



QUAGES – A concept to evaluate the evidence of health-sport programs

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- **Definition of »Health Sport«**
- **Target groups & aims of »Health Sport«**
- **Structure and contents of »Health Sport-Programmes«**
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- **Certification of »Health Sport-Programmes«:**
 - **instrument - process - results**

Background

- For enhancing health, every day activities are less effective than (traditional) sports activities.
- Sports activities are less effective than fitness directed physical activities.
- For special target groups of sedentary persons there is a need for fitness and behaviour directed sport programmes (→ »Health Sport-Programmes«)

Brehm, W., Janke, A., Sygusch, R. & Wagner, P. (2006). Gesund durch Gesundheitssport. Weinheim, München: Juventa.
Tiemann, M. (2007). Öffentliche Gesundheit und Gesundheitssport. Habilitationsschrift: Universitäten Bayreuth & Karlsruhe.

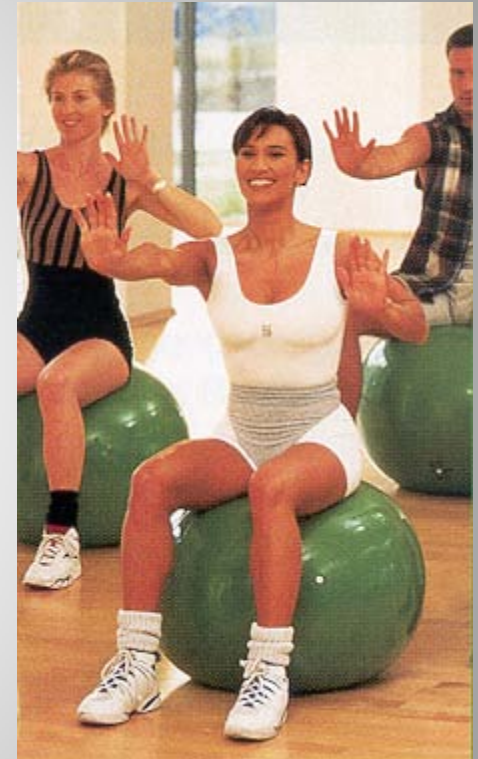
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Definition of »Health Sport« (1)

»Health Sport« is a subset of physical activity

- that is carefully planned, structured and
 - focused on health benefits
- that is targeted at sedentary persons with
 - disease risks
- whose main aims are based on the health promotion paradigms of the »New Public Health Concept« (WHO)
- that implies the development and quality management of evidence-based »Health Sport-Programmes«



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Definition of »Health Sport« (2)

»Health Sport« is clearly distinguished from other types of sports (e.g. competitive sports) as well as from Health Enhancing Physical Activity (HEPA) which is defined as »any form of physical activity that benefits health and functional capacity without any undue harm or risk«¹ (e.g. housework, gardening, using stairs, transportation).

¹ **Bouchard, C. & Shepard, R. (1994).** Physical activity, fitness and health: the model and key concepts. In C. Bouchard & R. Shepard (eds.), Physical activity, fitness and health. Champaign, IL: Human Kinetics Publishers.



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Target groups

1. Sedentary persons who often have not been exercising for a long time

- Reduction of physical inactivity / sedentary behaviour
- by means of »general« behaviour and health directed
- programmes



2. Persons with disease risks, esp. in the

- musculoskeletal system
- cardiovascular and metabolic system
- psychosomatic areas

