

Personalised Nutrition Advice L1 Service API Documentation

VERSION 1.0 – MAY 2021



Revision Summary

Version	Date	Comments
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Introduction

This documentation contains general information about SafeCape's **Personalised Nutrition Advice L1 Service** (PNA-L1) REST API available through the Quisper© platform.

SafeCape PNA-L1 API is powered by SafeCape Rules Toolset© platform which can be used to make API calls targeting different products. Each **product** is a domain-specific model comprising a set of rules that can be used to evaluate a set of **input variables** and produce a set of **output variables**.

The PNA-L1 API uses nutrient intake, activity level and body metrics (weight, BMI etc.) to provide a set of personalized advice based on the guidelines developed by the Food4Me project. The personalized dietary analysis provided by level 1 is based on diet alone.

The nutrient intakes input dataset may be produced by using SafeCape's Nutrient Intake Calculation Service, also offered through the Quisper platform.

The output of the PNA-L1 API contains both textual advice and rating scores (low/normal/high) for the following sections:

1. Fiber
2. Omega 3
3. Vitamin B12
4. Thiamin
5. Riboflavin
6. Unsaturated fat (Mono/Poly)
7. Saturated fat
8. Total fat
9. Carbohydrates
10. Protein
11. Calcium
12. Iron
13. Folate
14. Vitamin C
15. Vitamin A
16. Salt

API Authentication

The user must pass a valid **x-api-key** custom header to the service or else the request is not fulfilled and a *403 Forbidden* HTTP status code is returned. All successful requests return *200 OK* HTTP status code.

An api key can be received by creating a developer account in the following address and subscribing to Nutrient Intake Calculation Service (FFQ):

<https://developer.quisper.eu/getting-started>

Base URL

All URLs referenced in the documentation have the following base address:

<https://api.quisper.eu/personalised-nutrition-advice/beta>

1. Get information about the model (inputs/outputs)

Resource URI

```
[GET] https://api.quisper.eu/personalised-nutrition-advice/beta/food4me-l1/{version}
```

HTTP GET for this resource returns a description of the model in the version specified by the {version} parameter on the URI.

The current model version is 1.

The returned description consists of the following elements:

- “InputDescription”: an object containing all the input variables that the model accepts when making an HTTP POST request and a short description for each variable
- “InputEmpty”: an object containing all the input variables with empty values
- “InputSample”: an object containing all the input variables with sample values
- “OutputSample”: an object containing a sample of all the output variables that are returned when making an HTTP POST request using the sample input values

HTTP GET

```
curl -X GET "https://api.quisper.eu/personalised-nutrition-advice/beta/food4me-l1/1"  
-H "Accept: application/json"  
-H "x-api-key: YOUR_API_KEY"  
> output.json
```

Example Output (output.json)

```
{  
  "Name": "Food4Me",  
  "Version": {  
    "Version": 1,  
    "Status": "draft"  
  },  
  "InputDescription": {  
    "PersonDetails": {  
      "Weight": "",  
      "Height": "",  
      "Sex": "",  
      "Age": ""  
    },  
    "PhysicalActivity": {  
      "ActivityLevel": {  
        "PAL": ""  
      }  
    }  
  }  
}
```

```

    }
  },
  "Fiber": {
    "DailyIntake": {
      "Total": ""
    }
  },
  "Omega3": {
    "DailyIntake": {
      "FoodEnergyPercentage": "",
      "SupplementsEnergyPercentage": ""
    }
  },
  "VitaminB12": {
    "DailyIntake": {
      "Food": "",
      "Supplements": ""
    }
  },
  "Thiamin": {
    "DailyIntake": {
      "Food": "",
      "Supplements": ""
    }
  },
  "Riboflavin": {
    "DailyIntake": {
      "Food": "",
      "Supplements": ""
    }
  },
  "UnsaturatedFat": {
    "MonoUnsaturatedFat": {
      "DailyIntake": {
        "TotalEnergyPercentage": ""
      }
    },
    "PolyUnsaturatedFat": {
      "DailyIntake": {
        "TotalEnergyPercentage": ""
      }
    }
  },
  "Carbohydrate": {
    "DailyIntake": {
      "TotalEnergyPercentage": "",
      "Cereal": "",
      "BreadAndSavouryBiscuits": "",

```

```

        "PotatoesRiceAndPasta": "",
        "MeatAndFish": "",
        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
    }
},
"Protein": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"TotalFat": {
    "DailyIntake": {
        "FoodEnergyPercentage": "",
        "SupplementsEnergyPercentage": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
}

```



```

},
"Calcium": {
  "DailyIntake": {
    "Food": "",
    "Supplements": "",
    "Contributions": {
      "Cereal": "",
      "BreadAndSavouryBiscuits": "",
      "PotatoesRiceAndPasta": "",
      "MeatAndFish": "",
      "Dairy": "",
      "FatsAndSpreads": "",
      "SweetAndSnacks": "",
      "Drinks": "",
      "Fruit": "",
      "Vegetables": "",
      "Supplements": ""
    }
  }
},
"Iron": {
  "DailyIntake": {
    "Food": "",
    "Supplements": "",
    "Contributions": {
      "Cereal": "",
      "BreadAndSavouryBiscuits": "",
      "PotatoesRiceAndPasta": "",
      "MeatAndFish": "",
      "Dairy": "",
      "FatsAndSpreads": "",
      "SweetAndSnacks": "",
      "Drinks": "",
      "Fruit": "",
      "Vegetables": "",
      "Supplements": ""
    }
  }
},
"Folate": {
  "DailyIntake": {
    "Food": "",
    "Supplements": "",
    "Contributions": {
      "Cereal": "",
      "BreadAndSavouryBiscuits": "",
      "PotatoesRiceAndPasta": "",
      "MeatAndFish": "",

