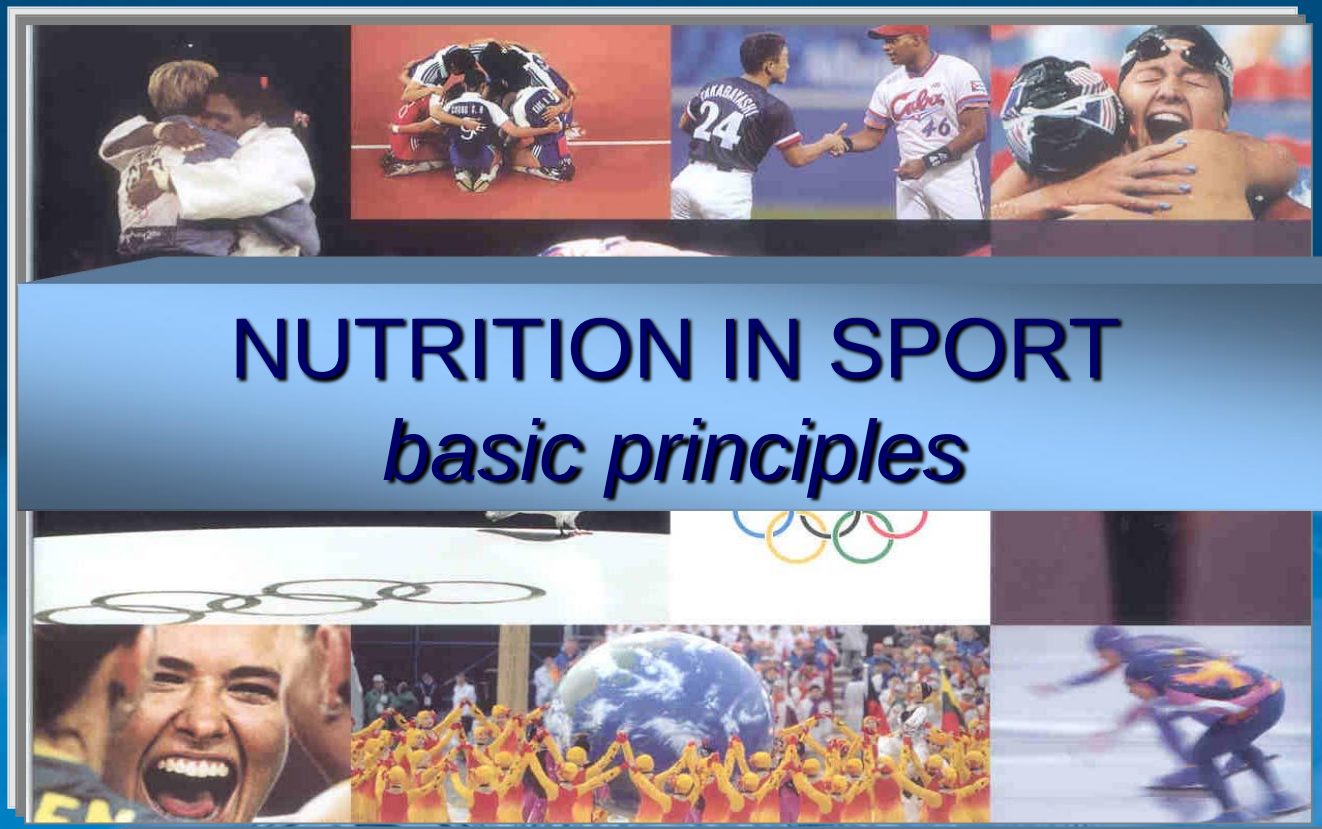


NUTRITION IN SPORT
basic principles

Ass Prof Zoran Handziski PhD, MD

Faculty of medical sciences, "Un.Goce Delcev", Stip, Republic of Macedonia

PROFFESIONAL AFFILIATIONS

- Ass prof of faculty of medical sciences, Un. “Goce Delcev”-Stip, Republic of Macedonia (lectures of pathophysiology, sports medicine and anthropology)
- Director of PZU Kineticus-sports medicine and exercise science **(www.kineticus.com.mk)**
- President of Health Commission of Macedinian Olympic Committee
- Main physician of National soccer team (U21)
- Main physician of FC Vardar (champion of National Soccer Leage)
- Medical adviser of Handball team Vardar Pro
- Former main physician of FC Rabotnicki and FC Metalurg
- Official educator of Biodex University in Macedonia
- Vice President of National Association of Sports Medicine Physicians of Macedonia
- Official delegate from Republic of Macedonia in EFSMA (European Federation of Sports Medicine Associations)
- Member of Scientific Commision of EFSMA from 2010
- Official delegate from Republic of Macedonia in FIMS (World Aassociation of Sports Medicine)
- Member of Antidoping Commission of Ministry of Sport and Youth
- Former President of Health and Antidoping Commission of Ministry of Sport and Youth
- Member of Macedonian Medical Association
- Member of Macedonian Physiology Association
- Member of Macedonian Chamber of Medicine

PUBLICATIONS

- Over 60 publications in Medical and Scientific Journals
- Coauthor of books in field of physiology and sports medicine

KEY SKILS

- Exercise physiology and ergometry
- Laboratory and field testing
- ***Nutrition, supplementation and antidoping in sport***
- Monitoring of training process and effects in amateur and professional athletes
- Rehabilitation of sports injuries

Scientific interests:

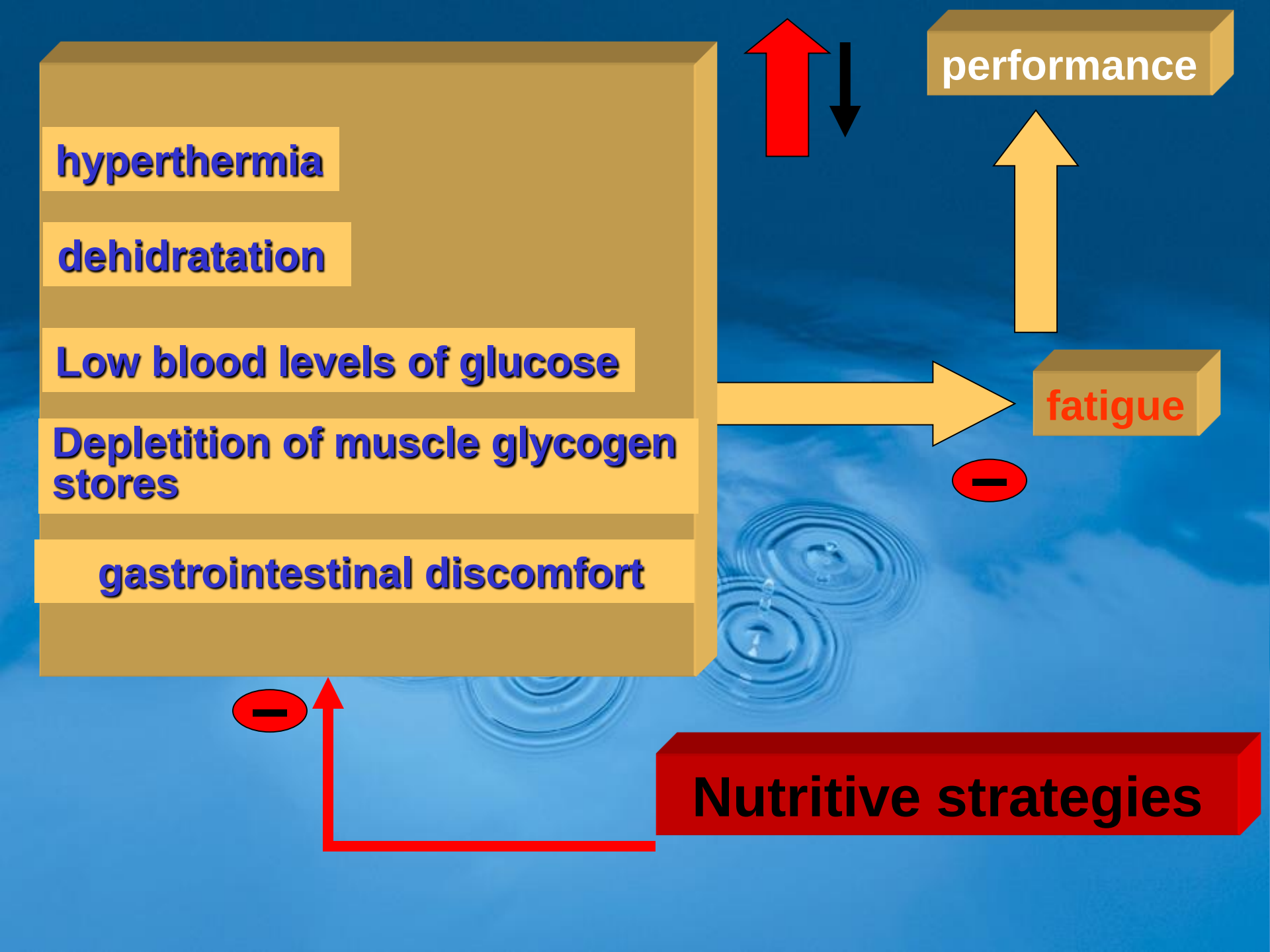
- Planning, monitoring and evaluating the training process in athletes
- ***Nutrition in sport***
- Prevention of sports injuries
- **OTHER EXPERIENCES**
- The third International Postgraduate School of Sports medicine in European Center for Peace and Development of the University for Peace Established by the United Nations, Belgrade, 20-25 November, 2000).
- FIMS Course of team physicians, World Congress of Sports medicine, Budapest, June, 2002 and European Congress of Sports Medicine, Hasselt, Belgium, May, 2003.
- Sports Medicine Course in Ankara (Turkey), 2004
- Main coordinator of Continental Seminar of Sports Medicine, organized by IOC (International Olympic Committee) and MOC, Skopje, 2006
- Antidoping seminars (Athena, Sofia, Minsk etc)
- Participant and moderator of World and European Congresses of Sports medicine
- Participant in Winter Olympic Games (Vancouver 2010) and Summer Olympic Games (London 2012) as a medicall chief of Mission

DEFINITION

Sports medicine is a clinical and academic medical specialization that deal with promotion and stimulation of physical active way of leaving and diagnosing, medical treatment, prevention and rehabilitation of injuries and diseases acquired by physical activity, exercising and sport on any level.

The sports medicine deals with prescription of dosed exercises (volume, intensity and frequency) in prevention and medical treatment of diseases (cardiovascular, degenerative, metabolic, malignant etc.)

