Universidade de São Paulo
Faculdade de Saúde Pública
Departamento de Nutrição – HNT0210 Avaliação Nutricional

AVALIAÇÃO NUTRICIONAL

2017

Equipe

Função	Manhã	Noite
Professor responsável	Wolney Conde	Wolney Conde
Aluna PAE	**Jéssica Cumpian**	**Camila Mazzeti**
Monitores	**Alexandre Orsi**	**Jacqueline Hochberg**

2017

Horário e funcionamento

Horário: 08h00 – 12h00 (manhã)

19h00 – 23h00 (noite)

Observar calendário

Usar site da disciplina

https:/edisciplinas.usp.br/(Stoa USP)

Acesso ao material de aula e complementar

Exercícios

Formas de contatar a equipe

Eletrônica:

Wolney Conde: ***wolneyconde@gmail.com***

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Camila Mazzeti [Aluna PAE]: camilamazzeti@usp.br

Jacqueline [Monitora] ***jacqueline.hochberg@usp.br***

Alexandre[Monitor] ***aleorsicampos@gmail.com***

Departamento:

2º andar, fone 30617705 ou 30617762

Monitoria

Horário a ser divulgado no site no fórum do Stoa.

Formas de avaliação

Prova escrita (2)

As provas serão elaboradas com questões dissertativas ou do tipo *teste* sobre os temas de aula abordados em cada bloco da disciplina.

Não haverá prova substitutiva.

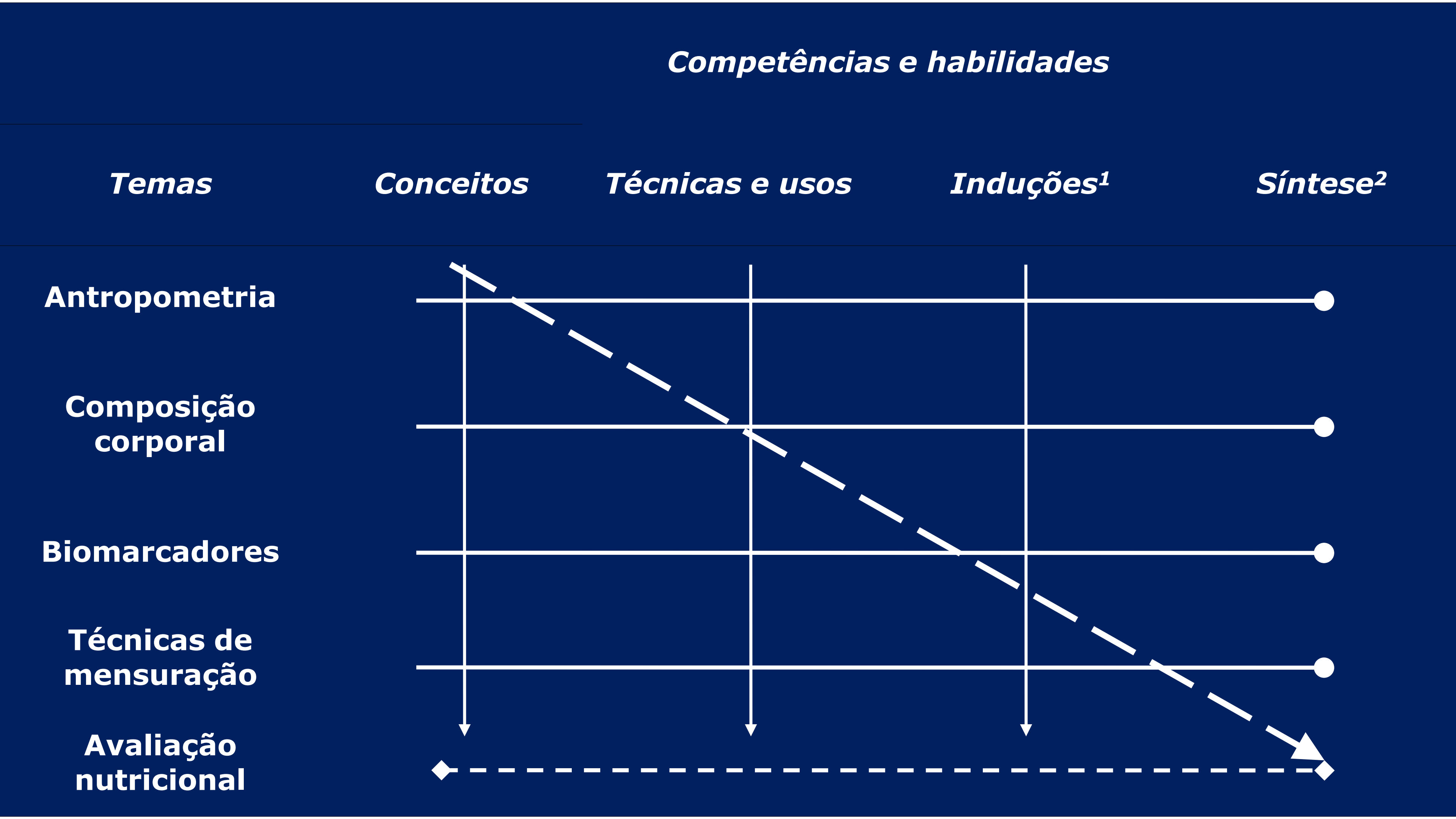
Exercícios práticos (aulas práticas) e teóricos ao longo da disciplina.

Composição da nota

Avaliação	Pontos	Peso	Número	Total
Prova escrita (individual)	10	0,85	2	8,5 pontos
Exercícios/ Prática	10	0,15	1	1,5 ponto

Em caso de "cola" a nota será multiplicada por 0,10 na primeira vez e 0 (zero) na segunda

Temas e aulas



[1] Inclui: exercícios, cálculos e raciocínios indutivos

[2] Relacionar os conhecimentos de Avaliação Nutricional entre si e com os de outras disciplinas

Calendário (manhã e noite)

Manhã (8-12h)	Noite (19-23h)	Aula	Responsável
10/03	**10/03**	Introdução à Avaliação Nutricional: definição, modelos básicos, raciocínio diagnóstico. Diagnóstico baseado em evidências.	**Wolney Conde**
13/03	**17/03**	O uso de valores de referência em Avaliação Nutricional	**Wolney Conde**
31/03	**31/03**	Antropometria I: as medidas antropométricas. Avaliação nutricional de crianças.	**Wolney Conde**
28/04	**07/03**	Antropometria II: distribuições de referência – o quê são e como são usadas? Avaliação nutricional de adolescentes.	**Wolney Conde**
08/05	**28/04**	**Prova** **Laboratório de informática – Exercício STATA/WHOAnthro**	**Wolney Conde**
22/05	**05/05**	**Lanpop - Aula Prática/ Exercícios práticos**	**Wolney Conde**
30/05	**22/05**	Composição corporal: os modelos da composição corporal e as técnicas mais frequentes (Parte I). Avaliação nutricional de adultos e idosos.	**Wolney Conde**
05/06	**30/05**	Composição corporal: os modelos da composição corporal e as técnicas mais frequentes (Parte II). Avaliação Nutricional em populações e indivíduos: temas da atualidade.	**Wolney Conde**
12/06	**05/06**	Avaliação nutricional baseada em indicadores bioquímicos I	**Marcelo Macedo Rogero**
23/06	**14/06**	Avaliação nutricional baseada em indicadores bioquímicos II	**Marcelo Macedo Rogero**
28/06	**23/06**	Avaliação nutricional baseada em indicadores bioquímicos III	**Marcelo Macedo Rogero**
03/07	**03/07**	Introdução à Avaliação Nutricional: definição, modelos básicos, raciocínio diagnóstico. Diagnóstico baseado em evidências.	**Wolney Conde**

Aparelhos eletrônicos

Celular (mesmo na função calculadora)
Aparelhos sonoros ou similares

Como vocês chegam para cursar avaliação nutricional?

Avaliação nutricional - tópicos

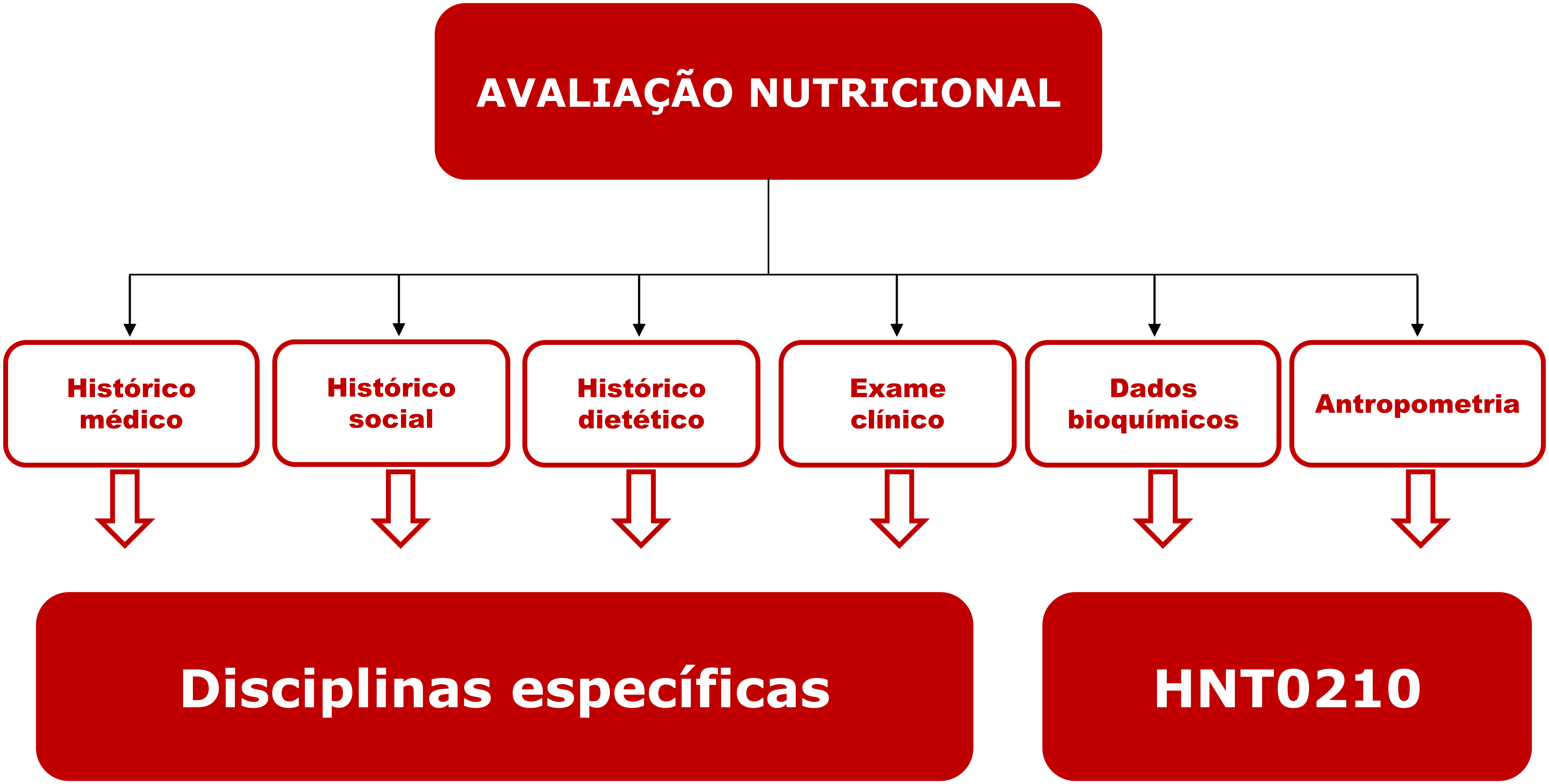
- ✓ O que vocês esperam ver na disciplina HNT0210?
- ✓ Que técnicas ou habilidades vocês imaginam que dominarão ao final da disciplina?
- ✓ Como vocês definiriam "avaliação nutricional"?