```

```

        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
    }
}
},
"VitaminC": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"VitaminA": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
}
},

```

```

    "Salt": {
      "DailyIntake": {
        "Total": "",
        "AddSaltWhenCooking": "",
        "AddSaltAtTable": "",
        "Contributions": {
          "Cereal": "",
          "BreadAndSavouryBiscuits": "",
          "PotatoesRiceAndPasta": "",
          "MeatAndFish": "",
          "Dairy": "",
          "FatsAndSpreads": "",
          "SweetAndSnacks": "",
          "Drinks": "",
          "Fruit": "",
          "Vegetables": "",
          "SoupsAndSauces": "",
          "Supplements": ""
        }
      }
    },
    "SaturatedFats": {
      "DailyIntake": {
        "TotalEnergyPercentage": "",
        "Contributions": {
          "PotatoesRiceAndPasta": "",
          "MeatAndFish": "",
          "Dairy": "",
          "FatsAndSpreads": "",
          "SweetAndSnacks": "",
          "SoupsAndSauces": "",
          "Eggs": ""
        }
      }
    }
  },
  "InputEmpty": {
    "PersonDetails": {
      "Weight": "",
      "Height": "",
      "Sex": "",
      "Age": ""
    },
    "PhysicalActivity": {
      "ActivityLevel": {
        "PAL": ""
      }
    }
  },
},

```

```

"Fiber": {
  "DailyIntake": {
    "Total": ""
  }
},
"Omega3": {
  "DailyIntake": {
    "FoodEnergyPercentage": "",
    "SupplementsEnergyPercentage": ""
  }
},
"VitaminB12": {
  "DailyIntake": {
    "Food": "",
    "Supplements": ""
  }
},
"Thiamin": {
  "DailyIntake": {
    "Food": "",
    "Supplements": ""
  }
},
"Riboflavin": {
  "DailyIntake": {
    "Food": "",
    "Supplements": ""
  }
},
"UnsaturatedFat": {
  "MonoUnsaturatedFat": {
    "DailyIntake": {
      "TotalEnergyPercentage": ""
    }
  },
  "PolyUnsaturatedFat": {
    "DailyIntake": {
      "TotalEnergyPercentage": ""
    }
  }
},
"Carbohydrate": {
  "DailyIntake": {
    "TotalEnergyPercentage": "",
    "Cereal": "",
    "BreadAndSavouryBiscuits": "",
    "PotatoesRiceAndPasta": "",
    "MeatAndFish": "",

```

```

        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
    }
},
"Protein": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"TotalFat": {
    "DailyIntake": {
        "FoodEnergyPercentage": "",
        "SupplementsEnergyPercentage": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"Calcium": {

```

```

    "DailyIntake": {
      "Food": "",
      "Supplements": "",
      "Contributions": {
        "Cereal": "",
        "BreadAndSavouryBiscuits": "",
        "PotatoesRiceAndPasta": "",
        "MeatAndFish": "",
        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
      }
    }
  },
  "Iron": {
    "DailyIntake": {
      "Food": "",
      "Supplements": "",
      "Contributions": {
        "Cereal": "",
        "BreadAndSavouryBiscuits": "",
        "PotatoesRiceAndPasta": "",
        "MeatAndFish": "",
        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
      }
    }
  },
  "Folate": {
    "DailyIntake": {
      "Food": "",
      "Supplements": "",
      "Contributions": {
        "Cereal": "",
        "BreadAndSavouryBiscuits": "",
        "PotatoesRiceAndPasta": "",
        "MeatAndFish": "",
        "Dairy": "",
        "FatsAndSpreads": "",

```

```

        "SweetAndSnacks": "",
        "Drinks": "",
        "Fruit": "",
        "Vegetables": "",
        "Supplements": ""
    }
}
},
"VitaminC": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"VitaminA": {
    "DailyIntake": {
        "Food": "",
        "Supplements": "",
        "Contributions": {
            "Cereal": "",
            "BreadAndSavouryBiscuits": "",
            "PotatoesRiceAndPasta": "",
            "MeatAndFish": "",
            "Dairy": "",
            "FatsAndSpreads": "",
            "SweetAndSnacks": "",
            "Drinks": "",
            "Fruit": "",
            "Vegetables": "",
            "Supplements": ""
        }
    }
},
"Salt": {
    "DailyIntake": {

