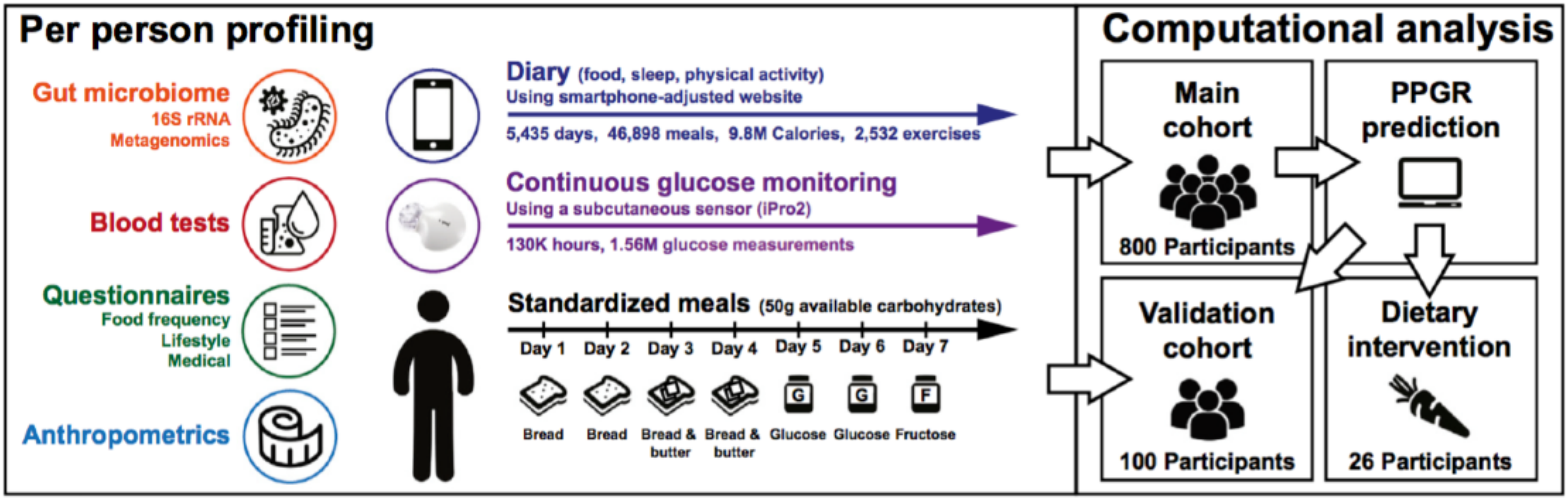