EXERCIES IS MEDICINE – A NEW CONCEPT OF SPORTS MEDICINE


performance
hyperthermia
dehidratation
Low blood levels of glucose
Depletition of muscle glycogen stores
gastrointestinal discomfort
fatigue
Nutritive strategies

NUTRITIVE AIMS

MAINTANCE OF FLUID BALANCE

SUPORT OF METABOLIC NEEDS

DEHIDRATATION

↓ performance

↓ gastrointestinal empting

↑ Incidence of gastrointestinal discomfort

↓ BM =1,8 % → ↓ High intensity exercise (>90% VO_2 max)

(Walsh et al, IJSM , 1994)

↓ BM >2 % → ↓ Complex motoric performance

(Gopinathan et al, Arch Env Med , 1988)

IN SPECIAL CONDITIONS OF HIGH TEMPERATURE AND HUMIDITY

REDUCTION OF POSIBILITY TO LOOSE THE HEAT

If the imbalance would be not corrected during a lot of competitions

(cumulative effect)

→ **INCREASING OF DEHYDRATATION**

The soccer players loose approximately 1-2 kg during a soccer match. In specific conditions (26C , 78-81% humidity) some of them loose until 4 kg.

(Rico Sanz, Int J Sports Nutr, 1998)

How mach does an athlete drink?

- *During an exercise of midle intensity, an athlete could not renew the loosed fluid with sweat*
- *If an athlete is leaved freely to drink, he will renew only 50% of loosed fluid with sweat*

(Noakes et al., EJAP, 1988)

Mc Gregor et al, J Sports Sci, 1999

The effects of fluid renewal during a simulated soccer performance

Abstention of fluid intake → **2,4% BM**

5 % decreasing of performace during an intermitent running test (LIST)

INFLUENCE OF THE FASCTORS ON FLUID INTAKE DURING EXERCISE

thurst

Awareness of losing the fluid

Availability of fluid

Drinking possibilities

Taste of fluid

Gastrointestinal comfort

Awareness of negative influence of dehydratation

STRATEGIC SUPORT FOR MAINTANCE OF FLUID BALANCE

- **start the competition in perfect hydrateted condition**

Balance achievement of fluid balance from the previous exercises

Prehydratation 1-4 hours before the exercises (competition)

- **a bottle of water for every athelete**
- **“ train ” the athlete to drink**
  - *during the halftime*
  - *during the injury and braketimes*
  - *on a seat*
  - *support from staff who deliver the fluids*

STRATEGIC SUPORT FOR MAINTANCE OF FLUID BALANCE

- **educate the athelte for monitoring his/her level of hydratation**

  urine checking

- **enhancment of fluid taste**

  + taste → + voluntary ingestion

- **taking acount the combined effect of ingestion fluid and carbohydrates (CH)**

CH AND PERFORMANCE WITH HIGH INTENSITY EXERCISE

Davis et al, MSSE, 1995

1 minute sprint with 120-130 % VO_2 max

Liquid with 6% CH

placebo

7 aditional sprints compare with placebo

Enhancement of capability to perform exercise at final part of the competition

American Coleague of sports medicine recommends consuming 400-600 ml of water 2 hours before an exercise (competition). This volume of fluid will balance any deficit appearing in early hours and obtain sufficient time for kidney mechanisms in order to regulate the total body water and osmolality

NUTRITIVE AIMS

MAINTANCE OF FLUID BALANCE

SUPORT OF METABOLIC NEEDS

Proteins

Carbohydrates (CH)

Lipids

Energy

Performance

APLICATION OF SPORTS MEDICINE IN REGULATION OF BODY COMPOSITION (athletes and others)

- Preparticipation examination (laboratory an filed testing)
- Questionnaire of nutritional habits
- Food intolerance
- Individual diet
- Individual program of exercise
- Continues monitoring and evaluation

Preparticipation examination

History form

HISTORY FORM

DATE OF EXAM _____

Name _____ Sex _____ Age _____ Date of Birth _____
Grade _____ School _____ Sports _____
Address _____ Phone _____
Personal physician _____
In case of emergency, contact
Name _____ Relationship _____ Phone (H) _____ (W) _____

Explain "Yes" answers below.
Circle questions you don't know the answers to.

	Yes	No
1. Has a doctor ever denied or restricted your participation in sports for any reason?	☐	☐
2. Do you have any ongoing medical condition (like diabetes or asthma)?	☐	☐
3. Are you currently taking any prescription or non-prescription (over-the-counter) medicines or pills?	☐	☐
4. Do you have allergies to medicine, pollens, foods or stinging insects?	☐	☐
5. Have you ever passed out or nearly passed out DURING exercise?	☐	☐
6. Have you ever passed out or nearly passed out AFTER exercise?	☐	☐
7. Have you ever had discomfort, pain or pressure in your chest during exercise?	☐	☐
8. Does your heart race or skip beats during exercise?	☐	☐
9. Has your doctor ever told you that you have (check all that apply): ☐ High blood pressure ☐ A heart murmur ☐ High cholesterol ☐ A heart infection	☐	☐
10. Has a doctor ever ordered a test for your heart? (for example, ECG, echocardiogram)	☐	☐
11. Has anyone in your family died for no apparent reason?	☐	☐
12. Does anyone in your family have a heart problem?	☐	☐
13. Has any family member or relative died of heart problems or of sudden death before age 50?	☐	☐
14. Does anyone in your family have Marfan syndrome?	☐	☐
15. Have you ever spent the night in a hospital?	☐	☐
16. Have you ever had surgery?	☐	☐
17. Have you ever had an injury, like a sprain, muscle or ligament tear, or tendonitis, that caused you to miss a practice or game? If yes, circle the affected area below:	☐	☐
18. Have you had any broken or fractured or dislocated joints? If yes, circle below:	☐	☐
19. Have you had a bone or joint injury that required x-rays, MRI, CT, surgery, injections, rehabilitation, physical therapy, a brace, a cast, or crutches? If yes, circle below:	☐	☐

Head	Neck	Shoulder	Upper arm	Elbow	Forearm	Hand/ fingers	Chest
Upper back	Lower back	Hip	Thigh	Knee	Calf/ shin	Ankle	Foot/ toes

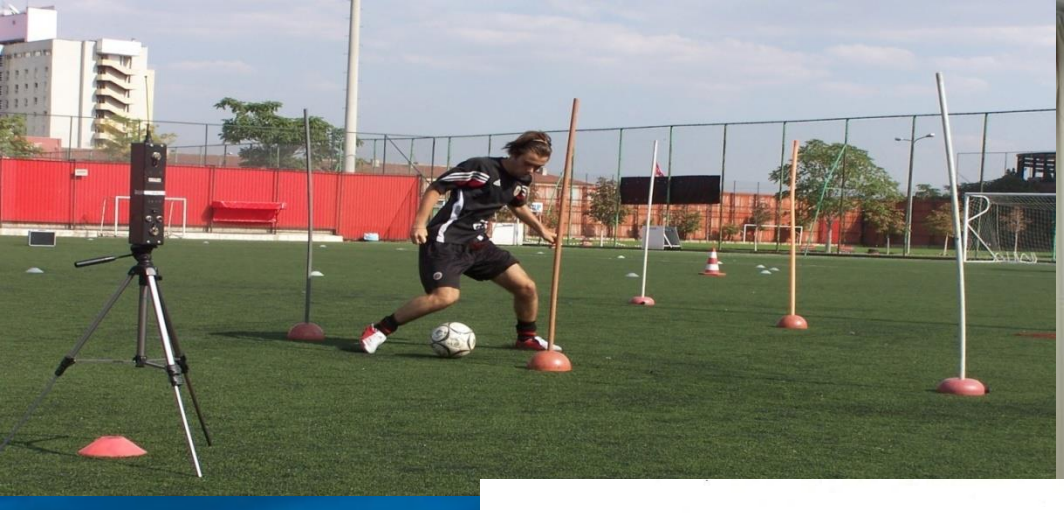
20. Have you ever had a stress fracture?	☐	☐
21. Have you been told that you have or have you had an x-ray for atlantoaxial (neck) instability?	☐	☐
22. Do you regularly use a brace or assistive device?	☐	☐
23. Has a doctor ever told you that you have asthma or allergies?	☐	☐
24. Do you cough, wheeze, or have difficulty breathing during or after exercise?	☐	☐
25. Is there anyone in your family who has asthma?	☐	☐
26. Have you ever used an inhaler or taken asthma medicine?	☐	☐
27. Were you born without or are you missing a kidney, an eye, a testicle, or any other organ?	☐	☐
28. Have you had infectious mononucleosis (mono) within the last month?	☐	☐
29. Do you have any rashes, pressure sores or other skin problems?	☐	☐
30. Have you had a herpes skin infection?	☐	☐
31. Have you ever had a head injury or concussion?	☐	☐
32. Have you been hit in the head and been confused or lost your memory?	☐	☐
33. Have you ever had a seizure?	☐	☐
34. Do you have headaches with exercise?	☐	☐
35. Have you ever had numbness, tingling or weakness in your arms or legs after being hit or falling?	☐	☐
36. Have you ever been unable to move your arms or legs after being hit or falling?	☐	☐
37. When exercising in the heat, do you have severe muscle cramps or become ill?	☐	☐
38. Has a doctor told you that you or someone in your family has sickle cell trait or sickle cell disease?	☐	☐
39. Have you had any problems with your eyes or vision?	☐	☐
40. Do you wear glasses or contact lenses?	☐	☐
41. Do you wear protective eyewear, such as goggles or a face shield?	☐	☐
42. Are you happy with your weight?	☐	☐
43. Are you trying to gain or lose weight?	☐	☐
44. Has anyone recommended you change your weight or eating habits?	☐	☐
45. Do you limit or carefully control what you eat?	☐	☐
46. Do you have any concerns that you would like to discuss with a doctor?	☐	☐
FEMALES ONLY		
47. Have you ever had a menstrual period?	☐	☐

48. How old were you when you had your first menstrual period? _____
49. How many periods have you had in the last 12 months? _____

Explain "yes" answers here: _____

I hereby state, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____ Signature of parent/guardian _____ Date _____



Individual HRmax, VO2max, AnT or point of deflection, explosiveness, speed

6 individual zones of exercise and training

BW,(TW -icw,ecw,P, M-non osseous and osseous,SMM)- ***FFM,BFM***

BMI,%BFM,W/H,VFA

BMR,AMC,AC, FS

Biochemical parar

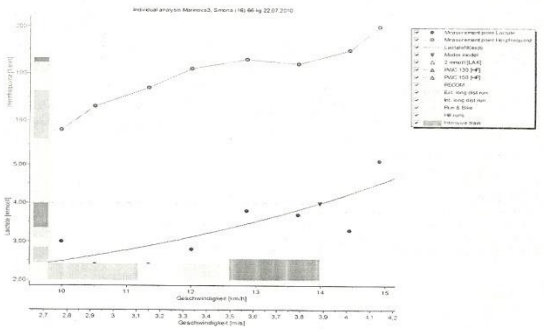
Registered serial number 1278455642

Stage test

Name: Marinova3, Simona
Age: 16
Category:
BMI: 22,3 kg/ml (n:19-25)
Date of test: 22.07.2010

Test modifications
Elevation (%): 0
Load unit: hh:mm:ss t
Performance unit: km/h v
Steps: 8
Testmethod: Running
Protocol: Running beginner