```

```

    "Total": "",
    "AddSaltWhenCooking": "",
    "AddSaltAtTable": "",
    "Contributions": {
      "Cereal": "",
      "BreadAndSavouryBiscuits": "",
      "PotatoesRiceAndPasta": "",
      "MeatAndFish": "",
      "Dairy": "",
      "FatsAndSpreads": "",
      "SweetAndSnacks": "",
      "Drinks": "",
      "Fruit": "",
      "Vegetables": "",
      "SoupsAndSauces": "",
      "Supplements": ""
    }
  },
  "SaturatedFats": {
    "DailyIntake": {
      "TotalEnergyPercentage": "",
      "Contributions": {
        "PotatoesRiceAndPasta": "",
        "MeatAndFish": "",
        "Dairy": "",
        "FatsAndSpreads": "",
        "SweetAndSnacks": "",
        "SoupsAndSauces": "",
        "Eggs": ""
      }
    }
  },
  "InputSample": {
    "PersonDetails": {
      "Weight": "82",
      "Height": "185",
      "Sex": "Female",
      "Age": "51"
    },
    "PhysicalActivity": {
      "ActivityLevel": {
        "PAL": "1.2"
      }
    }
  },
  "Fiber": {
    "DailyIntake": {

```



```

        "Total": "20"
    }
},
"Omega3": {
    "DailyIntake": {
        "FoodEnergyPercentage": "0.1",
        "SupplementsEnergyPercentage": "0.4"
    }
},
"VitaminB12": {
    "DailyIntake": {
        "Food": "1.5",
        "Supplements": "0.5"
    }
},
"Thiamin": {
    "DailyIntake": {
        "Food": "0.9",
        "Supplements": "0.1"
    }
},
"Riboflavin": {
    "DailyIntake": {
        "Food": "0.9",
        "Supplements": "0.1"
    }
},
"UnsaturatedFat": {
    "MonoUnsaturatedFat": {
        "DailyIntake": {
            "TotalEnergyPercentage": "20"
        }
    },
    "PolyUnsaturatedFat": {
        "DailyIntake": {
            "TotalEnergyPercentage": "20"
        }
    }
},
"Carbohydrate": {
    "DailyIntake": {
        "TotalEnergyPercentage": "44",
        "Cereal": "12",
        "BreadAndSavouryBiscuits": "13",
        "PotatoesRiceAndPasta": "10",
        "MeatAndFish": "15",
        "Dairy": "10",
        "FatsAndSpreads": "5",
    }
}

```

```

    "SweetAndSnacks": "5",
    "Drinks": "5",
    "Fruit": "5",
    "Vegetables": "5",
    "Supplements": "5"
  },
},
"Protein": {
  "DailyIntake": {
    "Food": "40",
    "Supplements": "50",
    "Contributions": {
      "Cereal": "12",
      "BreadAndSavouryBiscuits": "13",
      "PotatoesRiceAndPasta": "10",
      "MeatAndFish": "15",
      "Dairy": "10",
      "FatsAndSpreads": "5",
      "SweetAndSnacks": "5",
      "Drinks": "5",
      "Fruit": "5",
      "Vegetables": "5",
      "Supplements": "5"
    }
  }
},
},
"TotalFat": {
  "DailyIntake": {
    "FoodEnergyPercentage": "19",
    "SupplementsEnergyPercentage": "22",
    "Contributions": {
      "Cereal": "12",
      "BreadAndSavouryBiscuits": "15",
      "PotatoesRiceAndPasta": "10",
      "MeatAndFish": "13",
      "Dairy": "10",
      "FatsAndSpreads": "5",
      "SweetAndSnacks": "5",
      "Drinks": "5",
      "Fruit": "5",
      "Vegetables": "5",
      "Supplements": "5"
    }
  }
},
},
"Calcium": {
  "DailyIntake": {
    "Food": "999",

```

```

    "Supplements": "1",
    "Contributions": {
      "Cereal": "12",
      "BreadAndSavouryBiscuits": "15",
      "PotatoesRiceAndPasta": "10",
      "MeatAndFish": "13",
      "Dairy": "10",
      "FatsAndSpreads": "5",
      "SweetAndSnacks": "5",
      "Drinks": "5",
      "Fruit": "5",
      "Vegetables": "5",
      "Supplements": "5"
    }
  },
  "Iron": {
    "DailyIntake": {
      "Food": "45",
      "Supplements": "1",
      "Contributions": {
        "Cereal": "12",
        "BreadAndSavouryBiscuits": "15",
        "PotatoesRiceAndPasta": "10",
        "MeatAndFish": "13",
        "Dairy": "10",
        "FatsAndSpreads": "5",
        "SweetAndSnacks": "5",
        "Drinks": "5",
        "Fruit": "5",
        "Vegetables": "5",
        "Supplements": "5"
      }
    }
  },
  "Folate": {
    "DailyIntake": {
      "Food": "999",
      "Supplements": "1",
      "Contributions": {
        "Cereal": "12",
        "BreadAndSavouryBiscuits": "15",
        "PotatoesRiceAndPasta": "10",
        "MeatAndFish": "13",
        "Dairy": "10",
        "FatsAndSpreads": "5",
        "SweetAndSnacks": "5",
        "Drinks": "5",

```

```

        "Fruit": "5",
        "Vegetables": "5",
        "Supplements": "5"
    }
}
},
"VitaminC": {
    "DailyIntake": {
        "Food": "999",
        "Supplements": "1",
        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "15",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "13",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    }
},
"VitaminA": {
    "DailyIntake": {
        "Food": "999",
        "Supplements": "1",
        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "15",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "13",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    }
},
"Salt": {
    "DailyIntake": {
        "Total": "5.76",
        "AddSaltWhenCooking": "YES",
    }
}