Tópicos de avaliação nutricional

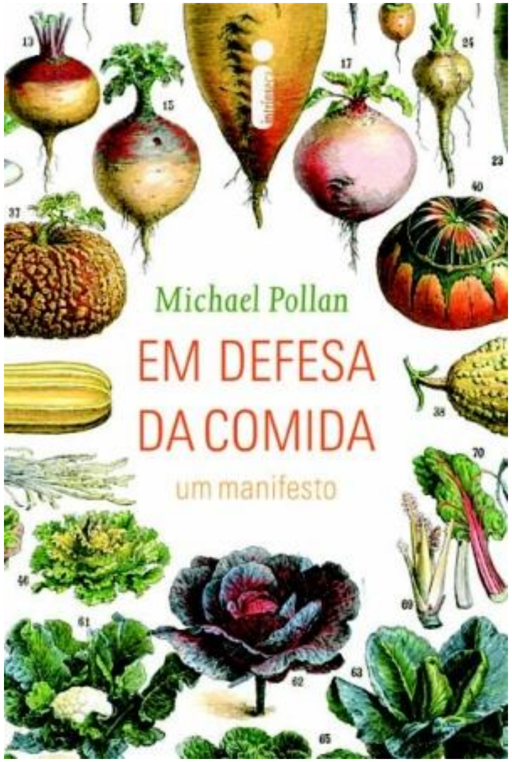
"A interpretação da informação obtida de estudos dietéticos, bioquímicos, antropométricos e clínicos"

Rosalind Gibson. Principles of nutritional assessment.

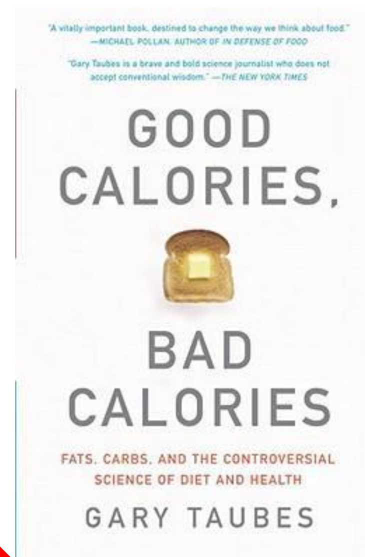
Avaliação nutricional - componentes

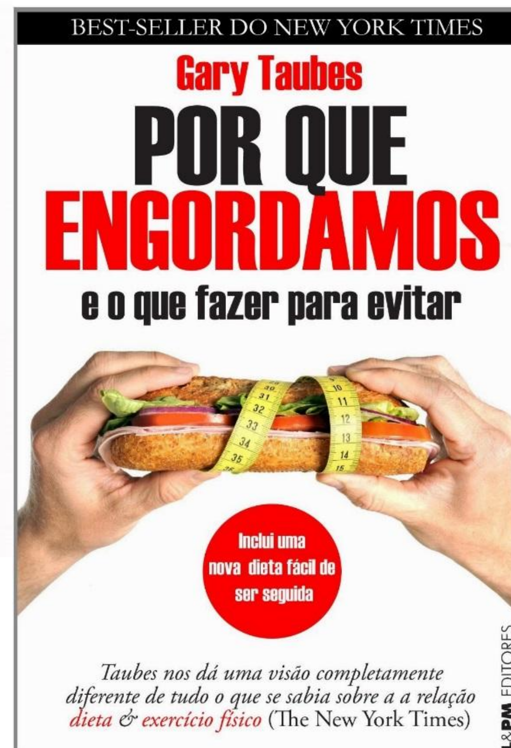


Avaliação nutricional - teorias



O nutricionismo é positivo? Favorece quem? Comida ≠ produtos alimentares





A teoria do balanço energético tem fundamento científico? Tem evidências para sustentá-la? Sempre se pode trocar uma caloria por outra?

Avaliação nutricional

Teorias
(fundamentos)

Modelos conceituais
(organização dos efeitos)

Modelos empíricos
(tamanho dos efeitos)

Avaliação nutricional – modelos conceituais

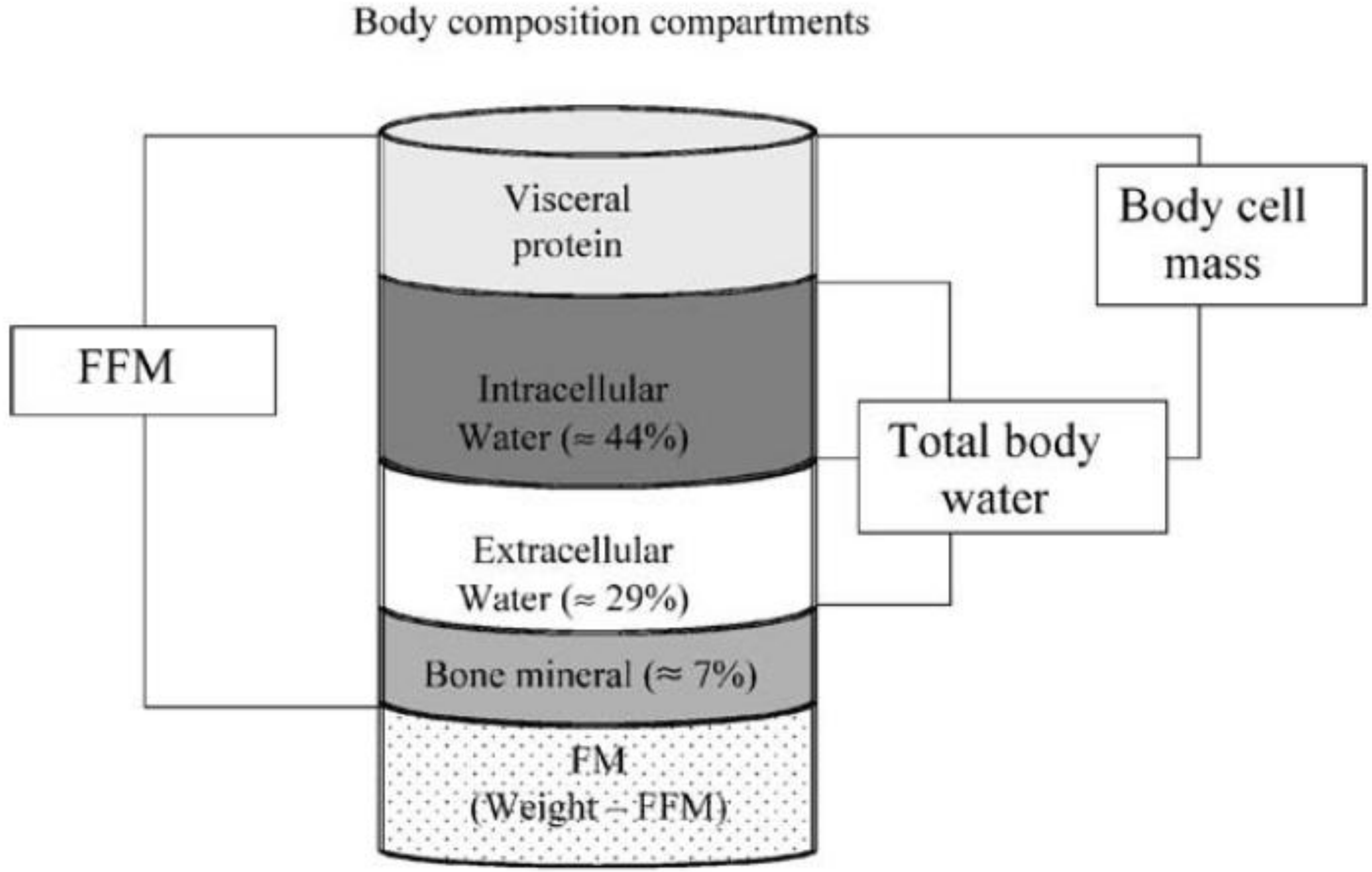


Figure 6 Schematic diagram of fat-free mass (FFM), total body water (TBW), intracellular water (ICW), extracellular water (ECW) and body cell mass (BCM).