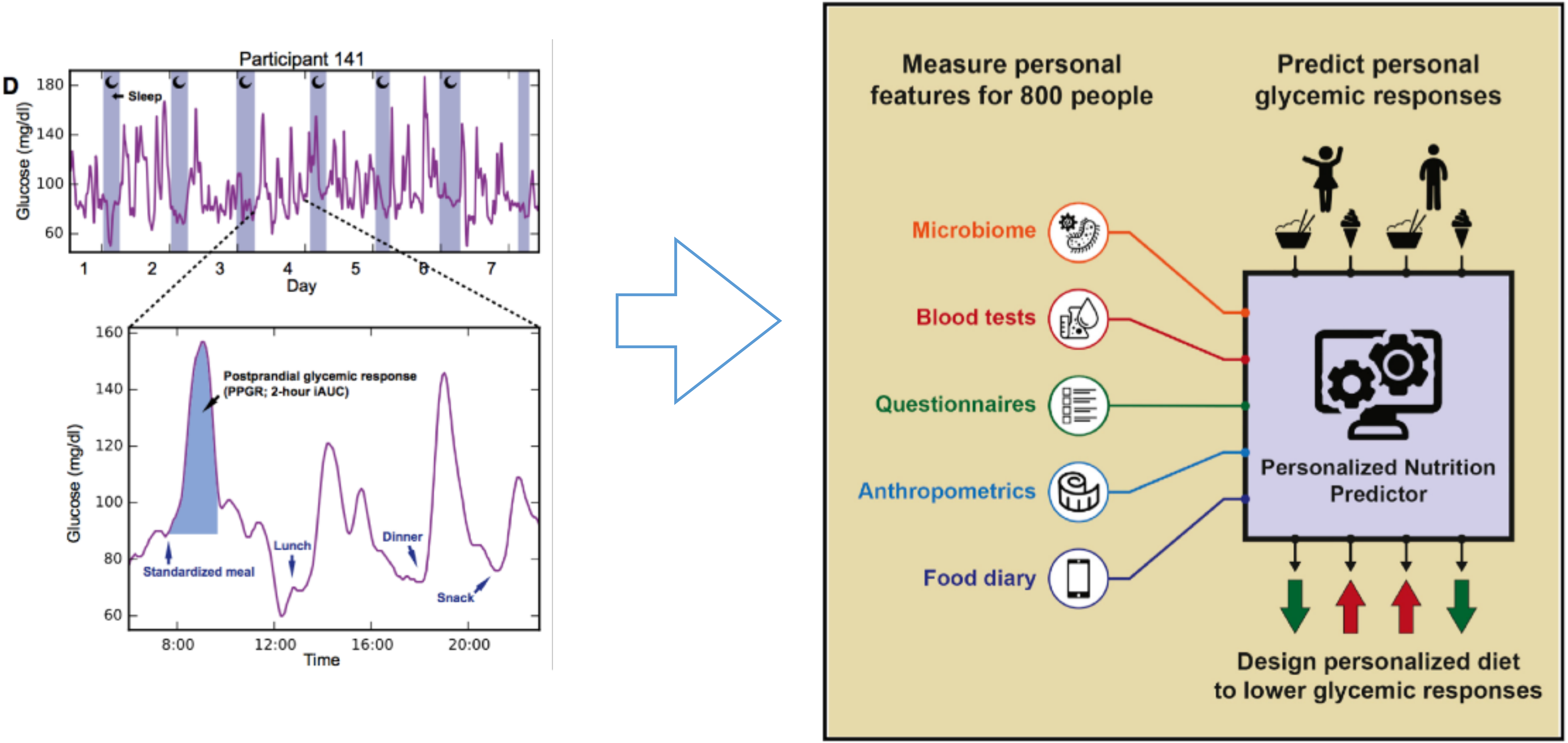