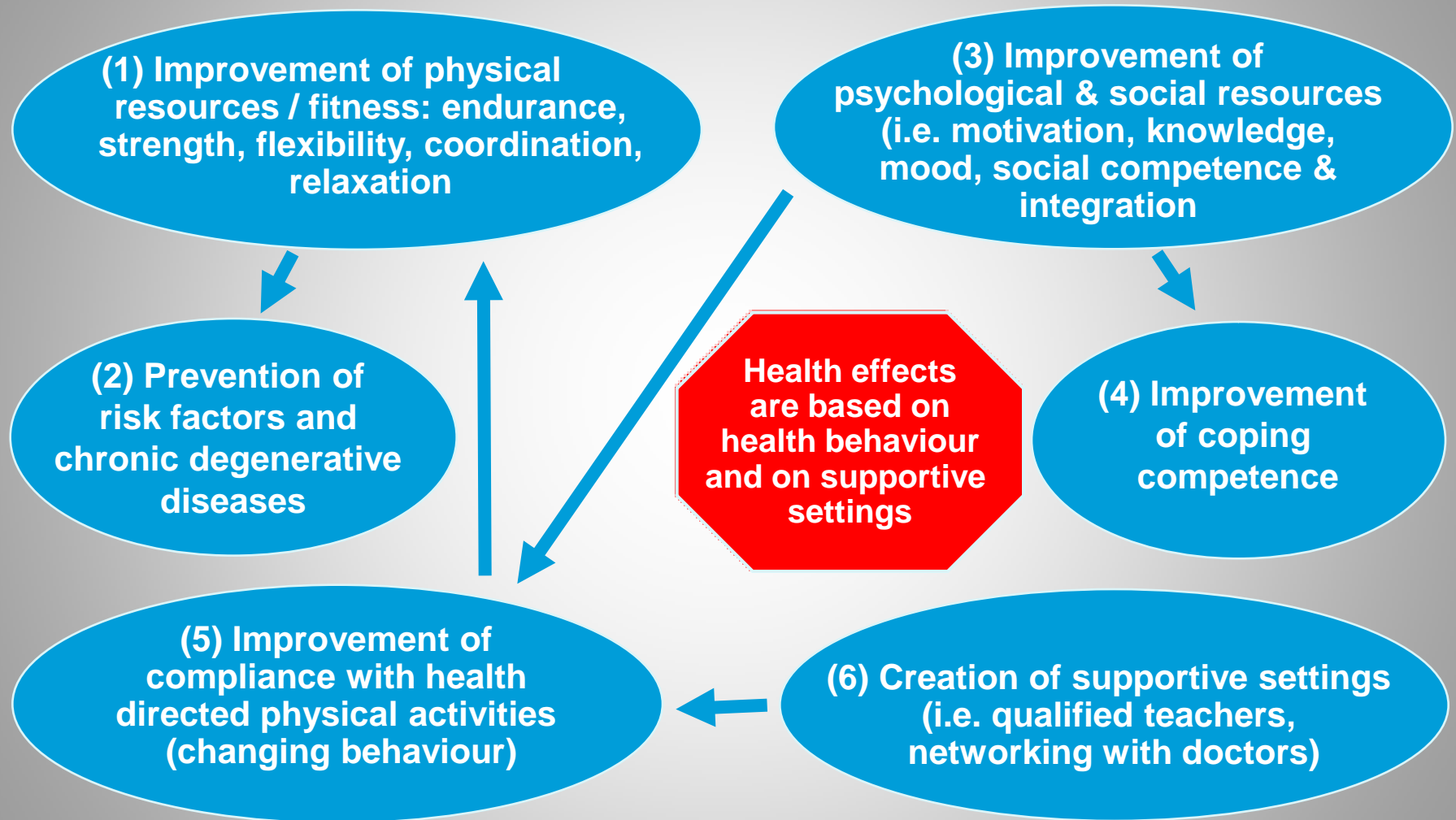
- Prevention and reduction of particular (prevalent)
- health risks by means of »specific« health and
- behaviour directed programmes



AG der Spitzenverbände der Krankenkassen (Hrsg.) (2008). Leitfaden Prävention. Bonn, Frankfurt/M.: KomPart.
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Aims of »Health Sport«

defined on the basis of the »New Public Health Concept« of the WHO



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»Health Sport-Programmes« (1)