Avaliação nutricional – modelos conceituais

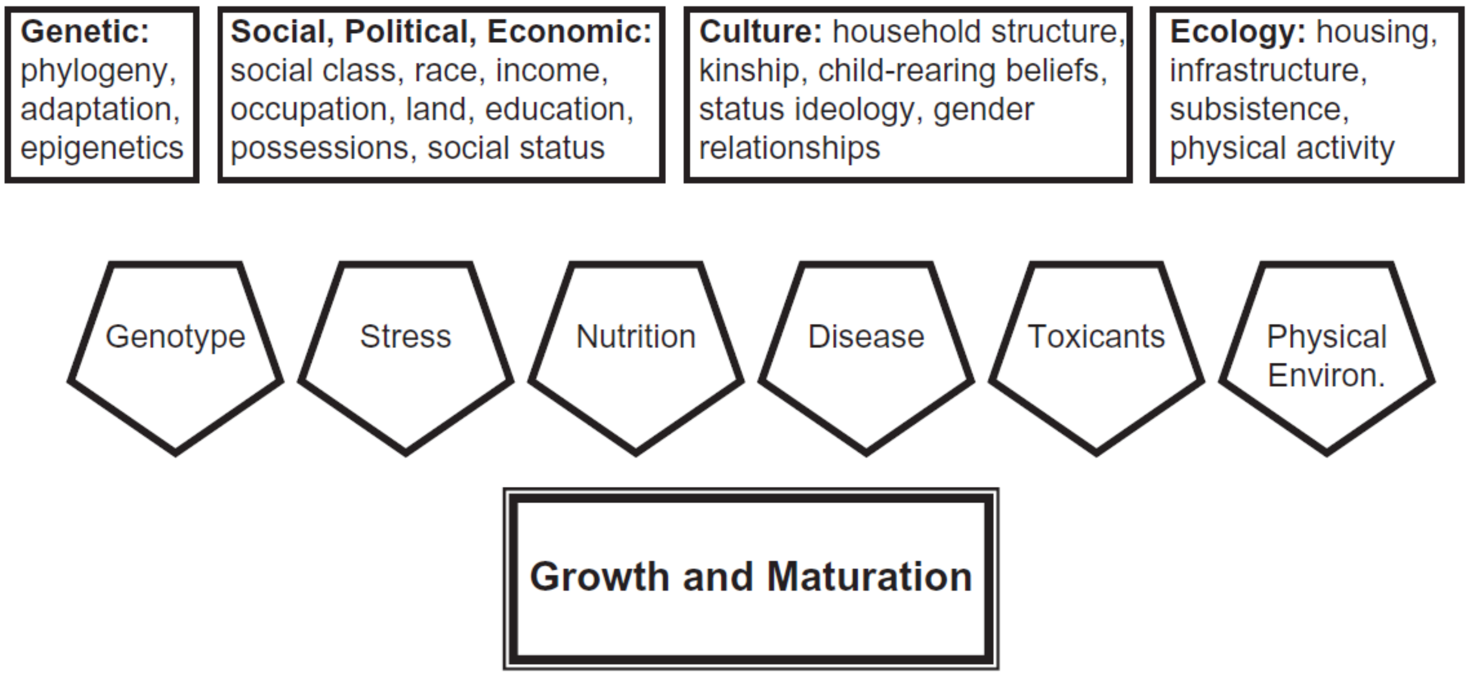
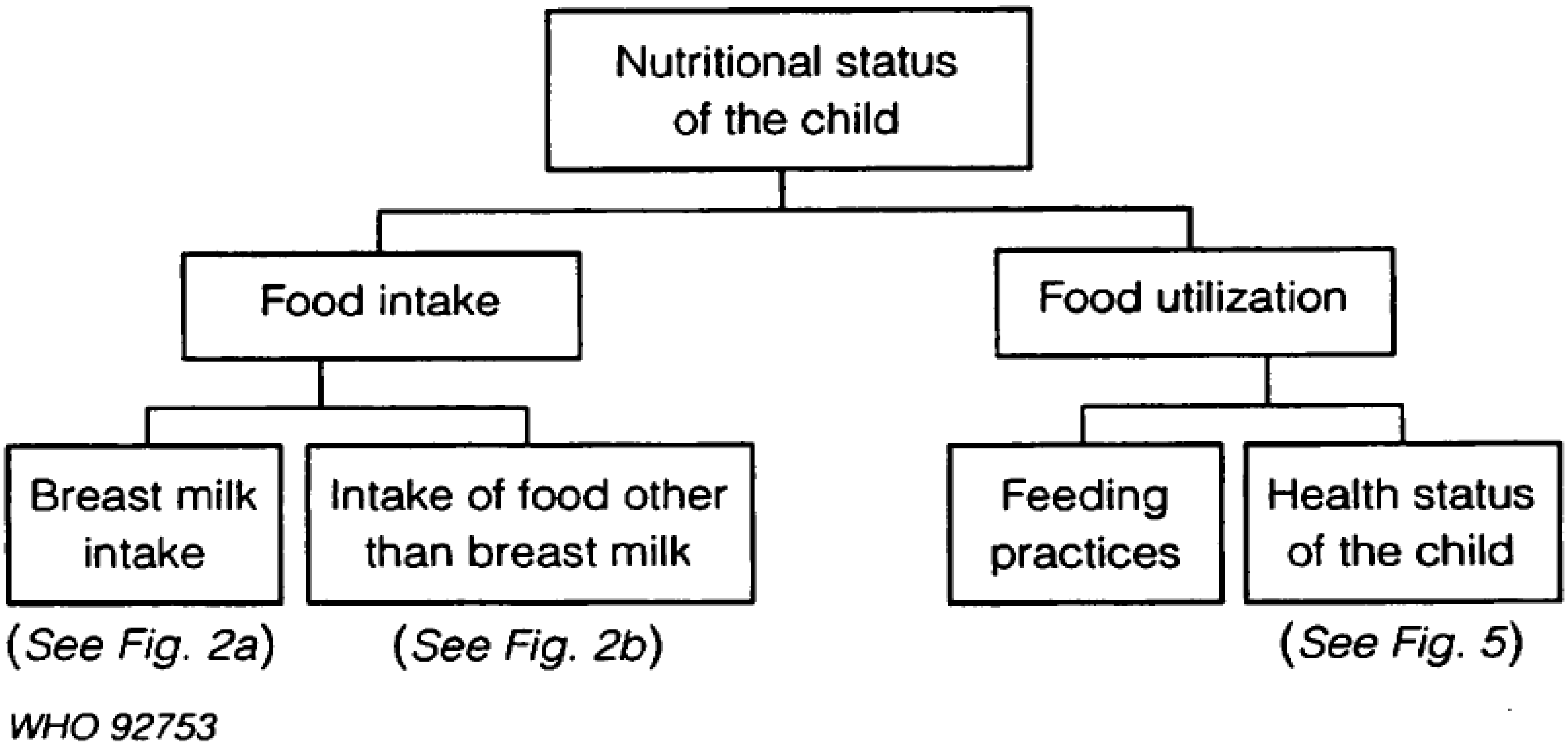


Figure 12.4 Factors influencing growth and maturation. The most proximate (direct) influences on growth and maturation are in the pentagons. Factors that affect these proximate factors are in the rectangular boxes. No arrows indicating the directions of influence are shown because almost all of the factors are interrelated and influence each other. Figure based on Bogin et al. (2007) and Ulijaszek (2006).

Modelos conceituais: esquema geral

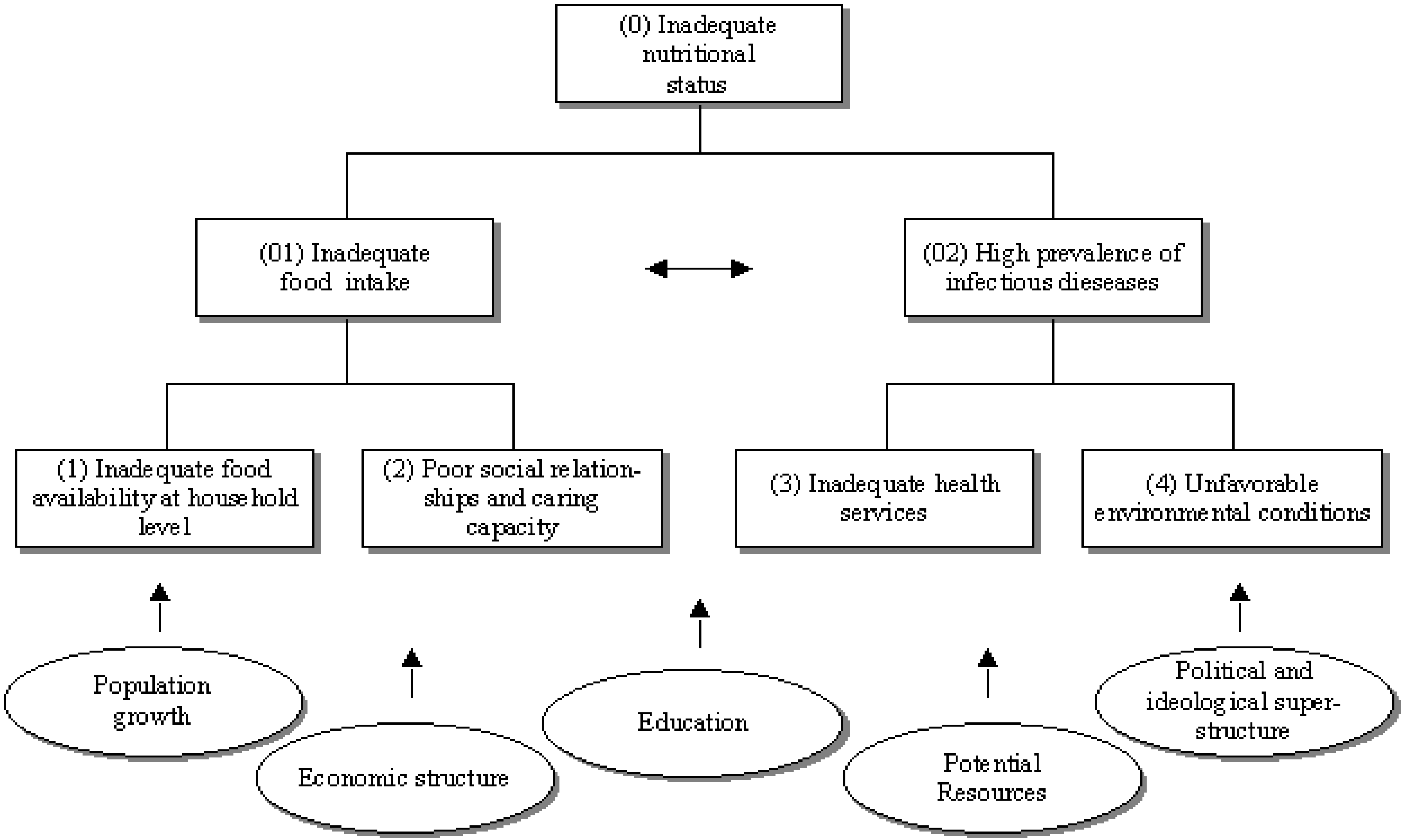
Avaliação nutricional – modelos conceituais I