```

```

    "AddSaltAtTable": "NO",
    "Contributions": {
      "Cereal": "12",
      "BreadAndSavouryBiscuits": "15",
      "PotatoesRiceAndPasta": "10",
      "MeatAndFish": "13",
      "Dairy": "10",
      "FatsAndSpreads": "5",
      "SweetAndSnacks": "5",
      "Drinks": "5",
      "Fruit": "5",
      "Vegetables": "5",
      "SoupsAndSauces": "5",
      "Supplements": "5"
    }
  },
  "SaturatedFats": {
    "DailyIntake": {
      "TotalEnergyPercentage": "10.1",
      "Contributions": {
        "PotatoesRiceAndPasta": "10",
        "MeatAndFish": "30",
        "Dairy": "20",
        "FatsAndSpreads": "10",
        "SweetAndSnacks": "10",
        "SoupsAndSauces": "10",
        "Eggs": "10"
      }
    }
  },
  "OutputSample": {
    "BodyWeight": {
      "BMIround": "24.0",
      "Score": "Normal",
      "Rating": "NORMAL",
      "Advice": "You have a healthy body weight which suggests you are eating
the right amount of food to meet your energy needs. However it is important
to be active and your physical activity level is too low. Engaging in exercis
e will help prevent you from losing valuable muscle which is essential for ma
intaining a healthy body weight. We strongly recommend you try to increase yo
ur physical activity. Aim to spend at least 30 minutes doing moderately inten
se aerobic activities each day, such as brisk walking, cycling or swimming."
    },
    "PhysicalActivity": {
      "Score": "Inactive"
    }
  },

```

```

    "Fiber": {
      "Score_Total": "Medium",
      "Rating_Total": "LOW",
      "Advice": "How you can increase your Fiber intake:\n•Try to have at least 5 portions of fruit and vegetables a day\n•Try adding beans to soups, stews and salads and seeds to cereals and yoghurts\n•Increase your intake of wholegrain breads, crackers and cereals - go for brown rice\nand wholemeal pasta\n•Make sure you drink plenty water when increasing your Fiber intake\n•Having a healthy Fiber intake has beneficial effects in controlling blood sugar levels"
    },
    "Omega3": {
      "Score_Food": "Low",
      "Rating_Food": "LOW",
      "Score_Total": "Medium",
      "Rating_Total": "LOW",
      "Advice": "How you can increase your omega-3 intake:\n•Try to increase the amount of oily fish you consume aim to have at least 1 portion of\noily fish per week\n•Try having salmon salad with boiled potatoes for a healthy meal\n•Mackerel in tomato sauce with toast makes a quick lunch\n•Remember while fresh tuna counts as an oily fish, tinned tuna doesn't\n•If you don't like oily fish then try consuming omega-3 supplements"
    },
    "VitaminB12": {
      "Score_Food": "Low",
      "Rating_Food": "LOW",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": "Your total vitamin B12 intake is within the recommended levels. This is a result of your\nconsumption of supplements as your intake of vitamin B12 from food is below\nrecommended levels. You should try to increase your intake of vitamin B12 from food:\n•Consume a varied balanced diet\n•Try to eat more foods rich in vitamin B12\n•Eat more low-fat dairy products, you should try to consume 3 portions of dairy foods\neach day\n•Increase your intake of eggs, they are full of nutrients and are quick and easy to\nprepare"
    },
    "Thiamin": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": ""
    },
    "Riboflavin": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",

```

```

    "Rating_Total": "NORMAL",
    "Advice": ""
  },
  "UnsaturatedFat": {
    "Rating": "HIGH",
    "Advice": "All foods even healthy foods should be eaten in moderation.
You should continue to eat unsaturated fats but consume them in smaller quantities:
•Use smaller amounts of monounsaturated and polyunsaturated fats when cooking e.g. sunflower, olive or rapeseed oils
•Nuts are healthy but a small handful (20g) is enough each day",
    "MonoUnsaturatedFat": {
      "Score_Total": "MediumHigh",
      "Rating_Total": "HIGH"
    },
    "PolyUnsaturatedFat": {
      "Score_Total": "High",
      "Rating_Total": "HIGH"
    }
  },
  "Carbohydrate": {
    "Score": "MediumLow",
    "Rating": "LOW",
    "Advice": "How you can increase your intake of carbohydrates:
•Make 'starchy' foods like bread, pasta, potatoes and rice, the base and bulk of your meals and snacks, try to eat a variety of these foods
•Bored of having the same foods - try having different types of breads - rolls, wraps, pitta or sliced bread at lunch
•Choose wholegrain varieties whenever possible as these are rich sources of dietary fiber
•Only eat simple carbohydrates occasionally, frequent consumption can promote tooth decay",
    "DailyIntake": {
      "Contributor1": "MeatAndFish"
    }
  },
  "Protein": {
    "Score_Food": "Low",
    "Rating_Food": "LOW",
    "Score_Total": "Normal",
    "Rating_Total": "NORMAL",
    "Advice": "Your total protein intake is within the recommended levels. This is a result of your consumption of supplements as your protein intake from food is below recommended levels. You should try increase the amount of protein you get from foods instead of supplements:
•Add beans and pulses to casseroles, soups, salads, curries and pasta dishes
•Fish is a good source of protein try to have it twice a week
•Go for lean cuts of meat
•Increase your intake of eggs, they are full of nutrients and are quick and easy to prepare
•Increase your portion sizes of protein rich foods",
    "DailyIntake": {
      "Contributions": {