Notes:



Rest values: 1,6 mmol/l LAK, 70 1/min HF, 110 mmHg SYS, 75 mmHg DIAS

Results (1): Thresholds Formula: La(x) = 0,99 + 0,26697 * EXP(0,17327 * x)

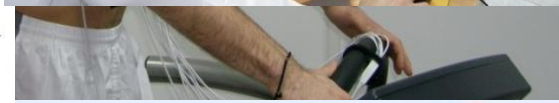
	2 mmol/l	PWC 130	PWC 150	Mader model	Max
actate [mmol/l]	2,00	1,93	2,14	4,00	5,10
lerzfrequenz [1/min]	156	130	150	193	200
Geschwindigkeit [km/h]	7,7	7,3	8,4	14,0	14,9
Geschwindigkeit [m/s]	2,13	2,03	2,34	3,88	4,14
nergy consumption [kcal/h]	507	481	555	923	984
000 m time	07:48	08:13	07:07	04:17	04:01
Marathon	05:29	05:47	05:00	03:01	02:49
O2 [ml/min/kg]	28,8	27,5	31,3	50,2	53,4
ax. efficiency [%]	51,5	48,9	56,5	93,8	100,0

thon target times: [hh:mm / mmol/l]: (05:30/2) - (04:13/2,5) - (03:37/3)
max Ergometry: 0,00 ml/min (no active model)
max Treadmill: 53,37 ml/min/kg (Cooper)

ts (2): Training areas
Calculation: Relative alignment to the IANS oriented to workload

Name	RECOM	Ext. long dist run	Int. long dist run	Run & Bike	Hill runs	Intensive train
Percent areas	60 - 70 %	70 - 80 %	80 - 85 %	85 - 90 %	90 - 95 %	90 - 100 %
Intensität						
mmol/l]	2,13 - 2,45	2,45 - 2,84	2,84 - 3,08	3,08 - 3,35	3,35 - 3,66	3,35 - 4,00
uenz [1/min]	163 - 176	176 - 186	186 - 190	190 - 192	192 - 192	192 - 193
Geschwindigkeit [km/h]	8,4 - 9,8	9,8 - 11,2	11,2 - 11,9	11,9 - 12,6	12,6 - 13,3	12,6 - 14,0
Geschwindigkeit [m/s]	2,33 - 2,72	2,72 - 3,11	3,11 - 3,30	3,30 - 3,50	3,50 - 3,69	3,50 - 3,88
Energy consumption [kcal/h]	554 - 646	646 - 738	738 - 784	784 - 830	830 - 877	830 - 923
1000 m time	07:09 - 06:07	06:07 - 05:21	05:21 - 05:02	05:02 - 04:46	04:46 - 04:31	04:46 - 04:17
Marathon	05:01 - 04:18	04:18 - 03:46	03:46 - 03:33	03:33 - 03:21	03:21 - 03:10	03:21 - 03:01

Analysis assessment:



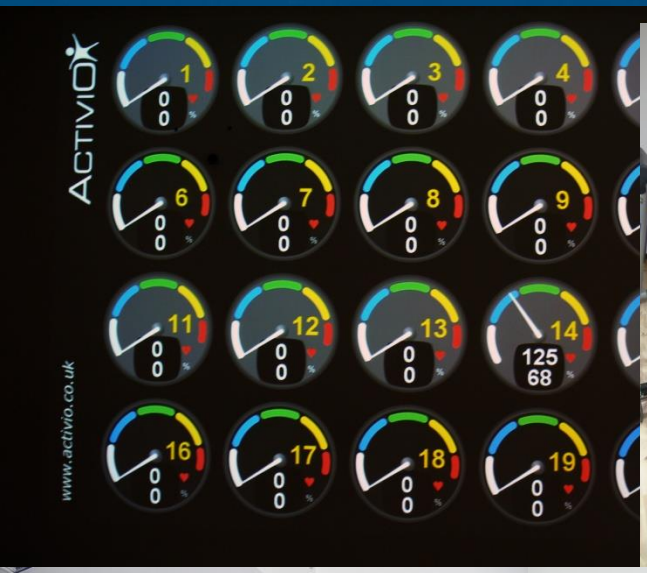
Questionnaire of nutritional habits

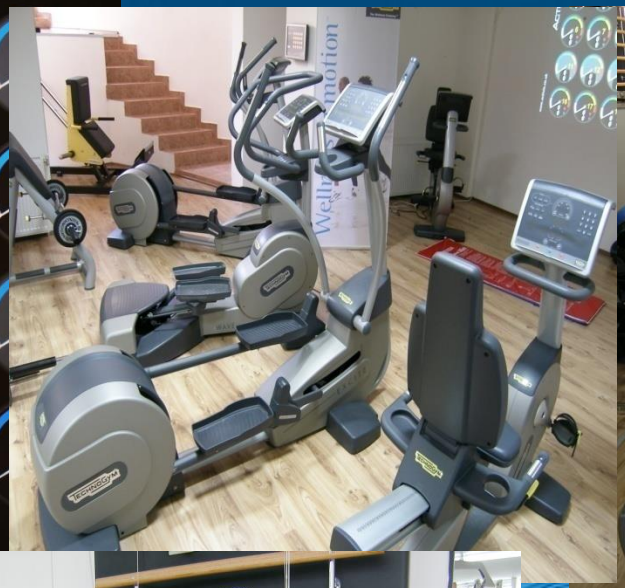
Food intolerance

INDIVIDUAL DIET

- Based on preparticipation examination, questionnaire of nutritional habits
- Lower CH intake at the beginning (1 -3 months)
- The main aim is to maintain a metabolic balance of steady-state condition – relatively constant fat mass (previous reached on desired level) with an increasing or maintaining of lean body mass
- Active participation of athlete/others in creation of his/her individual diet on daily base
- Athlete/others self monitoring each 15^{th} or 30^{th} day with BIA (bioelectrical impendance)
- Continuous education
- Individual diet based on previous fitness level and exercising habits

INDIVIDUAL PROGRAM OF EXERCISE





CONTINUOS MONITORING AND EVALUATION

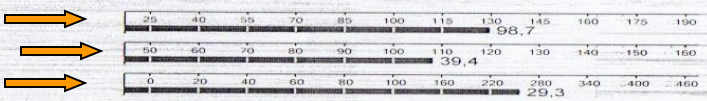
- **FORMER SWIMMER, 17 YEARS OLD, AFTER 3 MONTHS OF PROGRAM FOR REGULATION OF BODY COMPOSITION**

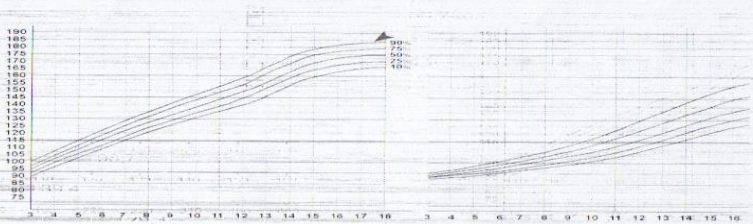
NAME Tasko Popovski (296) | HEIGHT 185,0cm | TEST DATE 2009/02/09
AGE 17,6years | GENDER Male | TEST TIME 11:08:45

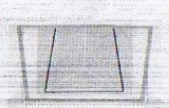
Biospace
KINETICUS

73

50,7kg
13,7kg
4,93kg
29,3kg







	81,7 kg	28,8 kg/m²	☐
-	17,0 kg	29,7 %	☐
	0,0 kg	129 %	☐
-	17,0 kg	1869 Kcal	☐

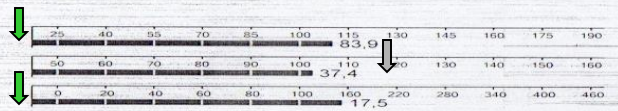
Z	RA	LA	TR	RL
1kHz	340,9	337,9	29,0	286,7
5kHz	330,9	325,0	27,6	276,8
50kHz	293,1	288,1	22,9	241,1
250kHz	265,2	261,1	19,5	216,1
500kHz	255,6	252,6	18,3	210,1

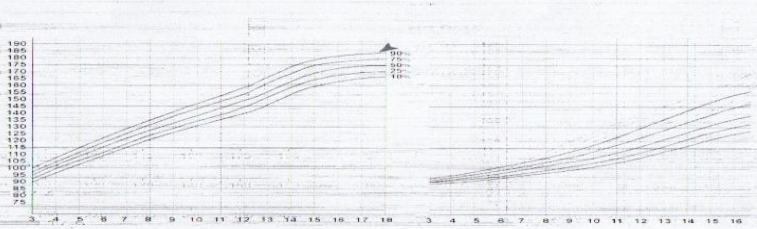
NAME Tasko Popovski (528) | HEIGHT 185,0cm | TEST DATE 2009/05/05
AGE 17,8years | GENDER Male | TEST TIME 17:50:05

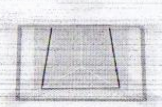
Biospace
KINETICUS

95

48,6kg
13,1kg
4,70kg
17,5kg







	78,1 kg	24,5 kg/m²	☑
-	5,8 kg	20,8 %	☐
	0,0 kg	110 %	☐
-	5,8 kg	1805 Kcal	☑

Z	RA	LA	TR	RL
1kHz	356,2	353,1	25,8	267,7
5kHz	351,5	342,7	24,6	261,1
50kHz	311,1	305,2	21,0	228,1
250kHz	282,2	278,3	17,9	205,1
500kHz	272,3	269,2	16,7	200,1
1MHz	262,5	261,0	15,6	196,1

- **A GIRL, 12 YEARS OLD, WITHOUT PHYSICAL ACTIVITY, AFTER A MONTH OF PROGRAM FOR REGULATION OF BODY COMPOSITION**

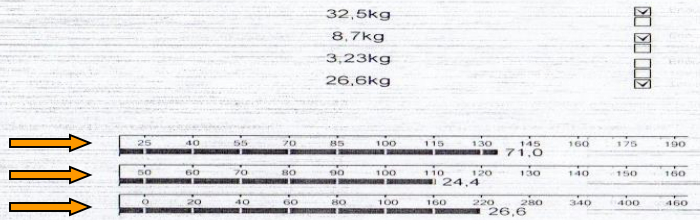
Anastasija Andreeva (433) | 159,0cm | 2009/04/01
12,4years | Female | 10:10:03

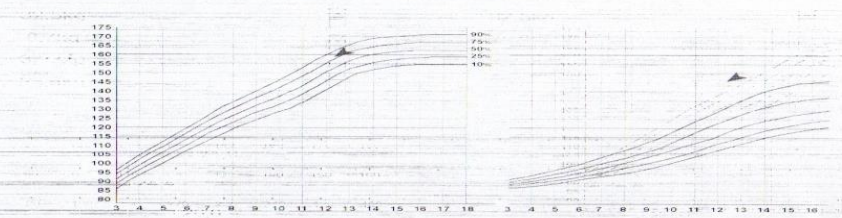
Biospace
KINETICUS

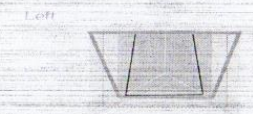
67

32,5kg
8,7kg
3,23kg
26,6kg

71,0
24,4
26,6







57,6 kg
13,4 kg
0,0 kg
13,4 kg

28,1 kg/m²
37,6 %
135 %
1328 Kcal

Z	RA	LA	TR	RL
1kHz	370,0	340,7	29,6	293.
5kHz	362,8	333,7	28,3	285.
50kHz	338,2	314,7	24,7	254.
250kHz	311,8	291,7	21,2	226.
500kHz	302,7	282,0	19,8	220.
1MHz	293,9	272,6	18,7	216.