Fig. 1. **Schematic representation of the basic model.**



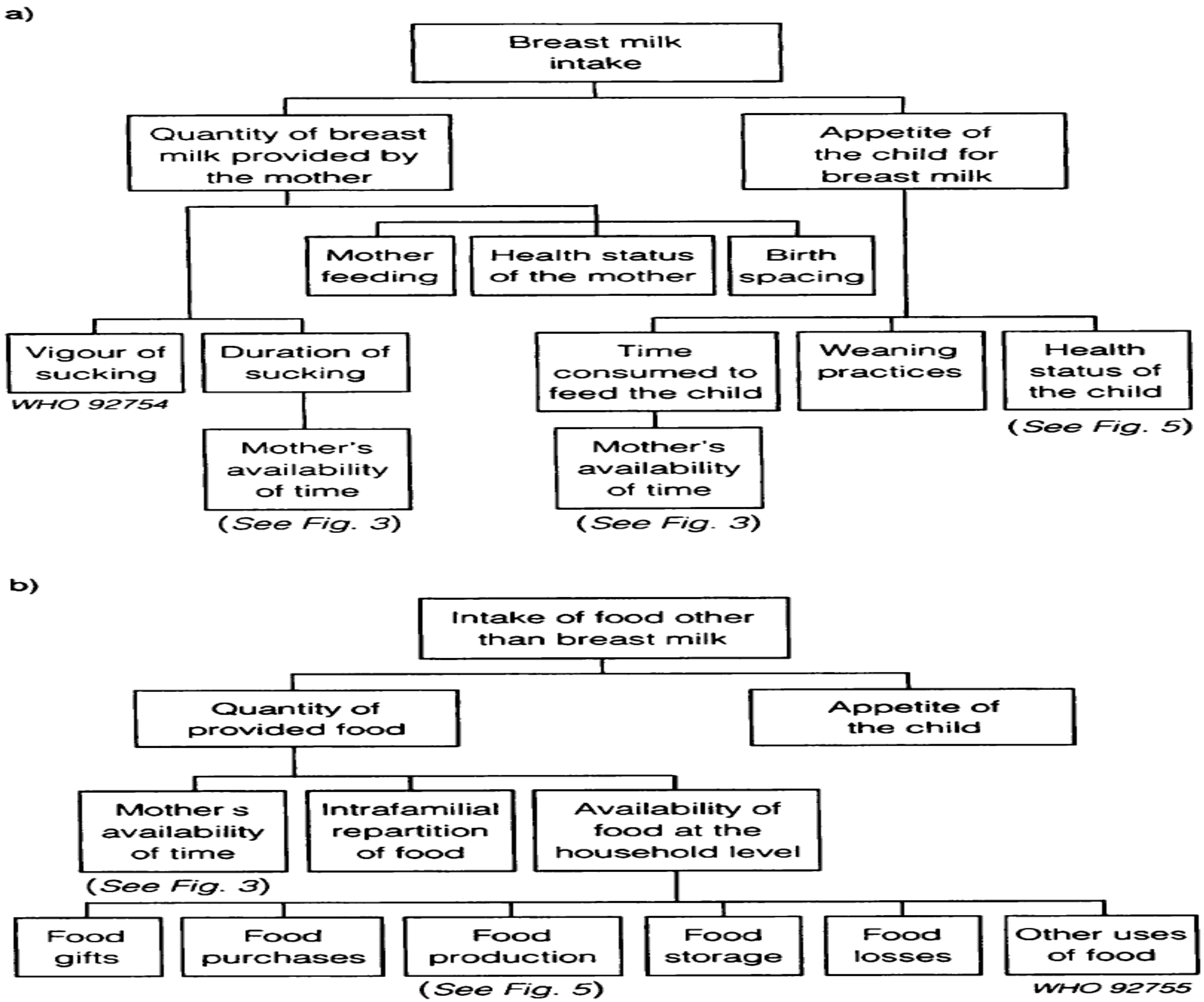
WHO Bulletin OMS. Vol 70 1992

Avaliação nutricional – modelos conceituais II



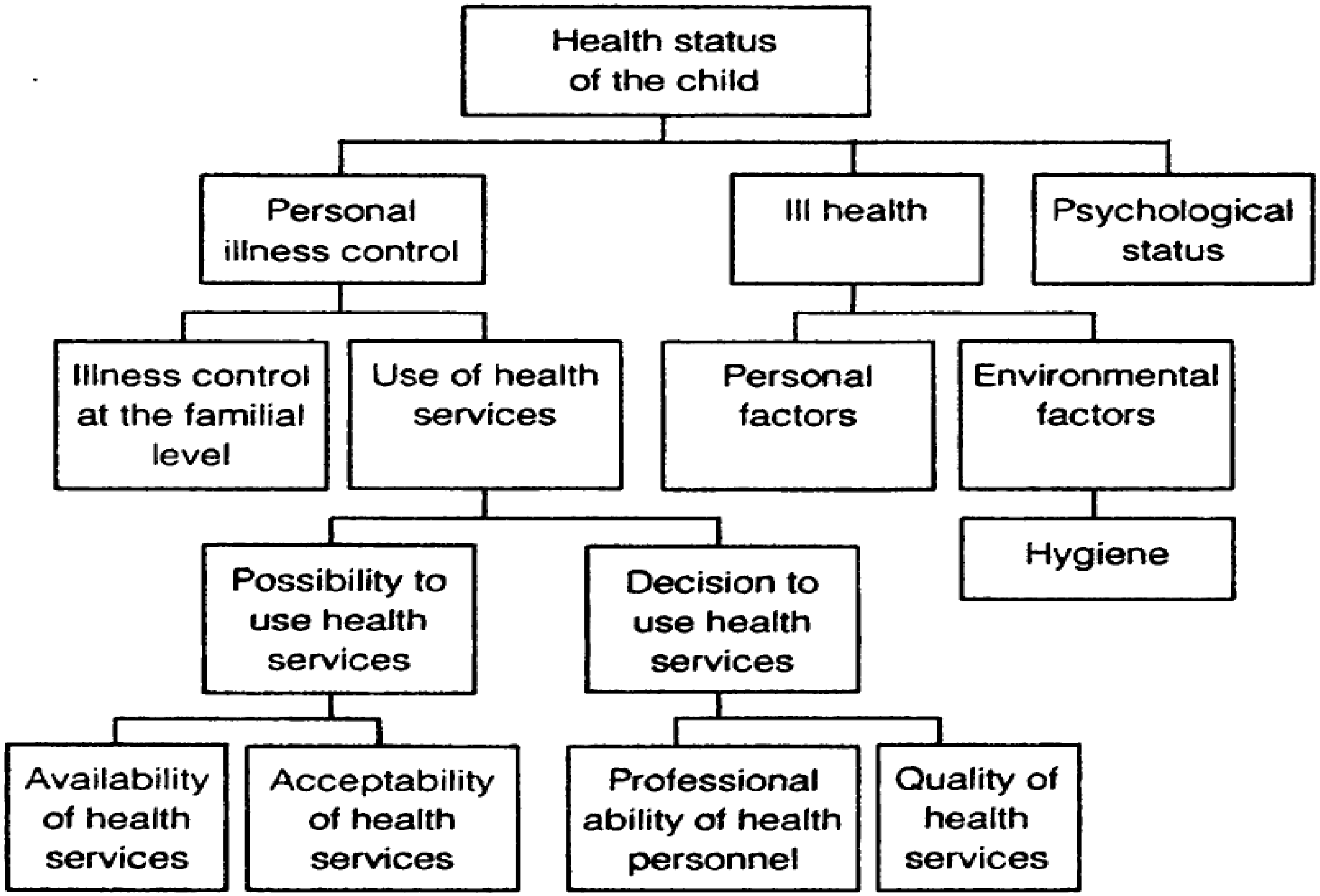
Avaliação nutricional – modelos conceituais III

Fig. 2. Schematic representation of the food intake sub-model: a) breast milk intake; b) intake of food other than breast milk.



Avaliação nutricional – modelos conceituais IV

Fig. 5. **Schematic representation of the submodel for child health status.**



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WHO Bulletin OMS. Vol 70 1992

Avaliação nutricional – modelo empírico (I)

FIGURA 1. Modelo Hierarquizado das Relações entre os Fatores de Risco para a Desnutrição

Olinto et ali. Determinantes da desnutrição infantil em uma população de baixa renda: um modelo de análise hierarquizado. Cad. Saúde Pública vol.9 suppl.1 Rio de Janeiro 1993

Avaliação nutricional – modelo empírico (II)

FIGURA 3. Modelo Hierárquico Final (razões de *odds* e intervalos de confiança) para os Déficit de Peso/Altura

UTILIDADES DOMÉSTICAS
1 1,0
2 1,3 (0,4-4,2)
3 1,7 (0,5-5,2)
4 4,8 (1,7-13,4)

INTERVALO INTERPARTAL	CONDIÇÕES DE MORADIA
<24 1,1 (0,5-2,6)	Regular 1,0
24-35 1,4 (0,6-3,5)	Inadequada 2,5 (1,2-5,2)
≥36 0,2 (0,1-0,7)	BAIRRO
Primogênitos 1,0	G. Vargas 1,0
	Dunas 0,5 (0,2-1,1)

PESO AO NASCER
<2.500 3,3 (1,4-8,0)
2.500- 2,4 (1,1-5,1)
≥3.000 1,0

IDADE
0-5 1,0
6-11 0,4 (0,1-1,5)
12-17 3,2 (1,4-7,4)
18-23 2,0 (0,8-4,9)
SEXO:
Masc. 1,0
Fem. 0,6 (0,3-1,1)

HOSPITALIZAÇOES
Não 1,0
Sim 1,9 (0,9-4,0)

FIGURA 1. Modelo Hierarquizado das Relações entre os Fatores de Risco para a Desnutrição

FIGURA 2. Modelo Hierárquico Final (razões de *odds* e intervalos de confiança) para os Déficit de Altura/Idade

EDUCAÇÃO DO PAI:
Ausente 5,6 (1,6-20,1)
0-3 anos 4,3 (1,3-13,6)
4-5 anos 3,3 (1,0-10,7)
≥ 6 anos 1,0

EDUCAÇÃO DA MÃE:
0-3 anos 2,7 (1,1-6,7)
4-5 anos 1,1 (0,4-2,9)
≥ 6 anos 1,0

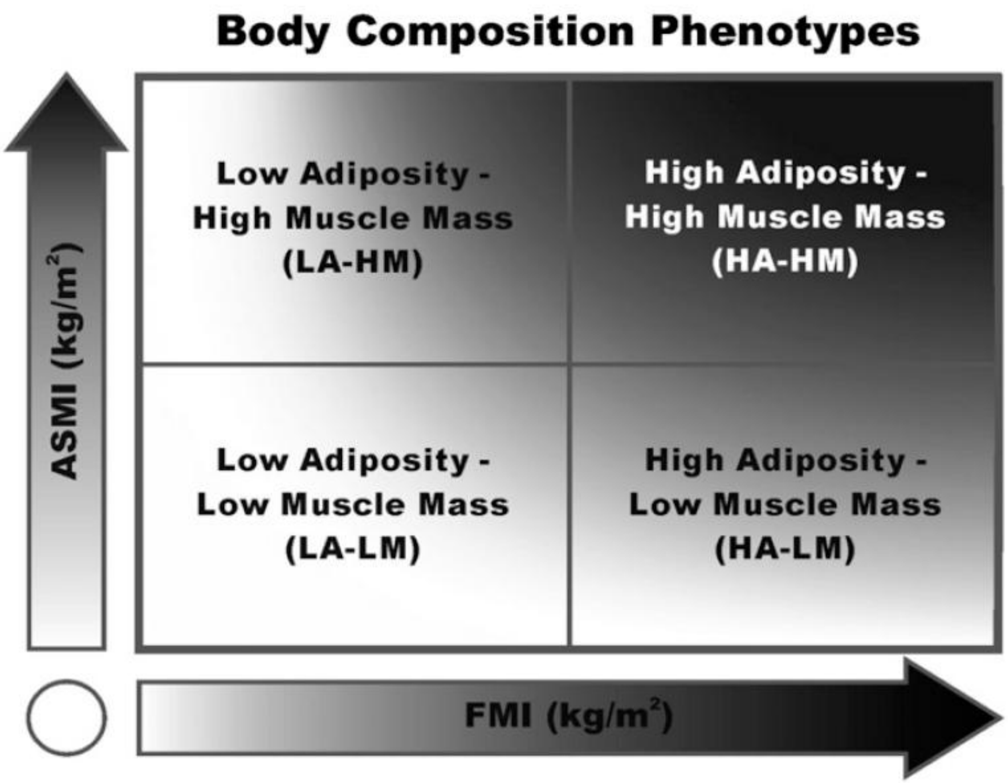
TRABALHO MATERNO:
Não 1,8 (0,9-3,8)
Sim 1,0

PESO AO NASCER:
<2.500 8,5 (3,8-19,0)
2.500- 1,4 (0,7-3,1)
≥ 3.000 1,0

IDADE:
0-5 1,0
6-11 3,6 (1,2-10,7)
12-17 4,9 (1,7-13,8)
18-23 4,4 (1,5-12,6)

Olinto et ali. Determinantes da desnutrição infantil em uma população de baixa renda: um modelo de análise hierarquizado. Cad. Saúde Pública vol.9 suppl.1 Rio de Janeiro 1993

Avaliação nutricional – modelo empírico (III)



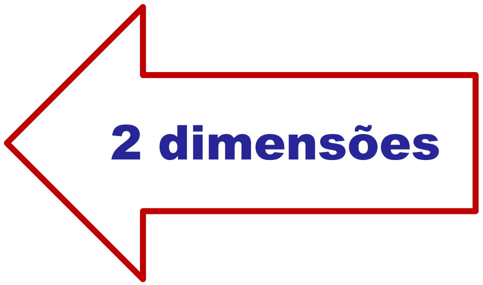


FIGURE 1. Body-composition phenotype classification criteria by decile groups of ASMI and FMI based on Baumgartner (8). In this figure, body composition is depicted by a spectrum of ASMI and FMI (low to high). On the basis of the Baumgartner model (8), these phenotypes can be depicted as follows: low adiposity with high muscle mass (individuals with low FMI and high ASMI), high adiposity with high muscle mass (individuals with high FMI and ASMI), low adiposity with low muscle mass (individuals with low ASMI and FMI), and those with high adiposity with low muscle mass (individuals with high FMI and low ASMI). A subclassification for the each group was proposed by including 3 categories—class I, class II, and class III—as described in Supplemental Table S1 under "Supplemental data" in the online issue to depict progressive changes/abnormalities within each phenotype. Cutoffs were defined according to the following deciles: LA-HM (ASMI: 50–100; FMI: 0–49.99), HA-HM (ASMI: 50–100; FMI: 50–100), LA-LM (ASMI: 0–49.99; FMI: 0–49.99), and HA-LM (ASMI: 0–49.99; FMI: 50–100). ASMI, appendicular skeletal muscle mass index; FMI, fat mass index; HA-HM, high adiposity with high muscle mass; HA-LM, high adiposity with low muscle mass; LA-HM, low adiposity with high muscle mass; LA-LM, low adiposity with low muscle mass.