```

```

        "Contributor1": "MeatAndFish"
    }
}
},
"TotalFat": {
    "Score_Food": "MediumLow",
    "Rating_Food": "LOW",
    "Score_Total": "High",
    "Rating_Total": "HIGH",
    "Advice": "Your total fat intake is higher than recommended. This is a
result of your consumption\nof supplements as your total dietary fat intake f
rom food is below recommended levels.\nYou should try to reduce the amount of
supplements you take and aim to increase your\nintake of healthy fats from y
our diet:\n•Use healthy oils like sunflower, soya, rapeseed for cooking or ma
ke them into salad\ndressings\n•Try adding seeds and unsalted nuts to salads
or cereals - they are full of healthy fats\nand other important nutrients\n•O
ily fish is full of essential omega-
3 fatty acids - try to have 1 portion of oily fish per\nweek\n•Limit your int
ake of saturated fats found in butter, full-
fat dairy products and\nprocessed foods e.g. biscuits, pastries and processed
meats",
    "DailyIntake": {
        "Contributions": {
            "Contributor1": "BreadAndSavouryBiscuits"
        }
    }
},
"Calcium": {
    "Score_Food": "MediumLow",
    "Rating_Food": "LOW",
    "Score_Total": "Normal",
    "Rating_Total": "NORMAL",
    "Advice": "Your total calcium intake is within the recommended levels.
This is a result of your\nconsumption of supplements as your intake of calciu
m from food is below\nrecommended levels. You should try to increase your int
ake of foods rich in calcium:\n•Eat more dairy products as these are the rich
est sources of calcium, choose low-
fat\ndairy products where possible\n•Aim to have 3 portions of low-
fat dairy products every day\n•Have low-
fat milk or yoghurt with breakfast cereals\n•For a healthy dessert try low-
fat yoghurt topped with fresh fruit\n•Try to eat more green vegetables e.g. b
roccoli, kale and cabbage",
    "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
            "Contributor1": "BreadAndSavouryBiscuits"
        }
    }
}
}

```



```

    },
    "Iron": {
      "Score_Food": "High",
      "Rating_Food": "HIGH",
      "Score_Total": "High",
      "Rating_Total": "HIGH",
      "Advice": "Your intake of iron from the diet is exceeding the recommend
ed levels. While it is important that you know that you are consuming quantit
ies in excess of your requirements, having too much iron is not associated wi
th any severe effects. You should:\n•Limit your intake of red meat to 3 servi
ngs per week\n•Take care with your portion sizes\n•Consume a variety of foods
",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "Folate": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "High",
      "Rating_Total": "HIGH",
      "Advice": "Your total folate intake is higher than recommended. As you
are already meeting the dietary recommendations for folate, your consumption
of supplements is unnecessary.",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "VitaminC": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": "",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "VitaminA": {

```

```

"Score_Food": "Normal",
"Rating_Food": "NORMAL",
"Score_Total": "Normal",
"Rating_Total": "NORMAL",
"Advice": "",
"DailyIntake": {
  "HasSupplements": "true",
  "Contributions": {
    "Contributor1": "BreadAndSavouryBiscuits"
  }
},
"Salt": {
  "Score": "High",
  "Rating": "HIGH",
  "AdviceHabits": "•Reduce the amount of salt you add to foods during cooking - try adding herbs or spices e.g. garlic, lemon, ginger, chilli or black pepper instead of salt",
  "AdviceContributor1": "•Breads contain a lot of 'hidden' salt\r\n•Next time your shopping try comparing the salt levels in different brands and go for the one with less salt",
  "AdviceContributor2": "•Reduce your intake of processed meats and pies; swap salami, ham and bacon for turkey, beef or chicken\r\n•Watch out for smoked meats and fish - they are incredibly high in salt",
  "DailyIntake": {
    "Contributions": {
      "Contributor1": "BreadAndSavouryBiscuits",
      "Contributor2": "MeatAndFish"
    }
  },
  "SaturatedFats": {
    "Score": "MediumHigh",
    "Rating": "HIGH",
    "Advice": "Go for healthier fats like oily fish, nuts and seeds or unsaturated oils e.g. olive oil",
    "AdviceContributor1": "• Swap savoury pies and processed meats e.g. burgers, sausages and chicken goujons for lean meats or skinless chicken breast\r\n• Trim the fat off meat before cooking it\r\n",
    "AdviceContributor2": "Choose low-fat dairy products over full-fat dairy products and take care with your portion sizes",
    "AdviceContributor1_Dairy": "",
    "AdviceContributor2_Dairy": "Swapping 1 pint of whole milk for 1 pint of skimmed milk can save you around 200kcal and 22g of fat!",
    "DailyIntake": {
      "Contributions": {
        "Contributor1": "MeatAndFish",
        "Contributor2": "Dairy",

```

```
"DairyContributions": {  
  "Contributor1": "FullFatMilk"  
}  
}  
}  
}  
}  
}
```

2. Execute the model and get results

Resource URI

[POST] <https://api.quisper.eu/personalised-nutrition-advice/beta/food4me-l1/{version}>

HTTP POST to this resource evaluates the JSON-formatted input values against the FFQ product and produces a JSON-formatted output according to the rules of the version of the product specified by the {version} parameter on the URI.