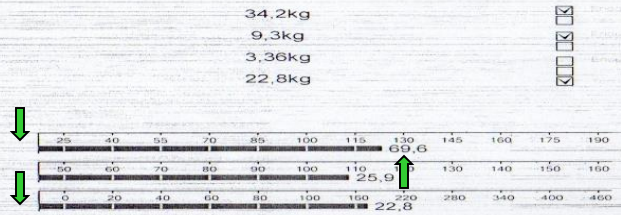
Anastasija Andreeva (517) | 163,0cm | 2009/04/30
12,4years | Female | 10:44:16

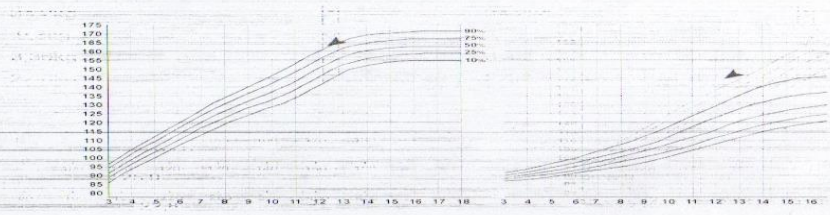
Biospace
KINETICUS

86

34,2kg
9,3kg
3,36kg
22,8kg

69,6
25,9
22,8





60,8 kg
8,8 kg
0,0 kg
8,8 kg

26,2 kg/m²
32,7 %
123 %
1382 Kcal

Z	RA	LA	TR	RL
1kHz	384,6	354,2	28,5	297.
5kHz	379,6	349,0	27,3	290.
50kHz	350,4	328,4	23,9	255.
250kHz	321,7	303,0	20,5	227.
500kHz	311,1	292,3	19,0	220.
1MHz	299,1	280,7	17,7	216.

- **A BOY, 17 YEARS OLD, WITHOUT PHYSISCAL ACTIVITY, AFTER A 3 MONTHS OF PROGRAM FOR REGULATION OF BODY COMPOSITION**

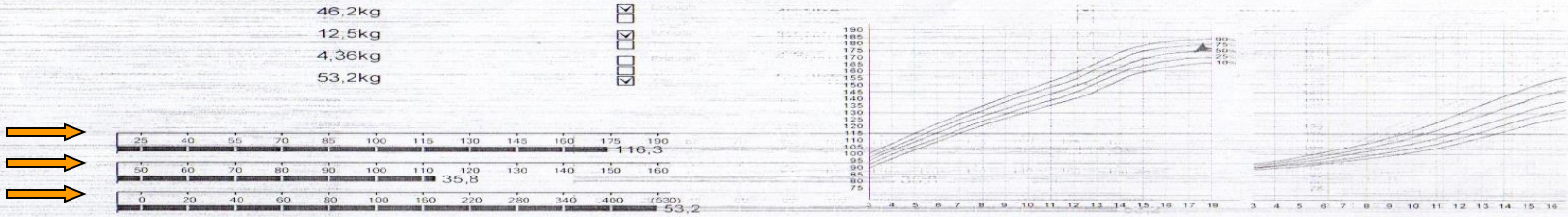
NAME Dimitar Trajkovski (749) HEIGHT 174,0cm 2009/09/19
AGE 17,3years GENDER Male 09:31:09

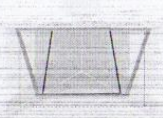
Biospace
KINETICUS

16

46,2kg
12,5kg
4,36kg
53,2kg

116,3
35,8
53,2





	74,3 kg		38,4 kg/m²
-	42,0 kg		45,7 %
	0,0 kg		174 %
-	42,0 kg		1733 Kcal

Z	RA	LA	TR	RL
1kHz	322,2	327,9	27,5	271,
5kHz	312,7	319,3	26,9	263,
50kHz	275,4	282,2	23,0	224,
250kHz	247,7	255,0	19,9	200,
500kHz	239,2	246,2	18,9	195,

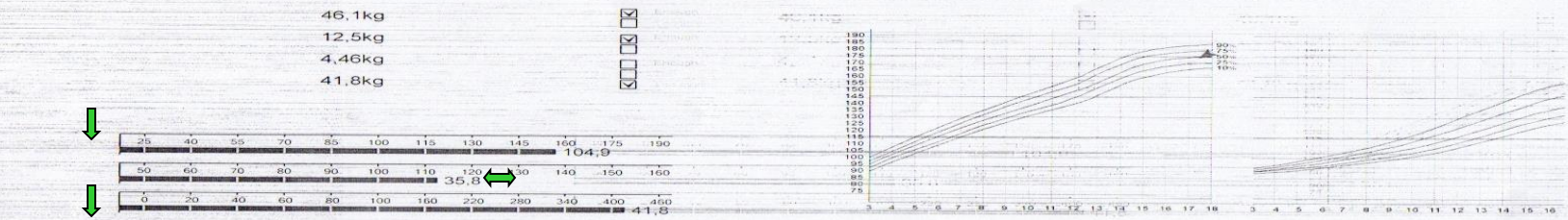
NAME Dimitar Trajkovski (1009) HEIGHT 174,0cm 2009/12/05
AGE 17,5years GENDER Male 11:51:29

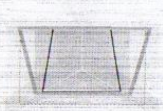
Biospace
KINETICUS

34

46,1kg
12,5kg
4,46kg
41,8kg

104,9
35,8
41,8





	74,2 kg		34,6 kg/m²
-	30,7 kg		39,9 %
	0,0 kg		157 %
-	30,7 kg		1732 Kcal

Z	RA	LA	TR	RL
1kHz	326,4	336,6	25,6	278,
5kHz	317,4	328,8	24,9	270,
50kHz	279,6	292,0	21,4	228,
250kHz	251,8	263,7	18,6	203,
500kHz	242,9	254,4	17,7	198,
1MHz	236,0	246,8	17,1	194,

- **A MAN, 40 YEARS OLD, WITHOUT PHYSICAL ACTIVITY, AFTER 2 MONTHS OF PROGRAM FOR REGULATION OF BODY COMPOSITION**

InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Vlatko Georgiev (269)	40,3years	170,0cm	Male	2009/01/23 11:40:02

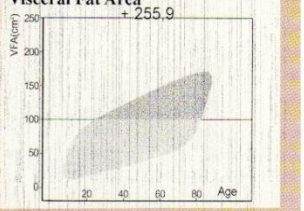
Biospace
KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	31,0	49,8	64,1	67,6	128,2	22,1 ~ 27,1
E C W (ℓ) Extracellular Water	18,8					13,6 ~ 16,6
Protein (kg)	13,4					9,5 ~ 11,7
Mineral (kg)	4,32	osseous: 3,57				3,30 ~ 4,04
Body Fat Mass (kg)	60,6					7,6 ~ 15,3

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)			128,2	54,1 ~ 73,1
S M M (kg) Skeletal Muscle Mass			38,5	27,1 ~ 33,1
Body Fat Mass (kg)			60,6	7,6 ~ 15,3

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index			44,4	18,5 ~ 25,0
P B F (%) Percent Body Fat			47,2	10,0 ~ 20,0
W H R Waist-Hip Ratio			1,07	0,80 ~ 0,90

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ▨▨

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)			4,69 (129,1)	0,336	0,383		
Left Arm (kg)			4,60 (126,6)	0,337	0,384		
Trunk (kg)			34,1 (113,1)	0,329	0,376		
Right Leg (kg)			9,41 (85,0)	0,330	0,376		
Left Leg (kg)			9,36 (84,5)	0,332	0,379	0,331	0,378

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☐ Normal	☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over ☑ Extremely Over
P B F	☐ Normal	☐ Over	☑ Extremely Over
W H R	☐ Normal	☐ Over	☑ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced	
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced	
Upper-Lower	☐ Balanced	☐ Slightly Unbalanced	☑ Extremely Unbalanced	

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak	
Lower	☐ Normal	☐ Developed	☑ Weak	
Muscle	☐ Normal	☐ Muscular	☑ Weak	

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☐ Risky ☑ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/01/23 11:40	128.2	38.5	60.6	45	0,378

Additional Data

		Normal Range
Obesity = 202%		90 ~ 110
B C M = 44,4kg		31,7 ~ 38,8
B M C = 3,57kg		2,73 ~ 3,33
B M R = 1831kcal		2468,3 ~ 2959,0
A C = 51,9cm		
A M C = 34,2cm		

Weight Control

Target Weight		79,6	kg
Weight Control	-	48,6	kg
Fat Control	-	48,6	kg
Muscle Control		0,0	kg
Fitness Score		45	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	261,8	266,7	22,9	253,8	254,8
5kHz	252,9	257,1	21,8	247,1	247,4
50kHz	220,9	226,7	18,5	213,4	214,5
250kHz	198,3	205,0	15,7	191,4	192,4

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Vlatko Georgiev (406)	40,5years	170,0cm	Male	2009/03/16 11:08:38

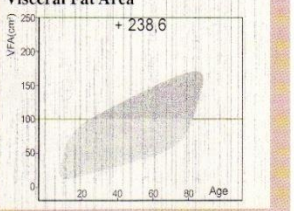
Biospace
KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	29,5	47,4	60,9	64,4	120,4	22,1 ~ 27,1
E C W (ℓ) Extracellular Water	17,9					13,6 ~ 16,6
Protein (kg)	12,8					9,5 ~ 11,7
Mineral (kg)	4,27	osseous: 3,46				3,30 ~ 4,04
Body Fat Mass (kg)	56,0					7,6 ~ 15,3

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)			120,4	54,1 ~ 73,1
S M M (kg) Skeletal Muscle Mass			36,5	27,1 ~ 33,1
Body Fat Mass (kg)			56,0	7,6 ~ 15,3

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index			41,7	18,5 ~ 25,0
P B F (%) Percent Body Fat			46,5	10,0 ~ 20,0
W H R Waist-Hip Ratio			1,05	0,80 ~ 0,90

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ▨▨

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)			4,33 (122,2)	0,334	0,381		
Left Arm (kg)			4,24 (119,8)	0,334	0,381		
Trunk (kg)			32,1 (109,2)	0,329	0,375		
Right Leg (kg)			9,20 (85,2)	0,330	0,377		
Left Leg (kg)			9,13 (84,6)	0,331	0,378	0,330	0,377