Obesidade mórbida e cirurgia bariátrica: caso clínico

http://www.nejm.org/doi/full/10.1056/NEJMimc1601141

Avaliação nutricional – referências (I)

BMJ

RESEARCH

Body mass index cut offs to define thinness in children and adolescents: international survey

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[3]Department of Child and Adolescent Mental Health, Great Ormond Street Hospital for Children, London

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doi:10.1136/bmj.39238.399444.55

ABSTRACT

Objective To determine cut offs to define thinness in children and adolescents, based on body mass index at age 18 years.

Design International survey of six large nationally representative cross sectional studies on growth.

Setting Brazil, Great Britain, Hong Kong, the Netherlands, Singapore, and the United States.

Subjects 97 876 males and 94 851 females from birth to 25 years.

Main outcome measure Body mass index (BMI, weight/height²).

Results The World Health Organization defines grade 2 thinness in adults as BMI <17. This same cut off, applied to the six datasets at age 18 years, gave mean BMI close to a z score of −2 and 80% of the median. Thus it matches existing criteria for wasting in children based on weight for height. For each dataset, centile curves were drawn to pass through the cut off of BMI 17 at 18 years. The resulting curves were averaged to provide age and sex specific cut-off points from 2-18 years. Similar cut offs were derived based on BMI 16 and 18.5 at 18 years, together providing definitions of thinness grades 1, 2, and 3 in children and adolescents consistent with the WHO adult definitions.

Conclusions The proposed cut-off points should help to provide internationally comparable prevalence rates of thinness in children and adolescents.

INTRODUCTION

Much has been written about the epidemic of child obesity[1] but malnutrition—meaning undernutrition—in infants, children, and adolescents poses a considerably larger public health problem internationally,[2-5] and in the developed world anorexia nervosa is the third most common chronic condition of adolescence.[6] Obesity and malnutrition represent opposite extremes on the spectrum of adiposity, and both are routinely quantified in terms of weight and height relative to the child's age.[7] Yet the classification of malnutrition in later childhood and adolescence is currently unsatisfactory because of the lack of suitable cut offs for international use.[8]

Fifty years ago Gomez introduced his malnutrition classification of weight below a specified percentage of median weight for the child's age.[9] This included three components: a measurement, a reference for age adjustment, and a set of cut offs.[10] Later Seoane and Latham proposed splitting weight for age into weight for height and height for age,[11] allowing underweight to be defined as wasting or stunting, or both.[12] Subsequently Waterlow et al recommended the use of z scores for the definitions of underweight, wasting, and stunting, with the cut offs defined in terms of standard deviations (SDs) below the median rather than as percentages of the median.[13] T
positive screening rate is cons
to the reference population.[10]
In 1983 the World Health C
mally recognised the US Na
Statistics (NCHS) classificati
reference[15] and has used it sin
underweight, wasted, or stun
off of −2 z scores.[16] Wasting
with the NCHS/WHO weig
which compares the child's
weight of children of the sam
the child's age, which allows
assessed when age is not kno
on average, children of a give
whatever their age; in infanc
ever, the weight-height relatio
This can be seen by consid
height^p, where the height po
with age. The index is adjus
dividing it by the same ratio
and height for the child's age
height index such as NCHS, t
the percentage growth rates
each age, so it is largest when
relative to height—that is, in
when p is 3 or more as agains
In later adolescence, as weigh
height growth has stopped, p
height adjustment becomes
important general limitation
ences in that they cannot be
For this reason the NCHS we
was truncated at age 10 in girl
The weight/height^p inde
adjusted for height for age, w
the index uncorrelated with h

Eur J Pediatr (2003) 162: 788–793
DOI 10.1007/s00431-003-1292-x

ORIGINAL PAPER

A. Miranda Fredriks · Stef van Buuren
Sara E. R. Jeurissen · Friedo W. Dekker
S. Pauline Verloove-Vanhorick · Jan Maarten Wit

Height, weight, body mass index and pubertal development reference values for children of Turkish origin in the Netherlands

Received: 24 March 2003 / Accepted: 3 July 2003 / Published online: 26 August 2003

Abstract The aim of this study was to provide growth and sexual maturation reference data for Turkish children living in The Netherlands. We also compared these references with the reference data of children of Dutch origin and with Turkish reference data collected in Turkey and elsewhere in Europe. Cross-sectional growth and demographic data were collected from 2,904 children of Turkish origin and 14,500 children of Dutch origin living in the Netherlands in the age range 0–20 years. Growth references for length, height, weight for height, body mass index (BMI) and head circumference were constructed with the LMS method. Reference curves for sexual maturation and menarche were estimated by a generalised additive model. Predictive variables for height and BMI were assessed by univariate and multivariate regression analyses. Young Turkish adults were 10 cm shorter than their Dutch contemporaries. Mean height was 174.0 cm for males and 160.7 cm for females. Height differences in comparison with Dutch children started at 3 years. Height SDS was predominantly associated with target height. The height of Turkish children living in the Netherlands was similar to Turkish children in Germany and to children from high socio-economic classes in Istanbul. Compared to Dutch children, maturation stages started 0.5–0.7 years later for both sexes. In girls, median age at menarche was 12.8 years, 5 months earlier than in Dutch girls. BMI of Turkish children was higher than that of Dutch children at all ages. BMI SDS was associated with birth weight and the duration of stay of the mother in the Netherlands. *Conclusion*: Turkish children are considerably shorter and more overweight than Dutch children. Separate growth charts for Turkish children in The Netherlands are useful for growth monitoring.

Keywords Body mass index · Height · Pubertal development · Target height · Turkey

Abbreviations *BMI* body mass index · *SD* standard deviation · *SES* socio-economic status · *TH* target height

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Introduction

For optimal growth monitoring, up-to-date reference growth data on representative samples from the population are necessary. In a country of immigration like the Netherlands, the dilemma is whether one should use growth references derived from a representative sample from the whole (multiethnic) population or a growth reference for the ethnic Dutch population and appropriate reference data on the largest ethnic groups living in the Netherlands. One of the disadvantages of the first option is that the reliability and efficiency of growth monitoring would decrease because children with a growth disorder of a relatively tall subpopulation would more often be considered normal versus the multiethnic reference, while children with a growth disturbance from a relatively short subpopulation would be overdiagnosed [8]. Furthermore, the secular trend could no longer be studied. Disadvantages of the second option are that there would be more than one growth reference in the country and that it would be impossible to provide specific reference data for all ethnic groups. Besides, within ethnic groups the composition of the population changes continuously through new immigration and intermarriage.

Anthropometry-based reference values for 24-h urinary creatinine excretion during growth and their use in endocrine and nutritional research[1–3]

Thomas Remer, Annette Neubert, and Christiane Maser-Gluth

ABSTRACT

Background: Urinary creatinine reference values that take anthropometric data into account, which is mandatory during growth, are not available for healthy white children.

Objective: We sought to establish anthropometry-based reference values for 24-h urinary creatinine excretion in healthy white children aged 3–18 y.

Design: Anthropometric variables and 24-h urinary creatinine excretion rates were determined cross-sectionally (225 boys and 229 girls). Age and sex dependency of 24-h creatinine excretion (crude and related to individual anthropometric variables) were assessed to derive appropriate creatinine reference values. The applicability of these creatinine reference values for estimation of daily excretion of certain analytes was assessed in 40 additional children.

Results: Sex-specific, body-weight-related creatinine reference values were derived for the following age groups: 3, 4–5, 6–8, 9–13, and 14–18 y. The 5th percentile exceeded 0.1 $mmol \cdot kg^{-1} \cdot d^{-1}$ in all age groups >3 y. The use of these creatinine reference values for estimating average 24-h excretion rates of certain analytes (determined as the ratio of analyte to creatinine in spot urine samples) yielded reasonable estimates of mean 24-h urinary excretion rates actually analyzed (spot and 24-h urine samples from the same children). Ideal 24-h creatinine excretion values for height were also derived for a potential determination of the creatinine height index.

Conclusions: Established anthropometry-based creatinine reference values are recommended as a convenient, simple tool to *1*) identify severe 24-h urine collection errors, *2*) calculate average 24-h excretion rates of certain analytes (from respective ratios of analyte to creatinine) determined in spot urine samples, and *3*) assess somatic protein status by determining the creatinine height index. *Am J Clin Nutr* 2002;75:561–9.

KEY WORDS Analyte-to-creatinine ratio, body height, body surface area, body weight, calcium, children, cortisol, creatinine height index, dehydroepiandrosterone sulfate, deoxypyridinoline cross-links, protein status, spot urine, 24-h urine collection

INTRODUCTION

Most of the creatinine excreted in urine is derived from the intracellular creatinine precursors creatine and phosphocreatine by nonenzymatic processes (ie, dehydration and hydrolysis) occurring in muscle. Therefore, measurement of urinary creatinine excretion serves as a simple biochemical tool for evaluating total-body skeletal muscle mass or body composition (1–4). In addition, urinary creatinine output is frequently used to check roughly the completeness of urine collection (5–8) or to estimate the excretion rates of certain analytes from the respective ratios of analyte to creatinine (5, 9, 10). Although normal ranges of 24-h urinary creatinine excretion are well documented in adults (11–14), only a few articles have been published during the past decades that present reference values of 24-h urinary creatinine excretion (creatinine reference values) in children and adolescents (15–18). Despite the fact that anthropometric characteristics and sex are major determinants of urinary creatinine excretion, only one of the studies involving children and adolescents presented sex-specific creatinine data in relation with anthropometric predictors (18). However, this study was conducted in Indian children who clearly had lower values for height, weight, body mass index, protein intake, and urinary creatinine output than do healthy white children of comparable age, so that these creatinine data are inappropriate as creatinine reference values for children of developed countries.

Therefore, the aim of the present study was to establish anthropometry-based age- and sex-specific reference values of the urinary 24-h creatinine excretion of healthy white children. In addition, our intention was to check the applicability of these creatinine reference values for the estimation of 24-h excretion rates of nutritionally and endocrinologically relevant urine analytes quantified in spontaneous urine samples.

[1]From the Department of Nutrition and Health, the Research Institute of Child Nutrition, Dortmund, Germany (TR and AN), and the Steroid Laboratory, the Department of Pharmacology, the University of Heidelberg, Heidelberg, Germany (CM-G).

[2]Supported by the Ministerium für Wissenschaft und Forschung des Landes Nordrhein-Westfalen and by the Bundesministerium für Gesundheit.

[3]Address reprint requests to T Remer, Forschungsinstitut für Kinderernährung (Research Institute of Child Nutrition), Heinstück 11, 44225 Dortmund, Germany. E-mail: remer@fke-do.de.

Received November 2, 2000.
Accepted for publication April 16, 2001.

Avaliação nutricional – referências (II)

Iron-Deficiency Anemia: Reexamining the Nature and Magnitude of the Public Health Problem

Iron Deficiency and Reduced Work Capacity: A Critical Review of the Research to Determine a Causal Relationship[1,2]

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ABSTRACT The causal relationship between iron deficiency and physical work capacity is evaluated through a systematic review of the research literature, including animal and human studies. Iron deficiency was examined along a continuum from severe iron-deficiency anemia (SIDA) to moderate iron-deficiency anemia (MIDA) to iron deficiency without anemia (IDNA). Work capacity was assessed by aerobic capacity, endurance, energetic efficiency, voluntary activity and work productivity. The 29 research reports examined demonstrated a strong causal effect of SIDA and MIDA on aerobic capacity in animals and humans. The presumed mechanism for this effect is the reduced oxygen transport associated with anemia; tissue iron deficiency may also play a role through reduced cellular oxidative capacity. Endurance capacity was also compromised in SIDA and MIDA, but the strong mediating effects of poor cellular oxidative capacity observed in animals have not been demonstrated in humans. Energetic efficiency was affected at all levels of iron deficiency in humans, in the laboratory and the field. The reduced work productivity observed in field studies is likely due to anemia and reduced oxygen transport. The social and economic consequences of iron-deficiency anemia (IDA) and IDNA have yet to be elucidated. The biological mechanisms for the effect of IDA on work capacity are sufficiently strong to justify interventions to improve iron status as a means of enhancing human capital. This may also extend to the segment of the population experiencing IDNA in whom the effects on work capacity may be more subtle, but the number of individuals thus affected may be considerably more than those experiencing IDA. J. Nutr. 131: 676S–690S, 2001.