- contain experienced guidelines
 - - to head for the six main aims of »Health Sport«
 - - to reach the preconditions of the specific target groups
- are normally published as manuals with details on contents,
 - teaching methods, exercise sessions and sequences of the
 - programme (→ income evidence)
- are evaluated with regard to practicability and effects, and
 - published as an evaluation report or an article in a journal
 - (→ outcome evidence)
- are turned over by well qualified / trained instructors

»Health Sport-Programmes« (2)

FITT – recommendations for sedentary persons

F	→ FREQUENCY	→ once a week & one year
I	→ INTENSITY	→ moderate
T	→ TIME	→ 90 minutes (about 600 kcal)
T	→ TYPE OF EXERCISE	→ seven-sequence-intervention

- Additionally health enhancing physical activities in everyday
- situations

»Health Sport-Programmes« (3)

The »seven-sequence-intervention«

1. Opening sequence (3-5 min.)

- Come together, session overview,
- check of pulse-rate



2. Warming-up sequence (about 10 min.)

- Group & partner centered warming-up
- (with music, different equipments)



3. Endurance sequence (about 20 min.)

- Walking, jogging (interval method, with music)
- control of intensity

4. Strength and flexibility sequence (30 min.)

- Well-rounded exercises for the major muscle groups
- Focus on common problems as lower back pain



»Health Sport-Programmes« (4)

The »seven-sequence-intervention«

5. Relaxation sequence (about 10 min.)

- Exercises and techniques for reducing
- physiological as well as psychic tension
- (e.g. progressive muscle relaxation,
- autogenic training)



6. Final sequence (about 10 min.)

- Activation with games or other dynamic
- movements (often in combination with music)
- Come together, feed back, say goodbye



7. Information sequence (about 10 min.)

- Not at the end of the session, but usually
- in combination with one of the sequences 3-5
- (concerns e.g. »awareness of body functions«)




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Quality Management (1)

Quality assurance and quality management are basically subject to the same quality requirements as the health system as a whole: *evidence-based* assurance of the quality of structure, process and outcome.

 Behind this background, the »Scientific advisory board of the German Gymnastic Federation (DTB)« has developed theory-based criteria for the Income- and Outcome-Evidence of »Health Sports-Programmes«.

Quality Management (2)

Wissenschaftlicher Beirat Gesundheitssport des DTB (*)

[Scientific Committee of the DTB (*)]

Criteria for the Income Evidence:

1. A »Health Sports-Programme« consists of documented modules and model course units ...

- to implement the aims of »Health-Sports«
- that take the condition of the participants into account
- that can be linked to prior and subsequent measures (or intervention modules)
- that have been tested for their feasibility

2. A »Health Sports-Programme« is available in form of a course manual indicating the scheme, aims, contents and methods of the units.

(*) **Members: Prof. Dr. Klaus Bös, Prof. Dr. Walter Brehm, Prof. Dr. Iris Pahmeier, PD Dr. Michael Tiemann, Prof. Dr. Jürgen von Troschke**

Quality Management (3)

Minimum Criteria for the Outcome Evidence:

- At least one controlled longitudinal study, with three measure points (start and end of the programme, follow-up).
- At least 100 participants of the target group of the programme.
- Measures based on the six aims of »Health Sport-Programmes«.
- A published evaluation report.

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Certification of »Health Sport-Programmes« (1)

Quages is a questionnaire to prove and evaluate »Health Sport-Programmes«.

Quages is designed to enable a neutral, standardised and comprehensive evaluation and to carry out a certification of programmes on this basis.

Quages is a product of the co-operation between sports scientists engaged in »Health Sports« and health scientists.