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☐ Normal	☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over ☑ Extremely Over
P B F	☐ Normal	☐ Over	☑ Extremely Over
W H R	☐ Normal	☐ Over	☑ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced	
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced	
Upper-Lower	☐ Balanced	☐ Slightly Unbalanced	☑ Extremely Unbalanced	

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak	
Lower	☐ Normal	☐ Developed	☑ Weak	
Muscle	☐ Normal	☐ Muscular	☑ Weak	

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☐ Risky ☑ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/03/16 11:08	120.4	36,5	56,0	46	0,377

Additional Data

		Normal Range
Obesity = 189%		90 ~ 110
B C M = 42,3kg		31,7 ~ 38,8
B M C = 3,46kg		2,73 ~ 3,33
B M R = 1760kcal		2359,1 ~ 2801,1
A C = 48,5cm		
A M C = 32,9cm		

Weight Control

Target Weight		75,7	kg
Weight Control	-	44,7	kg
Fat Control	-	44,7	kg
Muscle Control		0,0	kg
Fitness Score		46	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	274.8	282,7	24,7	262.1	265,8
5kHz	269.0	276,2	23,9	254,3	257.4
50kHz	236.4	243,0	20,3	220,3	222,4
250kHz	211,8	219,2	17,4	197,8	199,4

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- **A WOMEN, 53 YEARS OLD, WITHOUT PHYSICAL ACTIVITY, AFTER A MONTH OF PROGRAM FOR REGULATION OF BODY COMPOSITION (regulated hypertension)**

InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Marija Orovcanec (861)	53,8years	160,0cm	Female	2009/10/29 17:59:57

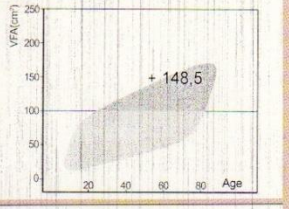
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	20,2	32,7	41,9	44,5	78,3	17,4 ~ 21,2
E C W (ℓ) Extracellular Water	12,5					10,6 ~ 13,0
Protein (kg)	8,7					7,5 ~ 9,1
Mineral (kg)	3,14	osseous: 2,62				2,59 ~ 3,17
Body Fat Mass (kg)	33,8					11,0 ~ 17,6

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		78,3		46,8 ~ 63,3
S M M (kg) Skeletal Muscle Mass		24,3		20,9 ~ 25,5
Body Fat Mass (kg)		33,8		11,0 ~ 17,6

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		30,6		18,5 ~ 25,0
P B F (%) Percent Body Fat		43,1		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,97		0,75 ~ 0,85

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,32 (115,7)		0,330	0,377		
Left Arm (kg)		2,34 (116,4)		0,333	0,380		
Trunk (kg)		20,4 (93,5)		0,336	0,383		
Right Leg (kg)		6,86 (91,8)		0,335	0,382		
Left Leg (kg)		6,85 (91,7)		0,340	0,387		
						0,336	0,383

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☑ Normal	☐ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over
		☑ Extremely Over	
P B F	☐ Normal	☐ Over	☑ Extremely Over
W H R	☐ Normal	☐ Over	☑ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☑ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☑ Normal	☐ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☐ Normal	☐ Muscular	☑ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☑ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/10/29 17:59	78,3	24,3	33,8	62	0,383

Additional Data

		(Normal Range)
Obesity	= 142%	90 ~ 110
B C M	= 28,9kg	24,9 ~ 30,4
B M C	= 2,62kg	2,13 ~ 2,61
B M R	= 1332kcal	1641,7 ~ 1802,0
A C	= 34,4cm	
A M C	= 25,5cm	

Weight Control

Target Weight		57,8	kg
Weight Control	-	20,5	kg
Fat Control	-	20,5	kg
Muscle Control		0,0	kg
Fitness Score		62	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	391,3	384,6	28,0	267,5	264,9
5kHz	381,0	374,4	26,7	260,7	257,7
50kHz	341,0	338,2	23,0	230,2	228,8
250kHz	309,9	309,0	20,0	208,0	207,8

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Marija Orovcanec (999)	53,9years	160,0cm	Female	2009/11/28 11:42:45

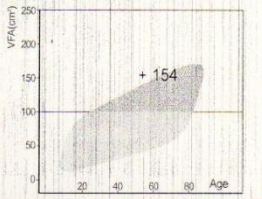
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	19,7	31,3	40,3	42,8	75,0	17,4 ~ 21,2
E C W (ℓ) Extracellular Water	11,6					10,6 ~ 13,0
Protein (kg)	8,5					7,5 ~ 9,1
Mineral (kg)	3,02	osseous: 2,49				2,59 ~ 3,17
Body Fat Mass (kg)	32,2					11,0 ~ 17,6

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		75,0		46,8 ~ 63,3
S M M (kg) Skeletal Muscle Mass		23,7		20,9 ~ 25,5
Body Fat Mass (kg)		32,2		11,0 ~ 17,6

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		29,3		18,5 ~ 25,0
P B F (%) Percent Body Fat		42,9		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,98		0,75 ~ 0,85

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,28 (115,5)		0,326	0,373		
Left Arm (kg)		2,32 (117,4)		0,327	0,374		
Trunk (kg)		20,4 (94,9)		0,325	0,372		
Right Leg (kg)		6,42 (87,3)		0,323	0,370		
Left Leg (kg)		6,37 (86,6)		0,326	0,372		
						0,325	0,372

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☑ Normal	☐ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☑ Over
			☐ Extremely Over
P B F	☐ Normal	☐ Over	☑ Extremely Over
W H R	☐ Normal	☐ Over	☑ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☐ Slightly Unbalanced	☑ Extremely Unbalanced

Body Strength

Upper	☑ Normal	☐ Developed	☐ Weak
Lower	☐ Normal	☐ Developed	☑ Weak
Muscle	☐ Normal	☐ Muscular	☑ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☑ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/11/28 11:42	75,0	23,7	32,2	61	0,372

Additional Data

		(Normal Range)
Obesity	= 136%	90 ~ 110
B C M	= 28,2kg	24,9 ~ 30,4
B M C	= 2,49kg	2,13 ~ 2,61
B M R	= 1295kcal	1492,3 ~ 1741,7
A C	= 35,2cm	
A M C	= 25,6cm	

Weight Control

Target Weight		55,7	kg
Weight Control	-	19,3	kg
Fat Control	-	19,3	kg
Muscle Control		0,0	kg
Fitness Score		61	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	428,0	416,5	32,1	339,1	340,9
5kHz	413,8	404,2	31,3	328,8	330,1
50kHz	366,2	359,2	26,6	280,1	284,3
250kHz	330,4	324,7	22,8	250,8	254,8

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- **A WOMEN, 54 YEARS OLD, WITHOUT PHYSICAL ACTIVITY, AFTER A MONTH OF PROGRAM FOR REGULATION OF BODY COMPOSITION (regulated hypertension)**

InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Slavica Stojanova (847)	54,2years	174,0cm	Female	2009/10/27 16:51:37

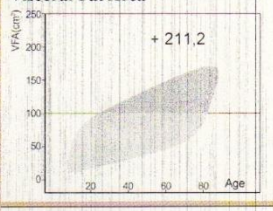
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	27,6	45,3	58,0	61,5	117,1	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	17,7					12,6 ~ 15,4
Protein (kg)	11,9					8,9 ~ 10,9
Mineral (kg)	4,23	osseous: 3,55				3,07 ~ 3,75
Body Fat Mass (kg)	55,6					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)			117,1	55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		34,0		25,0 ~ 30,6
Body Fat Mass (kg)			55,6	13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index			38,7	18,5 ~ 25,0
P B F (%) Percent Body Fat			47,5	18,0 ~ 28,0
W H R Waist-Hip Ratio			1,02	0,75 ~ 0,85

Lean Balance

Lean ■ Lean /Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		134,4	3,55	0,338	0,385
Left Arm (kg)		135,6	3,59	0,340	0,387
Trunk (kg)		99,8	28,2	0,341	0,388
Right Leg (kg)		103,1	10,04	0,347	0,394
Left Leg (kg)		103,1	10,04	0,348	0,396

Edema: ECF/TBF 0,343 | ECW/TBW 0,391

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient	
Mineral	☑ Normal	☐ Deficient	
Fat	☐ Normal	☐ Deficient	☑ Excessive

Weight Management

Weight	☐ Normal	☐ Under	☑ Over
S M M	☐ Normal ☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over ☑ Extremely Over
P B F	☐ Normal	☐ Over	☐ Extremely Over
W H R	☐ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☑ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☐ Normal	☐ Muscular	☑ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☐ Normal	☑ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☐ Risky ☑ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/10/27 16:51	117,1	34,0	55,6	54	0,391

Additional Data

		Normal Range
Obesity	= 180%	90 ~ 110
B C M	= 39,5kg	29,4 ~ 36,0
B M C	= 3,55kg/kg	2,53 ~ 3,09
B M R	= 1699kcal	2
A C	= 40,5cm	
A M C	= 29,1cm	

Weight Control

Target Weight		79,9	kg
Weight Control	-	37,2	kg
Fat Control	-	37,2	kg
Muscle Control		0,0	kg
Fitness Score		54	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	317,9	312,7	23,8	214,1	214,3
5kHz	311,8	306,7	24,0	207,1	206,3
50kHz	281,0	277,7	21,4	185,2	183,3
250kHz	257,5	255,9	18,5	170,4	168,4

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Slavica Stojanova (998)	54,3years	174,0cm	Female	2009/11/28 11:37:37

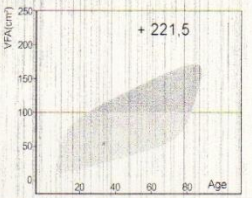
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	28,1	45,6	58,5	62,2	115,4	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	17,5					12,6 ~ 15,4
Protein (kg)	12,1					8,9 ~ 10,9
Mineral (kg)	4,44	osseous: 3,71				3,07 ~ 3,75
Body Fat Mass (kg)	53,2					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)			115,4	55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		34,6		25,0 ~ 30,6
Body Fat Mass (kg)			53,2	13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index			38,1	18,5 ~ 25,0
P B F (%) Percent Body Fat			46,1	18,0 ~ 28,0
W H R Waist-Hip Ratio			1,02	0,75 ~ 0,85

Lean Balance

Lean ■ Lean /Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		140,0	3,68	0,338	0,385
Left Arm (kg)		140,7	3,69	0,338	0,385
Trunk (kg)		102,8	28,8	0,337	0,384
Right Leg (kg)		97,5	9,44	0,339	0,386
Left Leg (kg)		97,4	9,43	0,339	0,386

Edema: ECF/TBF 0,338 | ECW/TBW 0,385

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient	
Mineral	☑ Normal	☐ Deficient	
Fat	☐ Normal	☐ Deficient	☑ Excessive