KEY WORDS: • *anemia* • *productivity* • *work* • *endurance* • *human capital*

Haas JD, Brownlie IV T. Iron Deficiency and Reduced Work Capacity: A Critical Review of the Research to Determine a Causal Relationship. J. Nutr. 131: 676S–690S, 2001

Esquema geral de desenvolvimento da deficiência nutricional

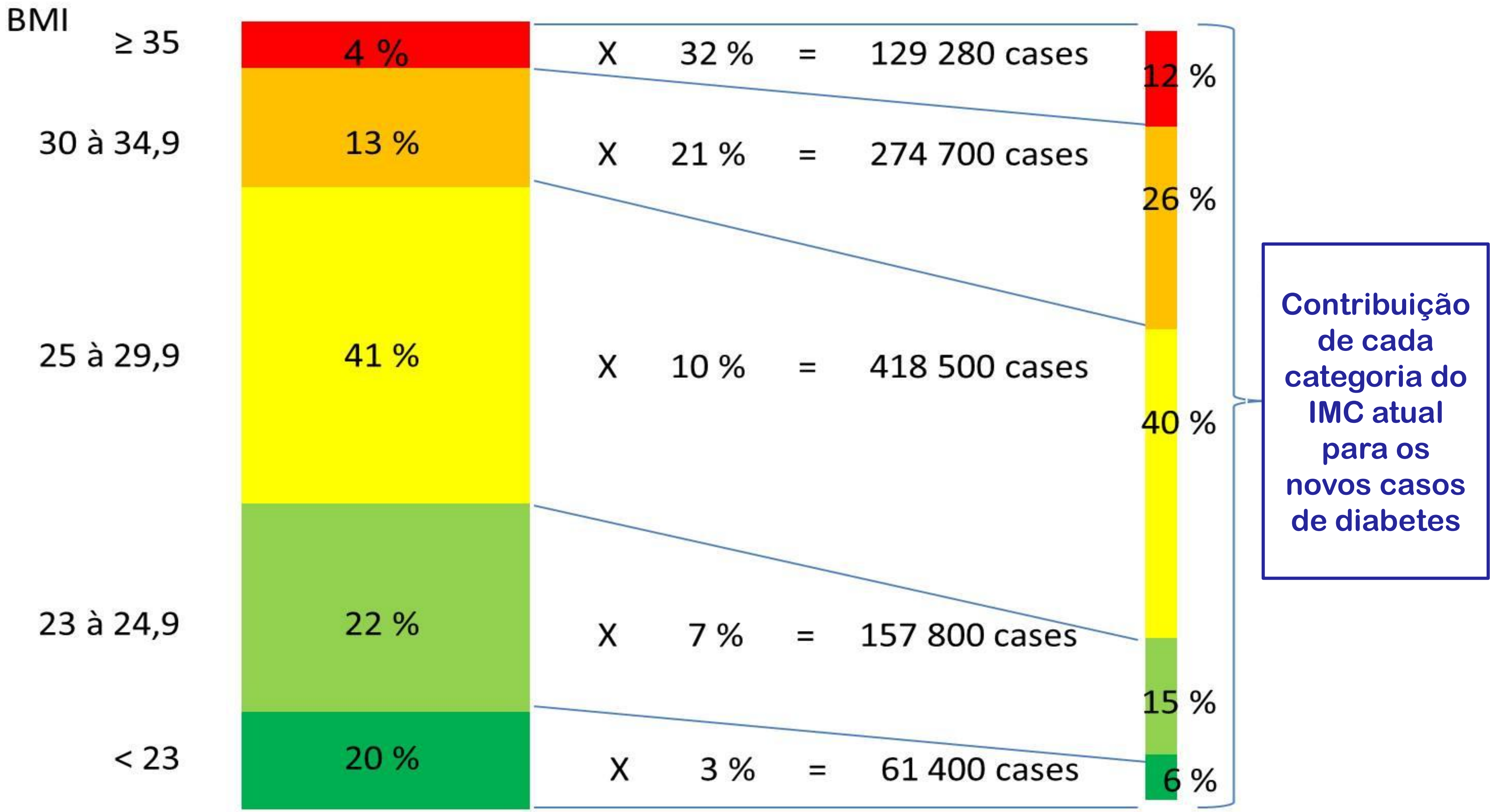
Estágio	Tipo de depleção	Método usado
1	Inadequação dietética	Dietético
2	Nível reduzido na reserva tissular	Bioquímico
3	Nível reduzido nos fluídos corporais	Bioquímico
4	Redução funcional nos tecidos	Antropométrico/bioquímico
5	Atividade reduzida das enzimas nutriente-dependentes	Bioquímico
6	Mudança funcional	Comportamental/psicológico
7	Sintomas clínicos	Clínico
8	Sinal anatômico	Clínico

Tratar indivíduos ou populações?

Geoffrey Rose
Diminuir o nível médio do risco (exposição) em uma população pode ser mais eficiente que tratar indivíduos sob alto risco.

Importância da prevenção: de onde vem os novos doentes?

Distribuição do IMC da população canadense (2007) **X** **Risco individual de diabetes em 10 anos** **=** **Carga populacional: novos casos 2007 - 2017**



Source of statistics: ICES Investigative Report, June 2010: “How many Canadians will be diagnosed with diabetes between 2007 and 2017?“