Per person profiling
Gut microbiome
16S rRNA
Metagenomics
Blood tests
Questionnaires
Food frequency
Lifestyle
Medical
Anthropometrics
Diary (food, sleep, physical activity)
Using smartphone-adjusted website
5,435 days, 46,898 meals, 9.8M Calories, 2,532 exercises
Continuous glucose monitoring
Using a subcutaneous sensor (iPro2)
130K hours, 1.56M glucose measurements
Standardized meals (50g available carbohydrates)
Day 1
Day 2
Day 3
Day 4
Day 5
Day 6
Day 7
Bread
Bread
Bread & butter
Bread & butter
Glucose
Glucose
Fructose
G
G
F
Computational analysis
Main cohort
800 Participants
PPGR prediction
Validation cohort
100 Participants
Dietary intervention
26 Participants

Personalized Nutrition by Prediction of Glycemic Responses

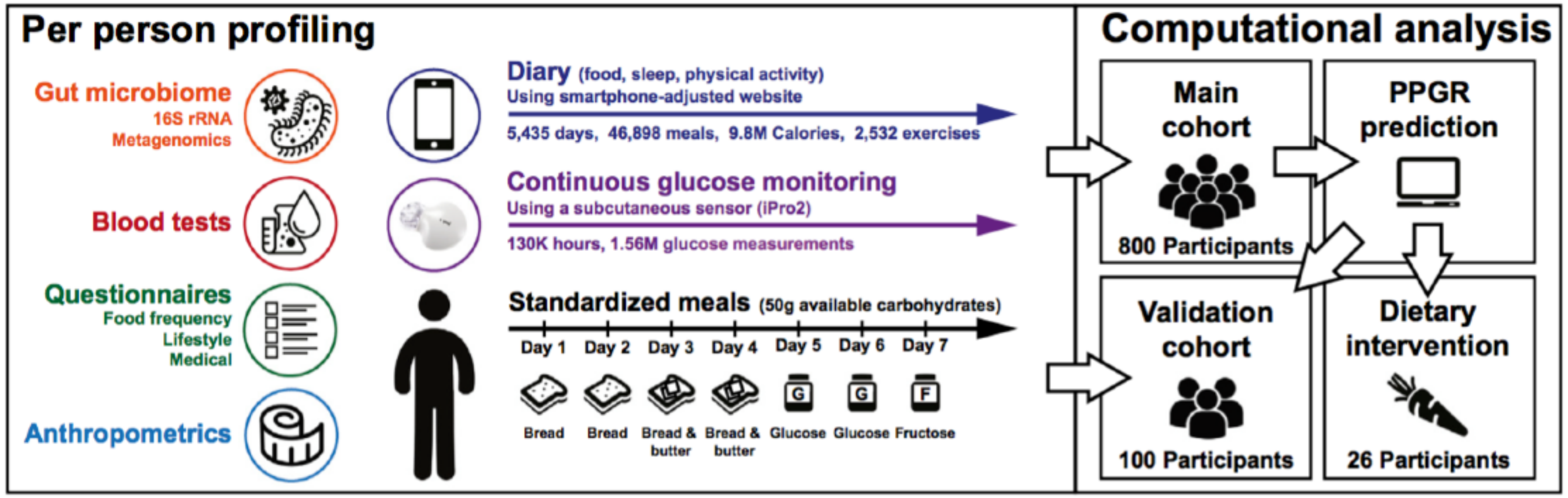
David Zeevi,[1,2,8] Tal Korem,[1,2,8] Niv Zmora,[3,4,5,8] David Israeli,[6,8] Daphna Rothschild,[1,2] Adina Weinberger,[1,2] Orly Ben-Yacov,[1,2] Dar Lador,[1,2] Tali Avnit-Sagi,[1,2] Maya Lotan-Pompan,[1,2] Jotham Suez,[3] Jemal Ali Mahdi,[3] Elad Matot,[1,2] Gal Malka,[1,2] Noa Kosower,[1,2] Michal Rein,[1,2] Gili Zilberman-Schapira,[3] Lenka Dohnalová,[3] Meirav Pevsner-Fischer,[3] Rony Bikovsky,[1,2] Zamir Halpern,[5,7] Eran Elinav,[3,9,*] and Eran Segal[1,2,9,*]



D
Participant 141
Sleep
Glucose (mg/dl)
180
140
100
60
1
2
3
4
5
6
7
Day
160
140
120
100
80
60
Postprandial glycemic response
(PPGR; 2-hour iAUC)
Standardized meal
Lunch
Dinner
Snack
8:00
12:00
16:00
20:00
Time
Measure personal
features for 800 people
Predict personal
glycemic responses
Microbiome
Blood tests
Questionnaires
Anthropometrics
Food diary
Personalized Nutrition
Predictor
Design personalized diet
to lower glycemic responses

Personalized nutrition

Personalized nutrition



Personalized Nutrition by Prediction of Glycemic Responses

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Mas na vida real...

LETTERS
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nature medicine

Meta-omics analysis of elite athletes identifies a performance-enhancing microbe that functions via lactate metabolism

Model_1 < -lme(*Veillonella*~time + sex + weight + BMI + age + race + menstruation + vegetables + fruits + grains + protein + dairy + dietary_protein_supp,random = ~1|subjectID,data = marathon16S)