Weight Management

Weight	☐ Normal	☐ Under	☑ Over
S M M	☐ Normal ☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over ☑ Extremely Over
P B F	☐ Normal	☐ Over	☑ Extremely Over
W H R	☐ Normal	☐ Over	☑ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☐ Slightly Unbalanced	☑ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☐ Normal	☐ Muscular	☑ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☐ Alert	☐ Risky ☑ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/11/28 11:37	115,4	34,6	53,2	58	0,385

Additional Data

		Normal Range
Obesity	= 177%	90 ~ 110
B C M	= 40,2kg	29,4 ~ 36,0
B M C	= 3,71kg/kg	2,53 ~ 3,09
B M R	= 1714kcal	2097,3 ~ 2481,2
A C	= 41,2cm	
A M C	= 29,4cm	

Weight Control

Target Weight		80,8	kg
Weight Control	-	34,6	kg
Fat Control	-	34,6	kg
Muscle Control		0,0	kg
Fitness Score		58	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	326,7	323,9	23,6	246,9	249,3
5kHz	318,0	315,5	22,9	241,0	242,2
50kHz	287,4	286,1	19,7	213,3	212,3
250kHz	263,9	263,1	17,1	194,4	192,9

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Tome Tomevski (664)	40,7years	184,0cm	Male	2009/07/07 11:42:21

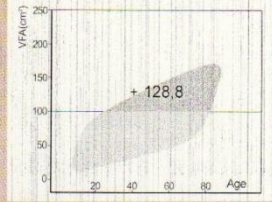
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	37,6	60,0	77,2	81,7	106,3	26,0 ~ 31,8
E C W (ℓ) Extracellular Water	22,4					15,9 ~ 19,5
Protein (kg)	16,2					11,3 ~ 13,8
Mineral (kg)	5,48	osseous: 4,54				3,88 ~ 4,74
Body Fat Mass (kg)	24,6					9,0 ~ 17,9

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)	55 70 85 100 115 130 145 160 175 190 205		106,3		63,3 ~ 85,7
S M M (kg) Skeletal Muscle Mass	70 80 90 100 110 120 130 140		47,0		32,1 ~ 39,2
Body Fat Mass (kg)	40 60 80 100 160 220 280 340 400 460 520		24,6		9,0 ~ 17,9

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index	10 15 18,5 22 25 30 35 40 45 50 55		31,4	18,5 ~ 25,0
P B F (%) Percent Body Fat	0 5 10 15 20 25 30		23,1	10,0 ~ 20,0
W H R Waist-Hip Ratio	0,70 0,75 0,80 0,85 0,90 0,95 1,00 1,05 1,10 1,15 1,20		0,90	0,80 ~ 0,90

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ■■■

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)	40 60 80 100 120 140 160 180		5,00 / 134,1		0,332	0,379		
Left Arm (kg)	40 60 80 100 120 140 160 180		4,91 / 131,5		0,334	0,381		
Trunk (kg)	70 80 90 100 110 120 130 140		35,8 / 115,1		0,326	0,372		
Right Leg (kg)	70 80 90 100 110 120 130 140		12,33 / 108,3		0,324	0,370		
Left Leg (kg)	70 80 90 100 110 120 130 140		12,01 / 105,5		0,329	0,375		
							0,327	0,373

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☐ Normal	☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☐ Over	☑ Extremely Over
P B F	☐ Normal	☑ Over	☐ Extremely Over	
W H R	☐ Normal	☑ Over	☐ Extremely Over	

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☑ Normal	☐ Muscular	☐ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☑ Alert	☐ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/07/07 11:42	106,3	47,0	24,6	88	0,373

Additional Data

		(Normal Range)
Obesity = 143%		90 ~ 110
B C M	= 53,8kg	37,2 ~ 45,5
B M C	= 4,54kg	3,19 ~ 3,90
B M R	= 2135kcal	[illegible]
A C	= 37,8cm	
A M C	= 32,7cm	

Weight Control

Target Weight		96,2	kg
Weight Control	-	10,1	kg
Fat Control	-	10,1	kg
Muscle Control		0,0	kg
Fitness Score		88	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	260,0	264,5	23,8	230,8	238,7
5kHz	253,0	257,1	22,9	223,3	231,7
50kHz	219,6	224,9	19,2	187,9	196,3
250kHz	195,2	201,5	16,4	166,9	175,4

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Tome Tomevski (962)	40,8years	185,0cm	Male	2009/08/26 09:56:06

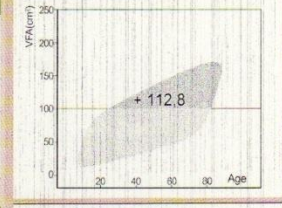
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	37,6	60,0	77,2	81,7	102,2	26,3 ~ 32,1
E C W (ℓ) Extracellular Water	22,4					16,1 ~ 19,7
Protein (kg)	16,2					11,3 ~ 13,9
Mineral (kg)	5,49	osseous: 4,51				3,91 ~ 4,78
Body Fat Mass (kg)	20,5					9,0 ~ 18,1

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)	55 70 85 100 115 130 145 160 175 190 205		102,2		64,0 ~ 86,6
S M M (kg) Skeletal Muscle Mass	70 80 90 100 110 120 130 140 150 160 170		47,0		32,4 ~ 39,6
Body Fat Mass (kg)	40 60 80 100 160 220 280 340 400 460 520		20,5		9,0 ~ 18,1

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index	10 15 18,5 22 25 30 35 40 45 50 55		29,9	18,5 ~ 25,0
P B F (%) Percent Body Fat	0 5 10 15 20 25 35 40 45 50		20,1	10,0 ~ 20,0
W H R Waist-Hip Ratio	0,70 0,75 0,80 0,85 0,90 0,95 1,00 1,05 1,10 1,15 1,20		0,89	0,80 ~ 0,90

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ■■■

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)	40 60 80 100 120 140 160 180		5,08 / 136,9		0,333	0,380		
Left Arm (kg)	40 60 80 100 120 140 160 180		4,94 / 133,0		0,333	0,380		
Trunk (kg)	70 80 90 100 110 120 130 140		36,0 / 116,3		0,327	0,373		
Right Leg (kg)	70 80 90 100 110 120 130 140		12,37 / 109,3		0,325	0,372		
Left Leg (kg)	70 80 90 100 110 120 130 140		12,05 / 106,4		0,328	0,374		
							0,327	0,374

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient		
Mineral	☑ Normal	☐ Deficient		
Fat	☐ Normal	☐ Deficient	☑ Excessive	

Weight Management

Weight	☐ Normal	☐ Under	☑ Over	
S M M	☐ Normal	☑ Strong	☐ Under	
Fat	☐ Normal	☐ Under	☑ Over	

Obesity Diagnosis

B M I	☐ Normal	☐ Under	☑ Over	☐ Extremely Over
P B F	☐ Normal	☑ Over	☐ Extremely Over	
W H R	☑ Normal	☐ Over	☐ Extremely Over	

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☐ Normal	☑ Muscular	☐ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☑ Alert	☐ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/08/26 09:56	102,2	47,0	20,5	92	0,374

Additional Data

		(Normal Range)
Obesity = 136%		90 ~ 110
B C M	= 53,8kg	37,6 ~ 46,0
B M C	= 4,51kg	3,22 ~ 3,94
B M R	= 2135kcal	2259,1 ~ 2434,4
A C	= 37,1cm	
A M C	= 32,7cm	

Weight Control

Target Weight		96,1	kg
Weight Control	-	6,1	kg
Fat Control	-	6,1	kg
Muscle Control		0,0	kg
Fitness Score		92	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	256,0	264,0	23,4	230,0	241,3
5kHz	249,9	257,5	22,4	224,3	235,4
50kHz	216,1	224,1	18,9	190,3	199,5
250kHz	192,4	200,4	16,4	169,4	177,9

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- **A WOMEN, 26 YEARS OLD, WIHTOUT PHSYCAL ACTIVITY, AFTER A 6 MONTHS OF PROGRAM FOR REGULATION OF BODY COMPOSITION(continuous monitoring, evaluation, assessment and education)**

InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (277)	26,9years	174,0cm	Female	2009/01/29 17:24:35

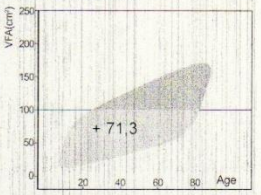
Biospace
KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	21,4	34,6	44,4	47,3	68,4	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	13,2					12,6 ~ 15,4
Protein (kg)	9,2					8,9 ~ 10,9
Mineral (kg)	3,47		non osseous osseous: 2,88			3,07 ~ 3,75
Body Fat Mass (kg)	21,1					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		68,4		55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		25,9		25,0 ~ 30,6
Body Fat Mass (kg)		21,1		13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		22,6		18,5 ~ 25,0
P B F (%) Percent Body Fat		30,8		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,82		0,75 ~ 0,85

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ▒▒

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,42 114,3		0,328	0,375		
Left Arm (kg)		2,37 112,1		0,329	0,375		
Trunk (kg)		21,3 91,0		0,337	0,384		
Right Leg (kg)		7,71 96,7		0,339	0,386		
Left Leg (kg)		7,53 94,4		0,336	0,383	0,336	0,383

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient
Mineral	☑ Normal	☐ Deficient
Fat	☑ Normal	☐ Deficient ☐ Excessive

Weight Management

Weight	☑ Normal	☐ Under ☐ Over
S M M	☑ Normal ☐ Strong	☐ Under
Fat	☑ Normal	☐ Under ☑ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under ☐ Over ☐ Extremely Over
P B F	☑ Normal	☑ Over ☐ Extremely Over
W H R	☑ Normal	☐ Over ☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced

Body Strength

Upper	☑ Normal	☐ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☑ Normal	☐ Muscular	☐ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under
Edema	☑ Normal	☐ Slight Edema ☐ Edema
Life Pattern	☑ Normal	☐ Alert ☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/01/29 17:24	68,4	25,9	21,1	71	0,383

Additional Data

		(Normal Range)
Obesity	= 105%	90 ~ 110
B C M	= 30,6kg	29,4 ~ 36,0
B M C	= 2,88kg	2,53 ~ 3,09
B M R	= 1392kcal	[illegible]
A C	= 30,1cm	
A M C	= 23,5cm	

Weight Control

Target Weight		65,1	kg
Weight Control	-	3,3	kg
Fat Control	-	6,1	kg
Muscle Control	+	2,8	kg
Fitness Score		71	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	452,9	463,8	30,2	333,1	356,5
5kHz	442,5	451,5	28,5	326,7	349,4
50kHz	396,9	406,8	24,4	293,0	311,1
250kHz	361,4	371,1	21,1	267,5	283,8

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (350)	27,0years	174,0cm	Male	2009/02/23 16:59:44

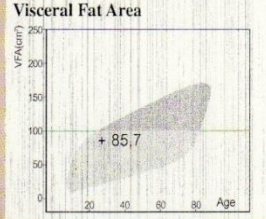
Biospace
KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	21,2	34,5	44,3	47,1	68,0	23,2 ~ 28,4
E C W (ℓ) Extracellular Water	13,3					14,2 ~ 17,4
Protein (kg)	9,2					10,1 ~ 12,3
Mineral (kg)	3,36		non osseous osseous: 2,86			3,46 ~ 4,24
Body Fat Mass (kg)	20,9					8,0 ~ 16,0

