subject.

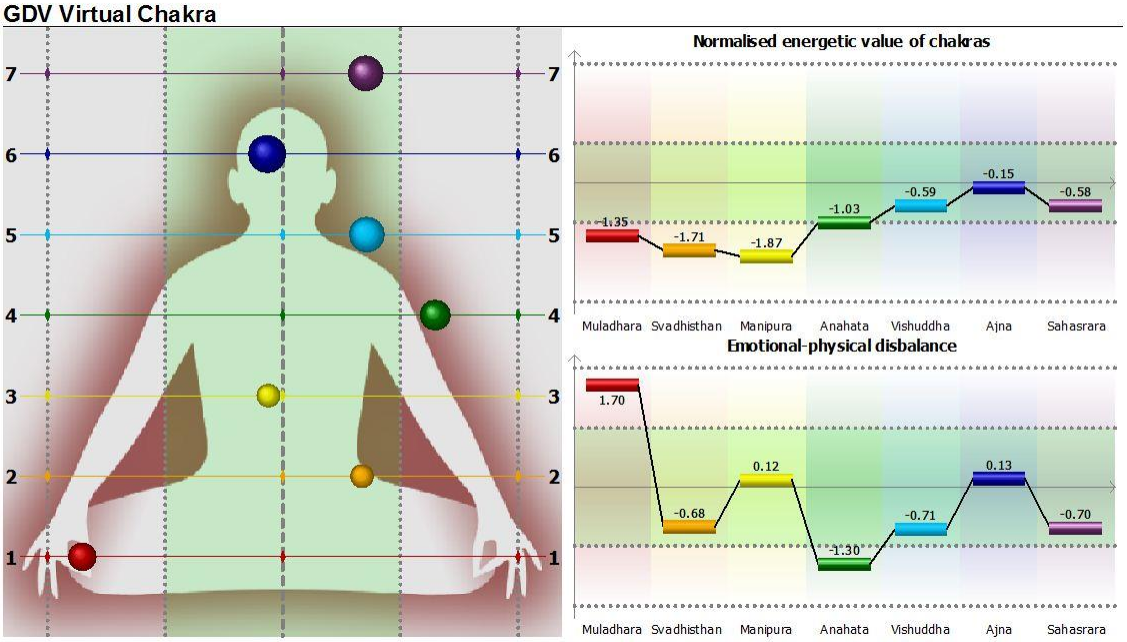


Figure F-5: Example of a GDV Virtual Chakra display. For all three chakra graphs above, the normal chakra bioenergy or balance is contained within the Green area (between the vertical dotted lines for the left graph and the horizontal dotted lines for the 2 right graphs). The size of the balls in the left diagram indicates the relative bioenergy outpouring of each chakra (the values determining the size of the balls are presented in the upper right graph entitled "Normalized energies" and are represented by the position of chakras the balls in the left diagram. In this diagram, if a ball is left of the middle line (corresponding to the right side of the subject), the position indicates a physical focus for the corresponding chakra and if the ball is on the right, an emotional focus is indicated. The values determining the position of the chakras in the left diagram are plotted on the lower right chart entitled "Emotional-physical disbalance". In the graphs presented chakras are in the emotional side and 3 chakras are in the physical side. The Anahata Chakra is out of the balanced zone on the right (corresponding to the left, emotional side) while the Muladhara chakra is out of the balance zone to the left (corresponding to the right, physical side).