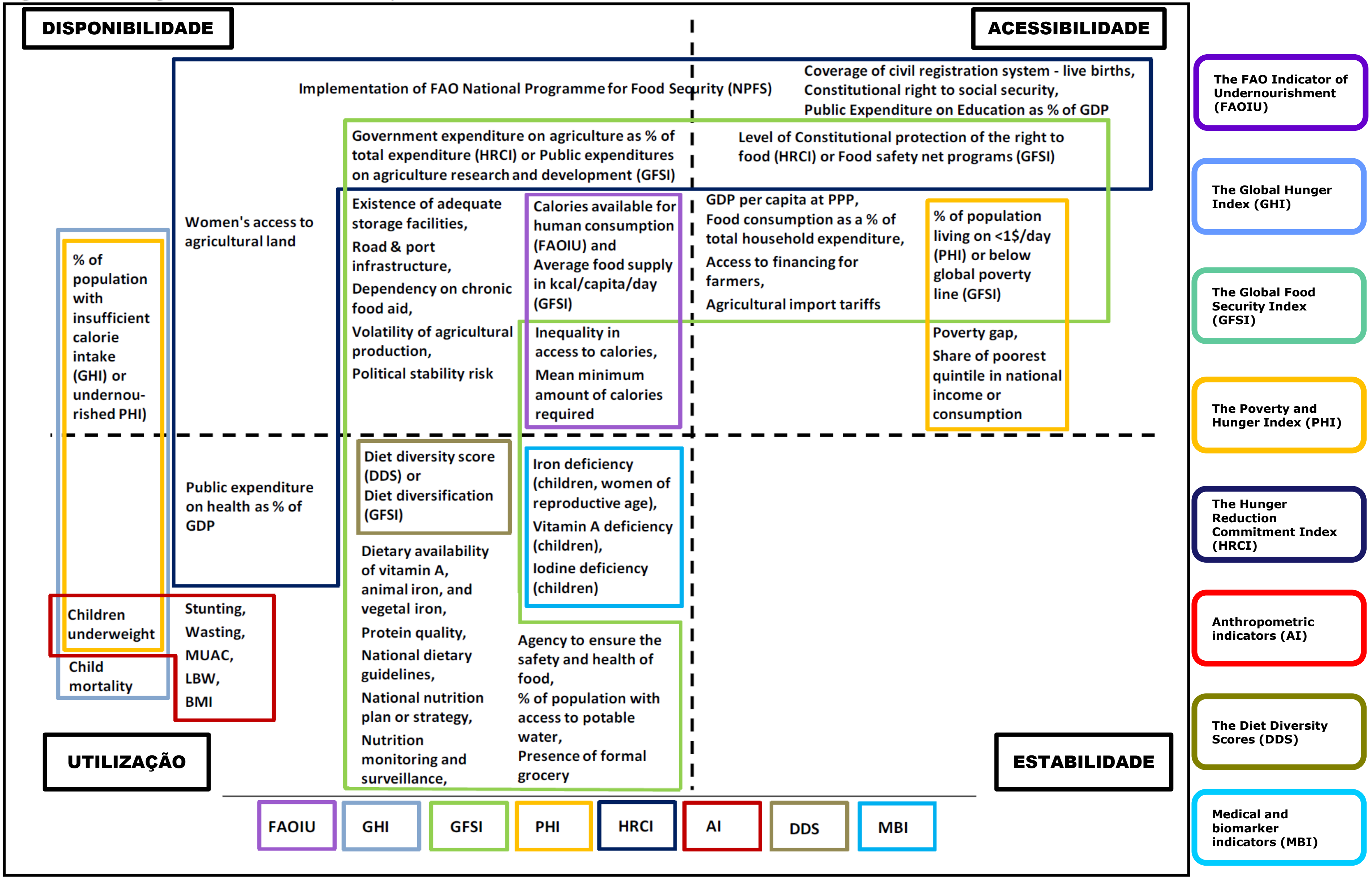
Os indicadores em avaliação nutricional

Avaliação nutricional - dimensões

Disponibilidade	**Acessibilidade**
Utilização	**Estabilidade**

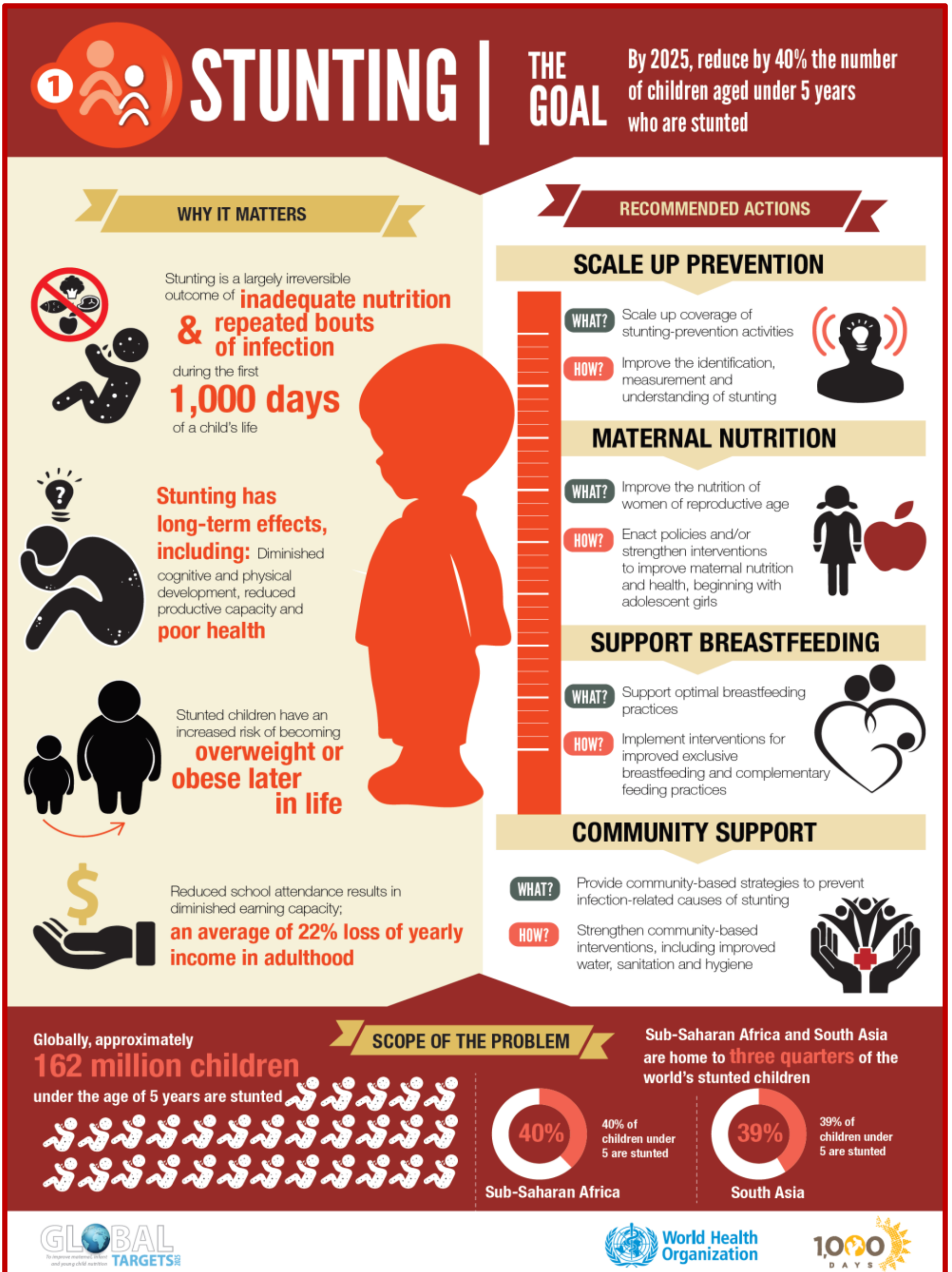
Avaliação nutricional - tópicos

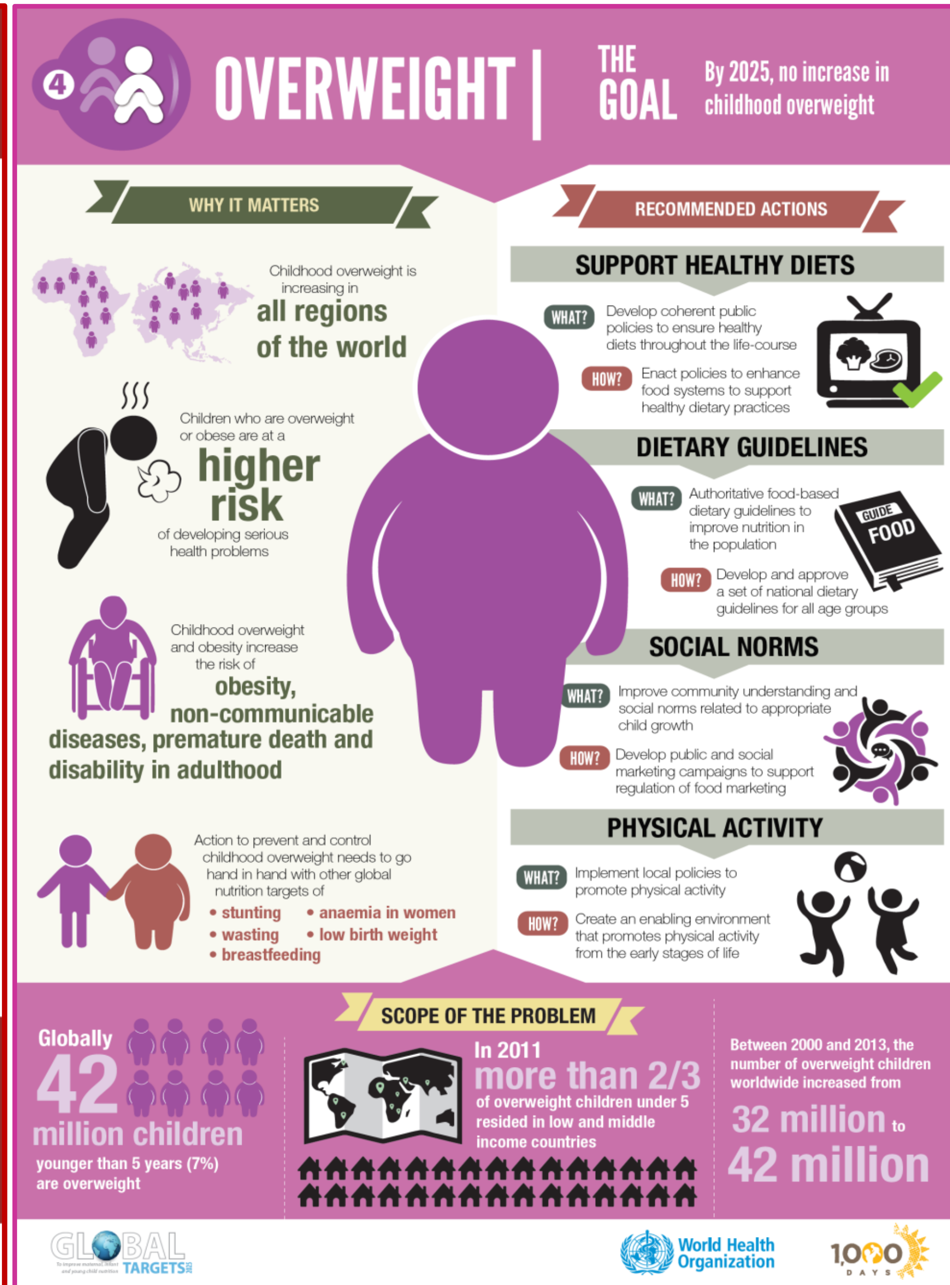
Figure 4. Existing FNS Indicators – overlaps across the FNS dimensions



Source: Authors' design

Avaliação nutricional – indicadores (I)





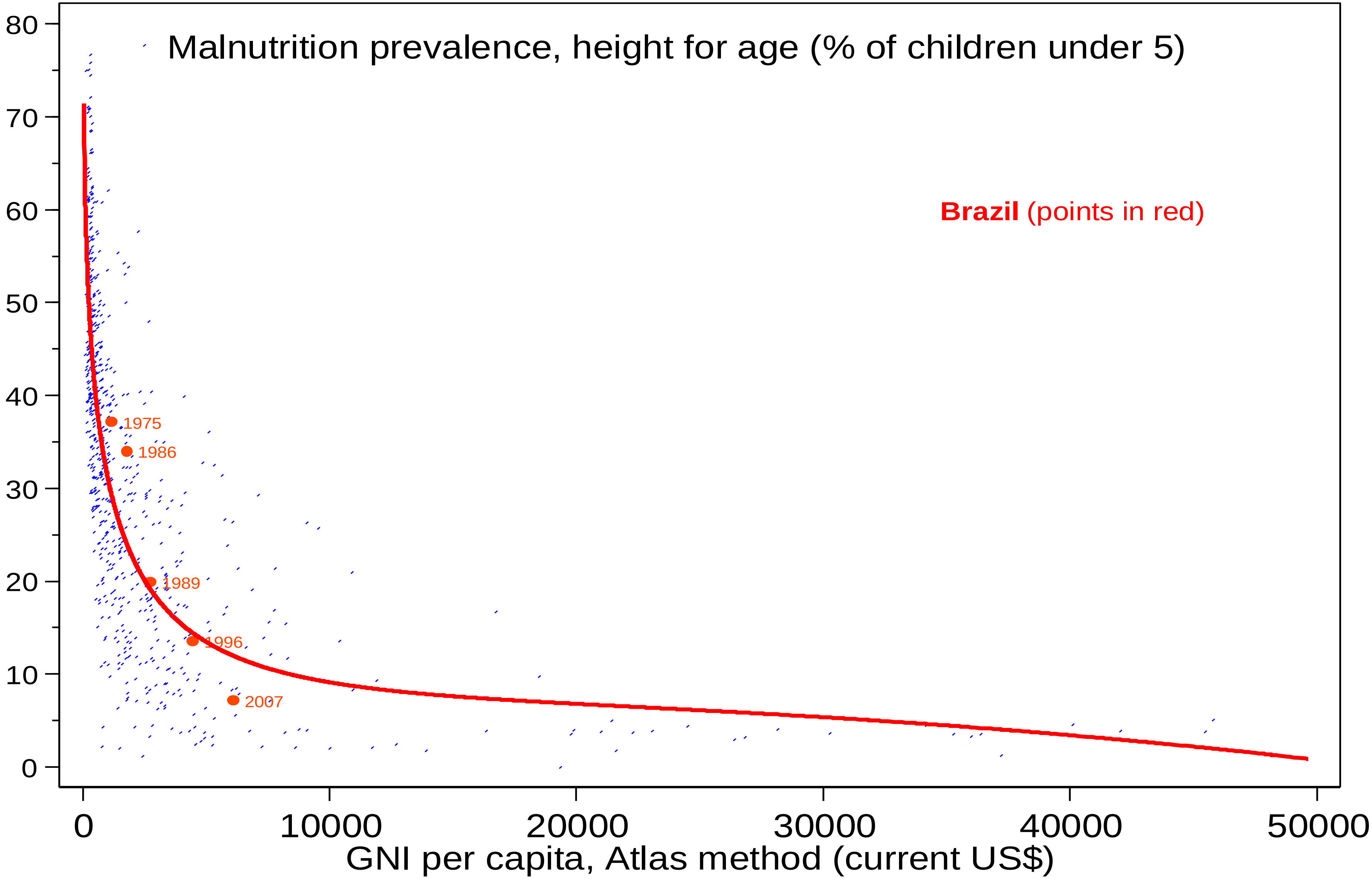
Avaliação nutricional – indicadores (II)

Monitorar

Quais indicadores?