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		68,0		56,6 ~ 76,6
S M M (kg) Skeletal Muscle Mass		25,7		28,5 ~ 34,8
Body Fat Mass (kg)		20,9		8,0 ~ 16,0

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		22,4		18,5 ~ 25,0
P B F (%) Percent Body Fat		30,6		10,0 ~ 20,0
W H R Waist-Hip Ratio		0,88		0,80 ~ 0,90

Lean Balance

Lean ■■ Lean/Ideal Lean x100 (%) ▒▒

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,42 80,3		0,330	0,377		
Left Arm (kg)		2,32 77,1		0,329	0,376		
Trunk (kg)		21,1 83,8		0,338	0,386		
Right Leg (kg)		7,80 84,9		0,341	0,389		
Left Leg (kg)		7,60 82,7		0,340	0,387	0,338	0,385

Nutritional Evaluation

Protein	☐ Normal	☑ Deficient
Mineral	☐ Normal	☑ Deficient
Fat	☐ Normal	☐ Deficient ☑ Excessive

Weight Management

Weight	☑ Normal	☐ Under ☐ Over
S M M	☐ Normal ☐ Strong	☑ Under
Fat	☐ Normal	☐ Under ☑ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under ☐ Over ☐ Extremely Over
P B F	☐ Normal	☐ Over ☑ Extremely Over
W H R	☐ Normal	☐ Over ☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced ☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☐ Developed	☑ Weak
Lower	☐ Normal	☐ Developed	☑ Weak
Muscle	☐ Normal	☐ Muscular	☑ Weak

Health Diagnosis

Body Water	☐ Normal	☑ Under
Edema	☑ Normal	☐ Slight Edema ☐ Edema
Life Pattern	☐ Normal	☑ Alert ☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/02/23 16:59	68,0	25,7	20,9	60	0,385

Additional Data

		(Normal Range)
Obesity	= 102%	90 ~ 110
B C M	= 30,4kg	33,3 ~ 40,6
B M C	= 2,86kg	2,85 ~ 3,49
B M R	= 1388kcal	1492,8 ~ 1742,3
A C	= 29,8cm	
A M C	= 23,3cm	

Weight Control

Target Weight		66,7	kg
Weight Control	-	1,3	kg
Fat Control	-	10,8	kg
Muscle Control	+	9,5	kg
Fitness Score		60	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	435,4	458,8	29,4	314,1	337,0
5kHz	428,2	449,8	28,3	308,9	330,9
50kHz	385,9	405,9	24,7	280,0	297,6
250kHz	352,7	370,9	21,3	256,0	272,4

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CONTINUOUS MONITORING AND EVALUATION

- She informed us that she has provieded her individual diet and exercise program, but…..
- One meal was missing very often (lunch) – after a breakfast and exercising at 4 pm she had only a dinner
- She informed us that she usually exercised at home, but……
- She was educated from us to change these habits

InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (350)	27.0years	174,0cm	Male	2009/02/23 16:59:44

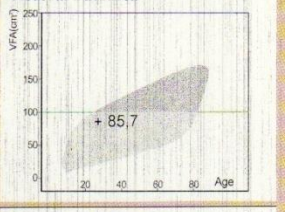
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	21,2	34,5				23,2 ~ 28,4
E C W (ℓ) Extracellular Water	13,3		44,3			14,2 ~ 17,4
Protein (kg)	9,2			47,1	68,0	10,1 ~ 12,3
Mineral (kg)	3,36		non-osseous: osseous: 2,86			3,46 ~ 4,24
Body Fat Mass (kg)	20,9					8,0 ~ 16,0

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)		68,0			56,6 ~ 76,6
S M M (kg) Skeletal Muscle Mass		25,7			28,5 ~ 34,8
Body Fat Mass (kg)		20,9			8,0 ~ 16,0

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		22,4		18,5 ~ 25,0
P B F (%) Percent Body Fat		30,6		10,0 ~ 20,0
W H R Waist-Hip Ratio		0,88		0,80 ~ 0,90

Lean Balance

Lean / Lean/Ideal Lean x100 (%)

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		2,42 80,3			0,330	0,377
Left Arm (kg)		2,32 77,1			0,329	0,376
Trunk (kg)		21,1 83,8			0,338	0,386
Right Leg (kg)		7,80 84,9			0,341	0,389
Left Leg (kg)		7,60 82,7			0,340	0,387

Edema ECF/TBF 0,338 ECW/TBW 0,385

Nutritional Evaluation

Protein	☐ Normal	☐ Deficient	
Mineral	☐ Normal	☐ Deficient	
Fat	☐ Normal	☐ Deficient	☐ Excessive

Weight Management

Weight	☑ Normal		☐ Under	☐ Over
S M M	☐ Normal	☐ Strong	☐ Under	
Fat	☐ Normal		☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over
		☐ Extremely Over	
P B F	☐ Normal	☐ Over	☐ Extremely Over
W H R	☐ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☐ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☐ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☐ Developed	☑ Weak	
Lower	☐ Normal	☐ Developed	☑ Weak	
Muscle	☐ Normal	☐ Muscular	☑ Weak	

Health Diagnosis

Body Water	☐ Normal	☑ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☐ Normal	☑ Alert	☐ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/02/23 16:59	68,0	25,7	20,9	60	0,385

Additional Data

		(Normal Range)
Obesity = 102%		90 ~ 110
B C M = 30,4kg		33,3 ~ 40,6
B M C = 2,86kg/		2,85 ~ 3,49
B M R = 1388kcal		1388,7 ~ 1697,3
A C = 29,8cm		
A M C = 23,3cm		

Weight Control

Target Weight		66,7	kg
Weight Control	-	1,3	kg
Fat Control	-	10,8	kg
Muscle Control	+	9,5	kg
Fitness Score		60	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	435,4	458,8	29,4	314,1	337,0
5kHz	428,2	449,8	28,3	308,9	330,9
50kHz	385,9	405,9	24,7	280,0	297,6
250kHz	352,7	370,9	21,3	256,0	272,4

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (414)	27.1years	174,0cm	Female	2009/03/18 16:59:59

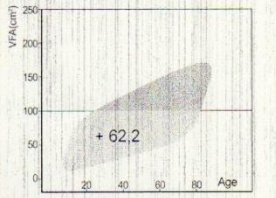
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	21,7	35,1				20,5 ~ 25,1
E C W (ℓ) Extracellular Water	13,4		45,1			12,6 ~ 15,4
Protein (kg)	9,4			48,0	66,6	8,9 ~ 10,9
Mineral (kg)	3,47		non-osseous: osseous: 2,91			3,07 ~ 3,75
Body Fat Mass (kg)	18,6					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)		66,6			55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		26,3			25,0 ~ 30,6
Body Fat Mass (kg)		18,6			13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		22,0		18,5 ~ 25,0
P B F (%) Percent Body Fat		27,9		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,81		0,75 ~ 0,85

Lean Balance

Lean / Lean/Ideal Lean x100 (%)

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		2,41 114,8			0,329	0,375
Left Arm (kg)		2,35 111,8			0,328	0,375
Trunk (kg)		21,1 91,1			0,336	0,383
Right Leg (kg)		7,88 99,6			0,337	0,384
Left Leg (kg)		7,66 96,9			0,337	0,383

Edema ECF/TBF 0,335 ECW/TBW 0,382

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient	
Mineral	☑ Normal	☐ Deficient	
Fat	☑ Normal	☐ Deficient	☐ Excessive

Weight Management

Weight	☑ Normal		☐ Under	☐ Over
S M M	☑ Normal	☐ Strong	☐ Under	
Fat	☑ Normal		☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over
		☐ Extremely Over	
P B F	☑ Normal	☐ Over	☐ Extremely Over
W H R	☑ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☑ Normal	☐ Developed	☐ Weak	
Lower	☑ Normal	☐ Developed	☐ Weak	
Muscle	☑ Normal	☐ Muscular	☐ Weak	

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☑ Normal	☐ Alert	☐ Risky
		☐ Highly Risky	

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/03/18 16:59	66,6	26,3	18,6	74	0,382

Additional Data

	(Normal Range)
Obesity = 102%	90 ~ 110
B C M = 31,1kg	29,4 ~ 36,0
B M C = 2,91kg/	2,53 ~ 3,09
B M R = 1407kcal	1366,7 ~ 1588,2
A C = 29,4cm	
A M C = 23,2cm	

Weight Control

Target Weight		65,1	kg
Weight Control	-	1,5	kg
Fat Control	-	3,6	kg
Muscle Control	+	2,1	kg
Fitness Score		74	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	444,1	459,3	29,1	320,0	342,0
5kHz	435,5	449,8	28,0	313,9	335,1
50kHz	391,5	404,4	24,0	279,8	298,4
250kHz	356,1	368,8	20,6	254,6	272,1

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (4|4)	27,1years	174,0cm	Female	2009/03/18 16:59:59

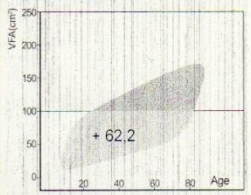
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	21,7	35,1	45,1	48,0	66,6	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	13,4					12,6 ~ 15,4
Protein (kg)	9,4					8,9 ~ 10,9
Mineral (kg)	3,47	osseous: 2,91				3,07 ~ 3,75
Body Fat Mass (kg)	18,6					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)		66,6			55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		26,3			25,0 ~ 30,6
Body Fat Mass (kg)		18,6			13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		22,0		18,5 ~ 25,0
P B F (%) Percent Body Fat		27,9		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,81		0,75 ~ 0,85

Lean Balance

Lean ■ Lean/Ideal Lean x100 (%)

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		2,41 114,8			0,329	0,375
Left Arm (kg)		2,35 111,8			0,328	0,375
Trunk (kg)		21,1 91,1			0,336	0,383
Right Leg (kg)		7,88 99,6			0,337	0,384
Left Leg (kg)		7,66 96,9			0,337	0,383

Edema: ECF/TBF 0,335 | ECW/TBW 0,382

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient
Mineral	☑ Normal	☐ Deficient
Fat	☑ Normal	☐ Deficient ☐ Excessive

Weight Management

Weight	☑ Normal		☐ Under	☐ Over
S M M	☑ Normal	☐ Strong	☐ Under	
Fat	☑ Normal		☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over ☐ Extremely Over
P B F	☑ Normal	☐ Over	☐ Extremely Over
W H R	☑ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☑ Normal	☐ Developed	☐ Weak	
Lower	☑ Normal	☐ Developed	☐ Weak	
Muscle	☑ Normal	☐ Muscular	☐ Weak	

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☑ Normal	☐ Alert	☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/03/18 16:59	66,6	26,3	18,6	74	0,382