The current model version is 1.

HTTP POST

```
curl -X POST "https://api.quisper.eu/personalised-nutrition-advice/beta/food4me-l1/1"
-H "Content-Type: application/json"
-H "Accept: application/json"
-H "x-api-key: YOUR_API_KEY"
-d @input.json > output.json
```

Example Input (input.json)

The JSON-encoded input and output data consist of name-value pairs (variables) organized in concepts. Input includes the concept "Personal_Details" with phenotype information, such as gender, weight, height etc. and the concept "Genes" containing the individual's genotype.

```
{
  "PersonDetails": {
    "Weight": "82",
    "Height": "185",
    "Sex": "Female",
    "Age": "51"
  },
  "PhysicalActivity": {
    "ActivityLevel": {
      "PAL": "1.2"
    }
  },
  "Fiber": {
    "DailyIntake": {
      "Total": "20"
    }
  },
  "Omega3": {
    "DailyIntake": {
      "FoodEnergyPercentage": "0.1",
      "SupplementsEnergyPercentage": "0.4"
    }
  },
  "VitaminB12": {
```

```

    "DailyIntake": {
      "Food": "1.5",
      "Supplements": "0.5"
    },
  },
  "Thiamin": {
    "DailyIntake": {
      "Food": "0.9",
      "Supplements": "0.1"
    }
  },
  "Riboflavin": {
    "DailyIntake": {
      "Food": "0.9",
      "Supplements": "0.1"
    }
  },
  "UnsaturatedFat": {
    "MonoUnsaturatedFat": {
      "DailyIntake": {
        "TotalEnergyPercentage": "20"
      }
    },
    "PolyUnsaturatedFat": {
      "DailyIntake": {
        "TotalEnergyPercentage": "20"
      }
    }
  },
  "Carbohydrate": {
    "DailyIntake": {
      "TotalEnergyPercentage": "44",
      "Cereal": "12",
      "BreadAndSavouryBiscuits": "13",
      "PotatoesRiceAndPasta": "10",
      "MeatAndFish": "15",
      "Dairy": "10",
      "FatsAndSpreads": "5",
      "SweetAndSnacks": "5",
      "Drinks": "5",
      "Fruit": "5",
      "Vegetables": "5",
      "Supplements": "5"
    }
  },
  "Protein": {
    "DailyIntake": {
      "Food": "40",

```

```

        "Supplements": "50",
        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "13",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "15",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    },
    "TotalFat": {
        "DailyIntake": {
            "FoodEnergyPercentage": "19",
            "SupplementsEnergyPercentage": "22",
            "Contributions": {
                "Cereal": "12",
                "BreadAndSavouryBiscuits": "15",
                "PotatoesRiceAndPasta": "10",
                "MeatAndFish": "13",
                "Dairy": "10",
                "FatsAndSpreads": "5",
                "SweetAndSnacks": "5",
                "Drinks": "5",
                "Fruit": "5",
                "Vegetables": "5",
                "Supplements": "5"
            }
        }
    },
    "Calcium": {
        "DailyIntake": {
            "Food": "999",
            "Supplements": "1",
            "Contributions": {
                "Cereal": "12",
                "BreadAndSavouryBiscuits": "15",
                "PotatoesRiceAndPasta": "10",
                "MeatAndFish": "13",
                "Dairy": "10",
                "FatsAndSpreads": "5",
                "SweetAndSnacks": "5",
                "Drinks": "5",
            }
        }
    }
}

```

```

        "Fruit": "5",
        "Vegetables": "5",
        "Supplements": "5"
    }
}
},
"Iron": {
    "DailyIntake": {
        "Food": "45",
        "Supplements": "1",
        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "15",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "13",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    }
},
"Folate": {
    "DailyIntake": {
        "Food": "999",
        "Supplements": "1",
        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "15",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "13",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    }
},
"VitaminC": {
    "DailyIntake": {
        "Food": "999",
        "Supplements": "1",

```

```

        "Contributions": {
            "Cereal": "12",
            "BreadAndSavouryBiscuits": "15",
            "PotatoesRiceAndPasta": "10",
            "MeatAndFish": "13",
            "Dairy": "10",
            "FatsAndSpreads": "5",
            "SweetAndSnacks": "5",
            "Drinks": "5",
            "Fruit": "5",
            "Vegetables": "5",
            "Supplements": "5"
        }
    },
    "VitaminA": {
        "DailyIntake": {
            "Food": "999",
            "Supplements": "1",
            "Contributions": {
                "Cereal": "12",
                "BreadAndSavouryBiscuits": "15",
                "PotatoesRiceAndPasta": "10",
                "MeatAndFish": "13",
                "Dairy": "10",
                "FatsAndSpreads": "5",
                "SweetAndSnacks": "5",
                "Drinks": "5",
                "Fruit": "5",
                "Vegetables": "5",
                "Supplements": "5"
            }
        }
    },
    "Salt": {
        "DailyIntake": {
            "Total": "5.76",
            "AddSaltWhenCooking": "YES",
            "AddSaltAtTable": "NO",
            "Contributions": {
                "Cereal": "12",
                "BreadAndSavouryBiscuits": "15",
                "PotatoesRiceAndPasta": "10",
                "MeatAndFish": "13",
                "Dairy": "10",
                "FatsAndSpreads": "5",
                "SweetAndSnacks": "5",
                "Drinks": "5",