Avaliação nutricional – indicadores (III)

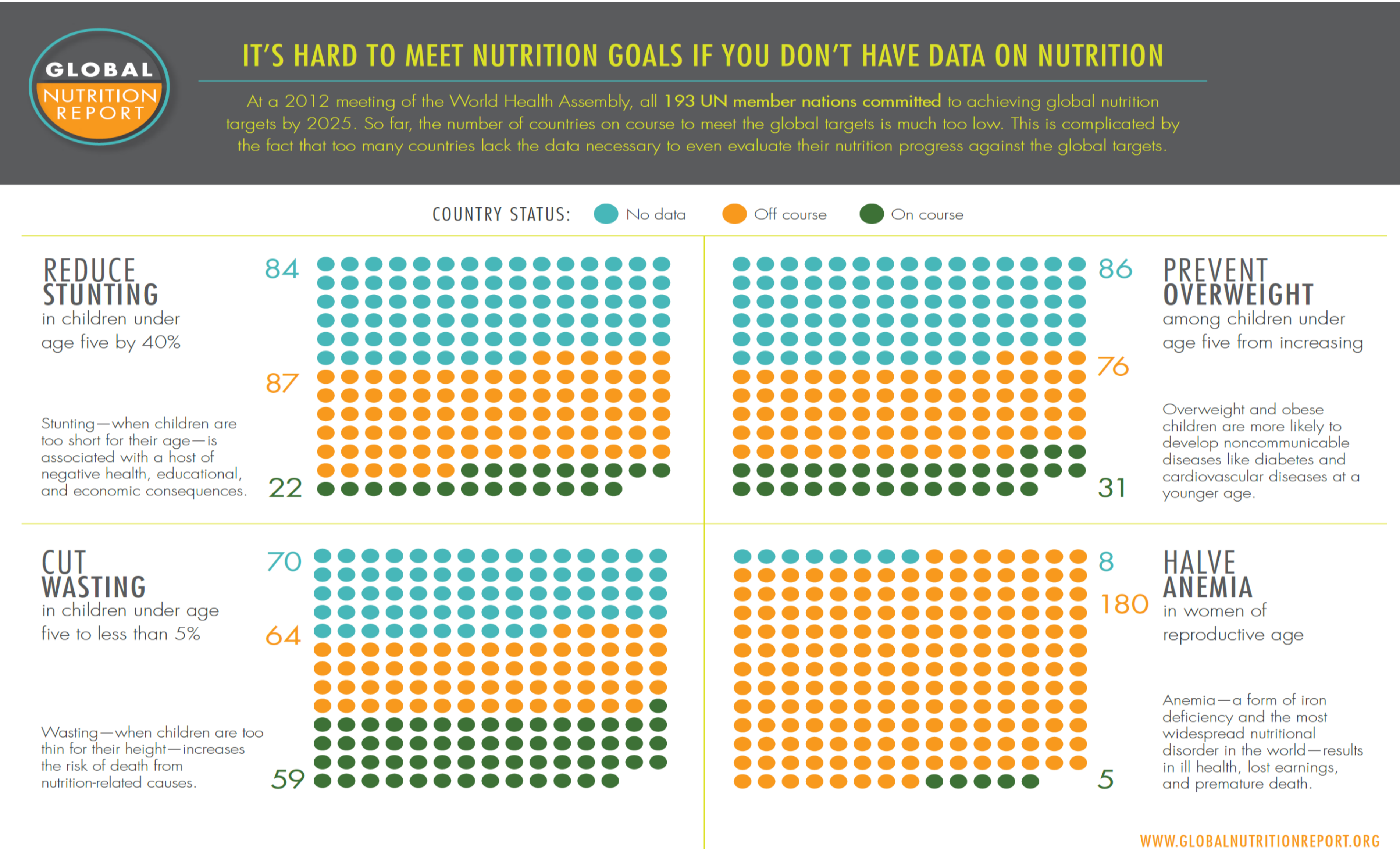
O déficit de crescimento infantil no Brasil e em outros países no mundo, segundo PIB *per capita*



Fonte: World Bank, opendata

Avaliação nutricional – indicadores (IV)

É difícil alcançar metas nutricionais se o país não tem dados sobre nutrição



Source: Global Nutrition Report 2014.
Note: Countries committed to six nutrition targets, but for two of these—reducing the share of infants who weigh too little at birth and increasing the share of children who are exclusively breastfed—it is not yet possible to assess country progress.

Avaliação nutricional - síntese

Teorias
(fundamentos)

Modelos conceituais
(organização dos efeitos)

"A interpretação da informação obtida de estudos dietéticos, bioquímicos, antropométricos e clínicos"

Rosalind Gibson. Principles of nutritional assessment.

Indicadores
(quantidade na população)

Modelos empíricos
(tamanho dos efeitos)

Avaliação nutricional – síntese (exemplo)

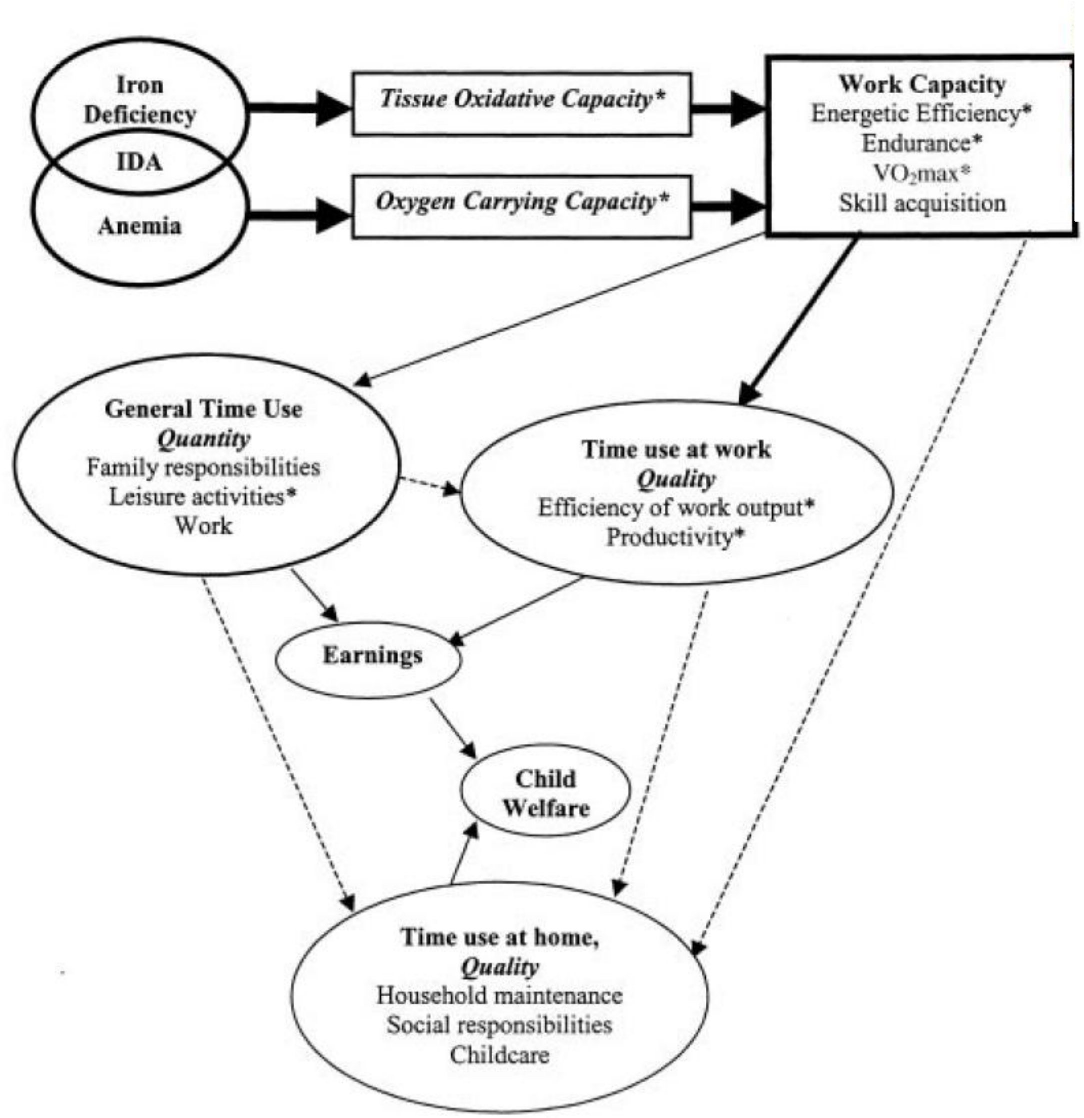


FIGURE 1 Effect of iron deficiency on biological and socioeconomic aspects of work. Outcomes indicated by an asterisk (*) are discussed in this review. IDA = iron deficiency anemia.

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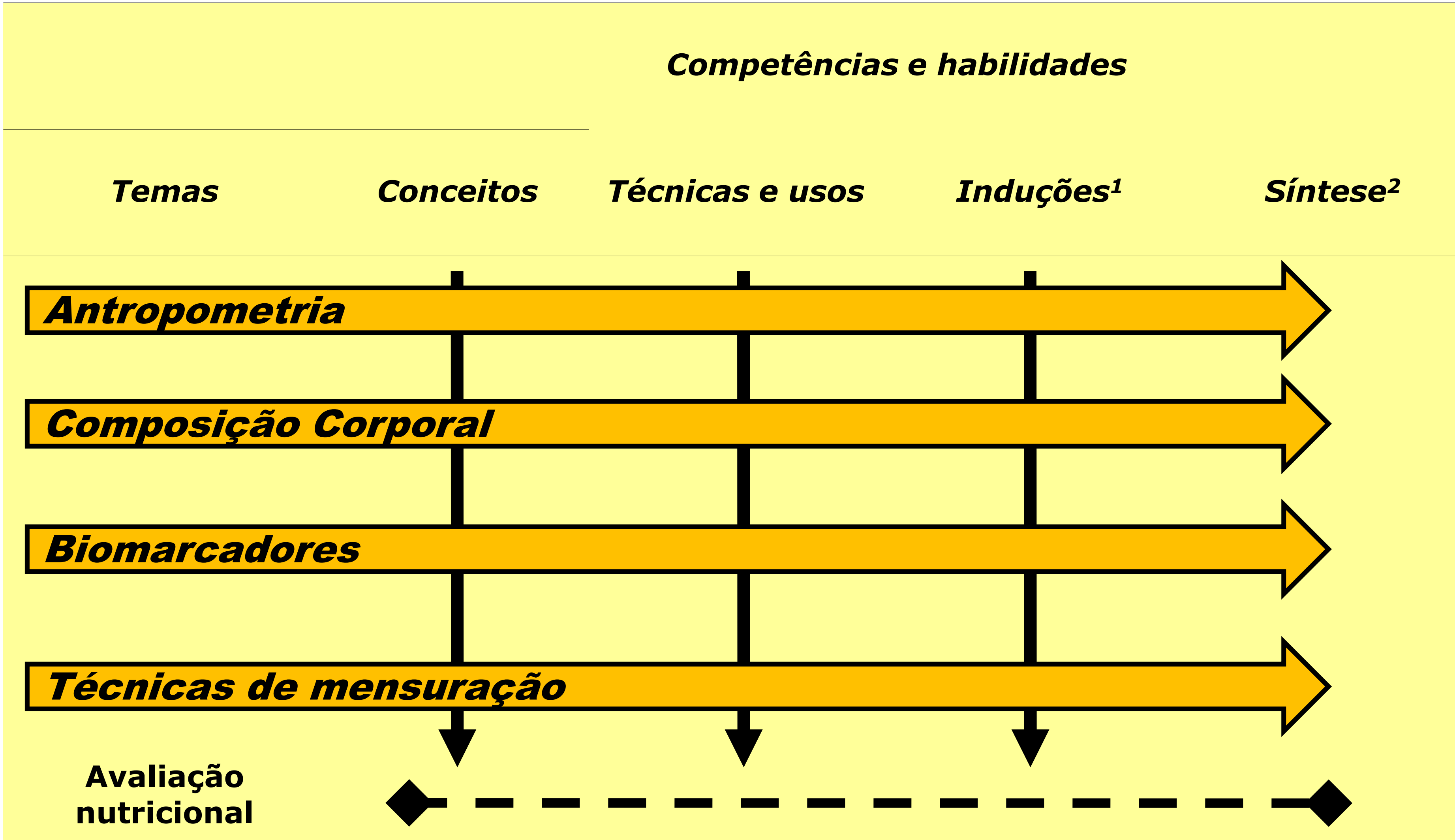
Avaliação nutricional – síntese da disciplina



[1] Inclui: exercícios, cálculos e raciocínios indutivos

[2] Relacionar os conhecimentos de Avaliação Nutricional entre si e com os de outras disciplinas

PAINEL

A AVALIAÇÃO NUTRICIONAL NO CONTEXTO DO COTIDIANO PROFISSIONAL

PAINEL SOBRE AVALIAÇÃO NUTRICIONAL

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Fim da 1ª aula – continua na próxima segunda/sexta-feira