Additional Data

	(Normal Range)
Obesity = 102%	90 ~ 110
B C M = 31,1kg	29,4 ~ 36,0
B M C = 2,91kg	2,53 ~ 3,09
B M R = 1407kcal	[illegible]
A C = 29,4cm	
A M C = 23,2cm	

Weight Control

Target Weight		65,1	kg
Weight Control	-	1,5	kg
Fat Control	-	3,6	kg
Muscle Control	+	2,1	kg
Fitness Score		74	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	444,1	459,3	29,1	320,0	342,0
5kHz	435,5	449,8	28,0	313,9	335,1
50kHz	391,5	404,4	24,0	279,8	298,4
250kHz	356,1	368,8	20,6	254,6	272,1

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (5|5)	27,2years	174,0cm	Female	2009/04/29 16:13:29

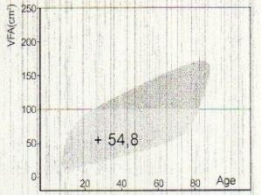
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	22,5	36,4	46,7	49,6	65,7	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	13,9					12,6 ~ 15,4
Protein (kg)	9,7					8,9 ~ 10,9
Mineral (kg)	3,49	osseous: 2,94				3,07 ~ 3,75
Body Fat Mass (kg)	16,1					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	UNIT:%	Normal Range
Weight (kg)		65,7			55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		27,4			25,0 ~ 30,6
Body Fat Mass (kg)		16,1			13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		21,7		18,5 ~ 25,0
P B F (%) Percent Body Fat		24,2		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,81		0,75 ~ 0,85

Lean Balance

Lean ■ Lean/Ideal Lean x100 (%)

	Under	Normal	Over	UNIT:%	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW
Right Arm (kg)		2,53 121,3			0,330	0,376
Left Arm (kg)		2,49 119,3			0,329	0,375
Trunk (kg)		21,8 94,4			0,334	0,380
Right Leg (kg)		7,93 100,6			0,335	0,382
Left Leg (kg)		7,75 98,5			0,333	0,380

Edema: ECF/TBF 0,333 | ECW/TBW 0,380

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient
Mineral	☑ Normal	☐ Deficient
Fat	☑ Normal	☐ Deficient ☐ Excessive

Weight Management

Weight	☑ Normal		☐ Under	☐ Over
S M M	☑ Normal	☐ Strong	☐ Under	
Fat	☑ Normal		☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over ☐ Extremely Over
P B F	☑ Normal	☐ Over	☐ Extremely Over
W H R	☑ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☑ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak	
Lower	☑ Normal	☐ Developed	☐ Weak	
Muscle	☑ Normal	☐ Muscular	☐ Weak	

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☑ Normal	☐ Alert	☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/04/29 16:13	65,7	27,4	16,1	78	0,380

Additional Data

	(Normal Range)
Obesity = 101%	90 ~ 110
B C M = 32,3kg	29,4 ~ 36,0
B M C = 2,94kg	2,53 ~ 3,09
B M R = 1442kcal	1353,2 ~ 1571,7
A C = 29,2cm	
A M C = 23,8cm	

Weight Control

Target Weight		65,1	kg
Weight Control	-	0,6	kg
Fat Control	-	1,1	kg
Muscle Control	+	0,5	kg
Fitness Score		78	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	419,0	428,7	29,0	321,0	341,6
5kHz	409,0	418,7	27,6	314,1	332,8
50kHz	367,4	375,5	23,8	277,8	292,3
250kHz	334,2	341,8	20,2	252,6	265,8

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (515)	27,2years	174,0cm	Female	2009/04/29 16:13:29

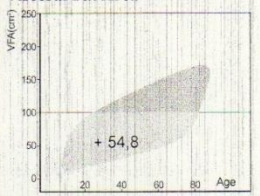
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	22,5	36,4	46,7	49,6	65,7	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	13,9					12,6 ~ 15,4
Protein (kg)	9,7					8,9 ~ 10,9
Mineral (kg)	3,49		osseous: 2,94			3,07 ~ 3,75
Body Fat Mass (kg)	16,1					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		65,7		55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		27,4		25,0 ~ 30,6
Body Fat Mass (kg)		16,1		13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		21,7		18,5 ~ 25,0
P B F (%) Percent Body Fat		24,4		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,81		0,75 ~ 0,85

Lean Balance

Lean / Lean/Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,53 121,3		0,330	0,376		
Left Arm (kg)		2,49 119,3		0,329	0,375		
Trunk (kg)		21,8 94,4		0,334	0,380		
Right Leg (kg)		7,93 100,6		0,335	0,382		
Left Leg (kg)		7,75 98,5		0,333	0,380	0,333	0,380

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient	
Mineral	☑ Normal	☐ Deficient	
Fat	☑ Normal	☐ Deficient	☐ Excessive

Weight Management

Weight	☑ Normal	☐ Under	☐ Over
S M M	☑ Normal ☐ Strong	☐ Under	
Fat	☑ Normal	☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over ☐ Extremely Over
P B F	☑ Normal	☐ Over	☐ Extremely Over
W H R	☑ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☑ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☑ Normal	☐ Muscular	☐ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☑ Normal	☐ Alert	☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/04/29 16:13	65,7	27,4	16,1	78	0,380

Additional Data

		(Normal Range)
Obesity = 101%		90 ~ 110
B C M	= 32,3kg	29,4 ~ 36,0
B M C	= 2,94kg	2,53 ~ 3,09
B M R	= 1442kcal	1356,1 ~ 1575,3
A C	= 29,2cm	
A M C	= 23,8cm	

Weight Control

Target Weight		65,1	kg
Weight Control	-	0,6	kg
Fat Control	-	1,1	kg
Muscle Control	+	0,5	kg
Fitness Score		78	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	419,0	428,7	29,0	321,0	341,6
5kHz	409,0	418,7	27,6	314,1	332,8
50kHz	367,4	375,5	23,8	277,8	292,3
250kHz	334,2	341,8	20,2	252,6	265,8

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InBody 720 Body Composition Analysis

NAME	AGE	HEIGHT	GENDER	DATE
Biljana Klopcevska (656)	27,4years	174,0cm	Female	2009/07/04 12:54:11

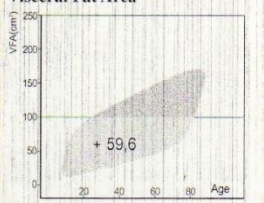
Biospace KINETICUS

Body Composition Analysis

Compartments	Values	Total Body Water	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
I C W (ℓ) Intracellular Water	22,8	36,9	47,3	50,4	65,9	20,5 ~ 25,1
E C W (ℓ) Extracellular Water	14,1					12,6 ~ 15,4
Protein (kg)	9,9					8,9 ~ 10,9
Mineral (kg)	3,70		osseous: 3,04			3,07 ~ 3,75
Body Fat Mass (kg)	15,5					13,0 ~ 20,8

▸ Mineral is estimated.

Visceral Fat Area



Muscle - Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)		65,9		55,3 ~ 74,9
S M M (kg) Skeletal Muscle Mass		27,8		25,0 ~ 30,6
Body Fat Mass (kg)		15,5		13,0 ~ 20,8

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m²) Body Mass Index		23,8		18,5 ~ 25,0
P B F (%) Percent Body Fat		23,5		18,0 ~ 28,0
W H R Waist-Hip Ratio		0,82		0,75 ~ 0,85

Lean Balance

Lean / Lean/Ideal Lean x100 (%)

	Under	Normal	Over	Segmental Edema ECF/TBF	Segmental Edema ECW/TBW	Edema ECF/TBF	Edema ECW/TBW
Right Arm (kg)		2,71 129,9		0,330	0,377		
Left Arm (kg)		2,64 126,1		0,329	0,376		
Trunk (kg)		22,6 97,9		0,336	0,382		
Right Leg (kg)		7,59 96,3		0,332	0,379		
Left Leg (kg)		7,46 94,6		0,333	0,380	0,334	0,381

Nutritional Evaluation

Protein	☑ Normal	☐ Deficient	
Mineral	☑ Normal	☐ Deficient	
Fat	☑ Normal	☐ Deficient	☐ Excessive

Weight Management

Weight	☑ Normal	☐ Under	☐ Over
S M M	☑ Normal ☐ Strong	☐ Under	
Fat	☑ Normal	☐ Under	☐ Over

Obesity Diagnosis

B M I	☑ Normal	☐ Under	☐ Over ☐ Extremely Over
P B F	☑ Normal	☐ Over	☐ Extremely Over
W H R	☑ Normal	☐ Over	☐ Extremely Over

Body Balance

Upper	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Lower	☑ Balanced	☐ Slightly Unbalanced	☐ Extremely Unbalanced
Upper-Lower	☐ Balanced	☑ Slightly Unbalanced	☐ Extremely Unbalanced

Body Strength

Upper	☐ Normal	☑ Developed	☐ Weak
Lower	☑ Normal	☐ Developed	☐ Weak
Muscle	☑ Normal	☐ Muscular	☐ Weak

Health Diagnosis

Body Water	☑ Normal	☐ Under	
Edema	☑ Normal	☐ Slight Edema	☐ Edema
Life Pattern	☑ Normal	☐ Alert	☐ Risky ☐ Highly Risky

Body Composition History

DATE / TIME	Weight	SMM	Fat	Score	ECW/TBW
09/07/04 12:54	65,9	27,8	15,5	80	0,381

Additional Data

		(Normal Range)
Obesity = 101%		90 ~ 110
B C M	= 32,7kg	29,4 ~ 36,0
B M C	= 3,04kg	2,53 ~ 3,09
B M R	= 1458kcal	1356,1 ~ 1575,3
A C	= 29,7cm	
A M C	= 24,2cm	

Weight Control

Target Weight		65,4	kg
Weight Control	-	0,5	kg
Fat Control	-	0,5	kg
Muscle Control		0,0	kg
Fitness Score		80	Points

Impedance

Z (KHz)	RA	LA	TR	RL	LL
1kHz	413,0	429,8	27,5	352,0	368,3
5kHz	397,6	413,1	25,1	345,7	359,7
50kHz	354,0	367,7	21,2	303,9	317,4
250kHz	323,1	335,7	18,6	275,9	288,7

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CONCLUSIONS

- **INDIVIDUAL APROACH**
- **SELF-MONITORING BY EVERY PARTICIPANT IN THIS PROGRAM OF REGULATION OF BODY COMOPISTION**
- **PREVIUOS BODY COMPOSITION (HIGH MUSCLE MASS) AND PREVIUOS LOW LEVEL OF PHYSISCAL ACTIVITY WAS A GOOD START POSITIO FOR MAININTING A GOOD RESULTS**
- **CONTINUOUS FOOD INTAKE AFTER 3 HOURS AND ACTIVE PARTICIPATION BY PARTICIPANT IN CREATION OF MENU ON DAILY BASE**
- **THERE IS A NEED OF PSYHOLOGICAL SUPORT**
- EDUCATION, EDUCATION, EDUCATION…….