```



```

        "Fruit": "5",
        "Vegetables": "5",
        "SoupsAndSauces": "5",
        "Supplements": "5"
    }
},
    "SaturatedFats": {
        "DailyIntake": {
            "TotalEnergyPercentage": "10.1",
            "Contributions": {
                "PotatoesRiceAndPasta": "10",
                "MeatAndFish": "30",
                "Dairy": "20",
                "FatsAndSpreads": "10",
                "SweetAndSnacks": "10",
                "SoupsAndSauces": "10",
                "Eggs": "10"
            }
        }
    }
}

```

Example Output (output.json)

```

{
  "Name": "Food4Me",
  "Version": {
    "Version": 1,
    "Status": "draft"
  },
  "Output": {
    "BodyWeight": {
      "BMIround": "24.0",
      "Score": "Normal",
      "Rating": "NORMAL",
      "Advice": "You have a healthy body weight which suggests you are eating the right amount of food to meet your energy needs. However it is important to be active and your physical activity level is too low. Engaging in exercise will help prevent you from losing valuable muscle which is essential for maintaining a healthy body weight. We strongly recommend you try to increase your physical activity. Aim to spend at least 30 minutes doing moderately intense aerobic activities each day, such as brisk walking, cycling or swimming."
    },
    "PhysicalActivity": {
      "Score": "Inactive"
    }
  },
}

```

```

    "Fiber": {
      "Score_Total": "Medium",
      "Rating_Total": "LOW",
      "Advice": "How you can increase your Fiber intake:\n•Try to have at least 5 portions of fruit and vegetables a day\n•Try adding beans to soups, stews and salads and seeds to cereals and yoghurts\n•Increase your intake of wholegrain breads, crackers and cereals - go for brown rice\nand wholemeal pasta\n•Make sure you drink plenty water when increasing your Fiber intake\n•Having a healthy Fiber intake has beneficial effects in controlling blood sugar levels"
    },
    "Omega3": {
      "Score_Food": "Low",
      "Rating_Food": "LOW",
      "Score_Total": "Medium",
      "Rating_Total": "LOW",
      "Advice": "How you can increase your omega-3 intake:\n•Try to increase the amount of oily fish you consume aim to have at least 1 portion of\noily fish per week\n•Try having salmon salad with boiled potatoes for a healthy meal\n•Mackerel in tomato sauce with toast makes a quick lunch\n•Remember while fresh tuna counts as an oily fish, tinned tuna doesn't\n•If you don't like oily fish then try consuming omega-3 supplements"
    },
    "VitaminB12": {
      "Score_Food": "Low",
      "Rating_Food": "LOW",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": "Your total vitamin B12 intake is within the recommended levels. This is a result of your\nconsumption of supplements as your intake of vitamin B12 from food is below\nrecommended levels. You should try to increase your intake of vitamin B12 from food:\n•Consume a varied balanced diet\n•Try to eat more foods rich in vitamin B12\n•Eat more low-fat dairy products, you should try to consume 3 portions of dairy foods\neach day\n•Increase your intake of eggs, they are full of nutrients and are quick and easy to\nprepare"
    },
    "Thiamin": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": ""
    },
    "Riboflavin": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",

```

```

    "Rating_Total": "NORMAL",
    "Advice": ""
  },
  "UnsaturatedFat": {
    "Rating": "HIGH",
    "Advice": "All foods even healthy foods should be eaten in moderation.
You should continue to eat unsaturated fats but consume them in smaller quantities:
•Use smaller amounts of monounsaturated and polyunsaturated fats when cooking e.g. sunflower, olive or rapeseed oils
•Nuts are healthy but a small handful (20g) is enough each day",
    "MonoUnsaturatedFat": {
      "Score_Total": "MediumHigh",
      "Rating_Total": "HIGH"
    },
    "PolyUnsaturatedFat": {
      "Score_Total": "High",
      "Rating_Total": "HIGH"
    }
  },
  "Carbohydrate": {
    "Score": "MediumLow",
    "Rating": "LOW",
    "Advice": "How you can increase your intake of carbohydrates:
•Make 'starchy' foods like bread, pasta, potatoes and rice, the base and bulk of your meals and snacks, try to eat a variety of these foods
•Bored of having the same foods - try having different types of breads - rolls, wraps, pitta or sliced bread at lunch
•Choose wholegrain varieties whenever possible as these are rich sources of dietary fiber
•Only eat simple carbohydrates occasionally, frequent consumption can promote tooth decay",
    "DailyIntake": {
      "Contributor1": "MeatAndFish"
    }
  },
  "Protein": {
    "Score_Food": "Low",
    "Rating_Food": "LOW",
    "Score_Total": "Normal",
    "Rating_Total": "NORMAL",
    "Advice": "Your total protein intake is within the recommended levels. This is a result of your consumption of supplements as your protein intake from food is below recommended levels. You should try increase the amount of protein you get from foods instead of supplements:
•Add beans and pulses to casseroles, soups, salads, curries and pasta dishes
•Fish is a good source of protein try to have it twice a week
•Go for lean cuts of meat
•Increase your intake of eggs, they are full of nutrients and are quick and easy to prepare
•Increase your portion sizes of protein rich foods",
    "DailyIntake": {
      "Contributions": {