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Certification of »Health Sport-Programmes« (2)

Content guidance:

Model of the qualities of “Health Sports six aims”

(Brehm, 2006; Brehm, Pahmeier, Tiemann, 1998;
Arbeitsgemeinschaft der Spitzenverbände der Krankenkassen, 2006)

Qualitative and formal guidance:

Deutsches Instrument zur methodischen Leitlinien-
Bewertung (DELBI)

[German Instrument for Methodological Guideline Appraisal]

(Arbeitsgemeinschaft der wissenschaftlichen Medizinischen Fachgesellschaften (AWMF)
Ärztliches Zentrum für Qualität in der Medizin (ÄZQ)

Certification of »Health Sport-Programmes« (3)

Content guidance:

QUAGES consists of 41 evaluation criteria that are linked to 11 domains. Each domain covers a separate dimension of programme quality. The respective dimensions relate to the »six aims of health sports«.

Certification of »Health Sport-Programmes« (4)

Formal guidance:

The formal structure of QUAGES follows the «German Instrument for Methodological Guideline Appraisal» (DELBI) of the Association of the Scientific Medical Societies in Germany and of the German Agency for Quality in Medicine (ÄZQ).

Certification of »Health Sport-Programmes« (5)

Domains:

1. General criteria
2. Improvement of physical resources
3. Improvement of psychological and social resources
4. Prevention of risk factors and diseases
5. Improvement of coping competence
6. Improvement of compliance
7. Creation of supportive settings
8. Specific aims
9. Methodological Issues
10. Handouts for Participants
11. Evaluation

Income
evidence

Outcome
evidence

Domain 2: Aim and contents of the programme

Improvement of physical health resources

1. The programme includes forms of exercise and training to improve endurance.	applies not at all	1	2	3	4	applies absolutely	Remarks:
2. The programme includes forms of exercise and training to improve strength.	applies not at all	1	2	3	4	applies absolutely	Remarks:
3. The programme includes forms of exercise and training to improve stretching.	applies not at all	1	2	3	4	applies absolutely	Remarks:
4. The programme includes forms of exercise and training to improve co-ordination.	applies not at all	1	2	3	4	applies absolutely	Remarks:
5. The programme includes exercises to improve (muscular) relaxation.	applies not at all	1	2	3	4	applies absolutely	Remarks:
6. The programme includes a module to improve relaxation and stress relief (e. g. PMR).	applies not at all	1	2	3	4	applies absolutely	Remarks:
7. Information on the intensity of physical activity and adaptation to physical activity is provided.	applies not at all	1	2	3	4	applies absolutely	Remarks:
Total number of points:						out of a maximum of 28 points	

Domain 11: Evaluation

1.	An evaluation of the programme was carried out ...	(a) as an outcome evaluation (b) as a process evaluation	no 0 no 0	yes 2 yes 2	Remarks:
2.	The study is ...	(a) an uncontrolled study (b) a controlled study	2 4		Remarks:
3.	The evaluation is documented by ...	(a) a report (b) scientific publication(s)	2 4		Remarks:
Total number of points:					out of a maximum of 12 points

Certification of »Health Sport-Programmes« (8)

Assessment and Evaluation

- Two independent and neutral experts assess each criterion on a 4-point Likert scale (ranging from 1 = applies not at all to 4 = applies absolutely).
- The higher the point value within a domain, the more the content-related criterion is fulfilled.
- Both experts submit an additional qualitative opinion on the programme

This instrument is currently being used by the DTB – assisted by the „Scientific Committee on Health Sports“ – under its quality initiatives in the field of health sports in order to verify, assess and certify health sports programmes.

Certification of »Health Sport-Programmes« (9)

Benefits for financing bodies:

- The targeted use of this instrument not only facilitates the appraisal of programmes or the selection of applications by health insurance funds/financing bodies, which is necessary according to § 20 SGB V, but also, and above all, makes them more transparent and efficient.
- Reduction of time and costs

Certification of »Health Sport-Programmes« (10)

Benefits for Prevention Providers:

- Prevention providers achieve greater certainty as to the quality of their programmes.
- In addition, prevention providers can use the questionnaire for self-evaluation purposes of their health sports programmes and as a check-list for the design of new programmes.