```

```

        "Contributor1": "MeatAndFish"
    }
}
},
"TotalFat": {
    "Score_Food": "MediumLow",
    "Rating_Food": "LOW",
    "Score_Total": "High",
    "Rating_Total": "HIGH",
    "Advice": "Your total fat intake is higher than recommended. This is a
result of your consumption\nof supplements as your total dietary fat intake f
rom food is below recommended levels.\nYou should try to reduce the amount of
supplements you take and aim to increase your\nintake of healthy fats from y
our diet:\n•Use healthy oils like sunflower, soya, rapeseed for cooking or ma
ke them into salad\ndressings\n•Try adding seeds and unsalted nuts to salads
or cereals - they are full of healthy fats\nand other important nutrients\n•O
ily fish is full of essential omega-
3 fatty acids - try to have 1 portion of oily fish per\nweek\n•Limit your int
ake of saturated fats found in butter, full-
fat dairy products and\nprocessed foods e.g. biscuits, pastries and processed
meats",
    "DailyIntake": {
        "Contributions": {
            "Contributor1": "BreadAndSavouryBiscuits"
        }
    }
},
"Calcium": {
    "Score_Food": "MediumLow",
    "Rating_Food": "LOW",
    "Score_Total": "Normal",
    "Rating_Total": "NORMAL",
    "Advice": "Your total calcium intake is within the recommended levels.
This is a result of your\nconsumption of supplements as your intake of calciu
m from food is below\nrecommended levels. You should try to increase your int
ake of foods rich in calcium:\n•Eat more dairy products as these are the rich
est sources of calcium, choose low-
fat\ndairy products where possible\n•Aim to have 3 portions of low-
fat dairy products every day\n•Have low-
fat milk or yoghurt with breakfast cereals\n•For a healthy dessert try low-
fat yoghurt topped with fresh fruit\n•Try to eat more green vegetables e.g. b
roccoli, kale and cabbage",
    "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
            "Contributor1": "BreadAndSavouryBiscuits"
        }
    }
}
}

```

```

    },
    "Iron": {
      "Score_Food": "High",
      "Rating_Food": "HIGH",
      "Score_Total": "High",
      "Rating_Total": "HIGH",
      "Advice": "Your intake of iron from the diet is exceeding the recommend
ed levels. While it is important that you know that you are consuming quantit
ies in excess of your requirements, having too much iron is not associated wi
th any severe effects. You should:\n•Limit your intake of red meat to 3 servi
ngs per week\n•Take care with your portion sizes\n•Consume a variety of foods
",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "Folate": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "High",
      "Rating_Total": "HIGH",
      "Advice": "Your total folate intake is higher than recommended. As you
are already meeting the dietary recommendations for folate, your consumption
of supplements is unnecessary.",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "VitaminC": {
      "Score_Food": "Normal",
      "Rating_Food": "NORMAL",
      "Score_Total": "Normal",
      "Rating_Total": "NORMAL",
      "Advice": "",
      "DailyIntake": {
        "HasSupplements": "true",
        "Contributions": {
          "Contributor1": "BreadAndSavouryBiscuits"
        }
      }
    },
    "VitaminA": {

```

```

"Score_Food": "Normal",
"Rating_Food": "NORMAL",
"Score_Total": "Normal",
"Rating_Total": "NORMAL",
"Advice": "",
"DailyIntake": {
  "HasSupplements": "true",
  "Contributions": {
    "Contributor1": "BreadAndSavouryBiscuits"
  }
},
"Salt": {
  "Score": "High",
  "Rating": "HIGH",
  "AdviceHabits": "•Reduce the amount of salt you add to foods during cooking - try adding herbs or spices e.g. garlic, lemon, ginger, chilli or black pepper instead of salt",
  "AdviceContributor1": "•Breads contain a lot of 'hidden' salt\r\n•Next time your shopping try comparing the salt levels in different brands and go for the one with less salt",
  "AdviceContributor2": "•Reduce your intake of processed meats and pies; swap salami, ham and bacon for turkey, beef or chicken\r\n•Watch out for smoked meats and fish - they are incredibly high in salt",
  "DailyIntake": {
    "Contributions": {
      "Contributor1": "BreadAndSavouryBiscuits",
      "Contributor2": "MeatAndFish"
    }
  },
  "SaturatedFats": {
    "Score": "MediumHigh",
    "Rating": "HIGH",
    "Advice": "Go for healthier fats like oily fish, nuts and seeds or unsaturated oils e.g. olive oil",
    "AdviceContributor1": "• Swap savoury pies and processed meats e.g. burgers, sausages and chicken goujons for lean meats or skinless chicken breast\n• Trim the fat off meat before cooking it\n",
    "AdviceContributor2": "Choose low-fat dairy products over full-fat dairy products and take care with your portion sizes",
    "AdviceContributor1_Dairy": "",
    "AdviceContributor2_Dairy": "",
    "DailyIntake": {
      "Contributions": {
        "Contributor1": "MeatAndFish",
        "Contributor2": "Dairy",
        "DairyContributions": {

```

```
        "Contributor1": "Other"  
    }  
  }  
}

```