


# The SPOLIT Literature Database of the Federal Institute of Sports Science (BISp) in Bonn (Germany)

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**T**he Federal Institute of Sports Science (BISp, [www.bisp.de](http://www.bisp.de)), which was founded in 1970, makes use of and supports the available research capacities at the universities, particularly the sports-related sciences in the Federal Republic of Germany, to assist elite sport and elite athletes in delivering top performances.

Through the project-related and application-oriented promotion of scientific research, scientific counselling and knowledge transfer both in sports practice and sports science, BISp provides effective support to elite sport.

Always under the premise of humane performance sport, BISp has had a considerable influence on the development of sports science, including sports medicine, and has acquired a strong national and international reputation.

BISp consists of three departments:

- Department I – Research and Development
- Department II – Scientific Counselling
- Department III – Policy and Controlling

Department I is responsible for the initiation, coordination and funding of sports-science research projects and Department III deals with general matters of the institute that do not concern one department in particular (for example, the supervision of the advisory boards of BISp and legal matters). The primary task of Department II is the documentation and distribution of sports-science findings and results.

## BISp databases

The core of the information processing are the three databases run by BISp: SPOLIT, SPOFOR, SPOMEDIA (literature, research and media documentation) as well as the Specialist Sports Information Guide (quality-secured internet sources).

For athletics coaches and officials, the SPOLIT literature database may be particularly interesting.

SPOLIT currently includes approximately 190,000 articles and books, more than 10,000 of which are indexed with the controlled term “Leichtathletik” (athletics). Almost 4,800 of these documents are in English.

SPOLIT includes a simple search and an extended search modus. The simple search screen can be accessed directly via: [www.bisp-datenbanken.de](http://www.bisp-datenbanken.de).

Search is possible using the name of an author, title and abstract keywords in English or any other language, or controlled terms (*Schlagwörter*), which can only be in German. The results of a search can be limited by period (e.g., 2000-2012) or by language (e.g., English).

Users who want a more targeted search should go to the menu options on the left and click *Profisuche* (professional search). When clicking this tab, a sub-menu will open including the tabs *Literatur gesamt* (general literature), *Monographien* (monographs), *Sammelwerksbeiträge* (articles in books), and *Zeitschriftenaufsätze* (articles in periodicals).

Figure 1: SPOLIT simple search

When clicking, for example, “Zeitschriftenaufsätze”, search can be done by filling in the search fields “Freitextsuche” (free text search – the word(s) typed into this field will be searched for in all document subfields), “Titel(-übersetzung)” (title (translation) – word(s) typed here will be searched only in the document titles or their translations), “Person” (author), “Zeitschrift” (periodical), “ISSN” (instead of the periodical title), “Inhalt/Abstract” (contents/abstract – word(s) typed here will be searched only in the abstract), “Schlagwörter” (controlled terms – only German words can be used). Again, the results of a search can be limited by period or by language.

Within the search fields, words that are separated by a blank will be searched as one single term, e.g., “distance running”. If these two terms are separated by a semicolon (without a blank) and the button *und* (and) on the right is clicked, these terms will be searched both as one single term and separate terms. If the same terms are separated by a semicolon and the button *oder* (or) on the right is clicked, the search result will include all titles containing only one or both of these terms.

The search results are so-called literature documents that include bibliographic data and an abstract, which is very often in English. Readers who are interested in the full text of a literature document can order the respective article by clicking the *Subito* button at the top of the individual result page.

The search results can be downloaded in total or in the form of selected documents in PDF, RTF, HTML, or RIS format

## Advantages and Disadvantages

The biggest advantage of the SPOLIT literature database for athletics coaches is that access to it is free of charge and that it provides full coverage of the most important international athletics journals, e.g.: *New Studies in Athletics*, *Modern Athlete and Coach*, and *Track Coach*. In addition, the database also includes almost all articles from important international training-science, biomechanics, and sports-medicine periodicals which are relevant to athletics (e.g., *Journal of Strength and Con-*

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|                          |                                                                                                                                                                                                                         |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dokumentnummer           | 20120011830                                                                                                                                                                                                             |
| Sprache                  | Englisch                                                                                                                                                                                                                |
| Dokumentart              | Zeitschriftenaufsatz                                                                                                                                                                                                    |
| Quelle                   | BJEP                                                                                                                                                                                                                    |
| Autoren                  | Gentile, Paul M.; Gentile, Paul M.; Grier, Steven B.; Rana, Raju S.; Smith, Lawrence A.; Thomas, Walter S.                                                                                                              |
| Titel                    | A new strategy for the implementation of an aerobic training session                                                                                                                                                    |
| Übersetzer Titel         | Eine neue Strategie zur Implementierung einer aeroben Trainingsplanung                                                                                                                                                  |
| Zeitschrift/Journalsband | <i>Journal of strength and conditioning research : the research journal of the NSCA</i> /                                                                                                                               |
| Erscheinungsort          | Colorado Springs                                                                                                                                                                                                        |
| Fachzeitschrift          | Jahrgang: 26, Heft 12, November 2012, S. 67-69, 68.                                                                                                                                                                     |
| Publikationsjahr         | 2012                                                                                                                                                                                                                    |
| ISSN                     | 1549-1018                                                                                                                                                                                                               |
| DOI                      | 10.1519/JSC.0b013e31825f1d39                                                                                                                                                                                            |
| Descriptorcode           | <a href="#">Anatomische Anatomie, Bewegung Physiologie, Biomechanik, Ernährung, Ergonomie, Gesundheit, Leistungsphysiologie, Leistungsphysiologie, Leistungsphysiologie, Leistungsphysiologie, Leistungsphysiologie</a> |

### Kurzreferat

The objective was to propose a new strategy for adjusting aerobic training variables based on the eight American College of Sports Medicine (ACSM) guidelines and maximal aerobic power (VO<sub>2max</sub>) and to establish energy expenditure (EE) recommendations for training, which depend on a subject's body mass (BM). Exclusively based on aerobic training recommendations that are available in the ACSM guidelines, 18 equally partitioned subcategories were created from the slope of a linear regression between the lower (10.4 ml/kg·min⁻¹) and upper (63.2 ml/kg·min⁻¹) limits of VO<sub>2max</sub>: percentile tables and all aerobic variables (intensity, 30–90% reserve, duration, 90–100 min/wk-1, frequency, 3–5 d/wk-1, and EE, 1,000–4,000 kcal/wk-1). ACSM's EE (EACSM) recommendation was compared to EE based on VO<sub>2max</sub> (EEActual), BM, exercise intensity and duration combined, for five BMI categories (50 to ≥ 100 kg). The following equations were generated to adjust aerobic training: Intensity (%HRmax) = %HRmax [when I = 1.23 ± 0.83, Duration (min) = %HRmax × 5.38 ± 27.49, Frequency (d/wk-1) = %HRmax × 0.04 ± 2.27, EACSM (kcal/wk-1) = %HRmax × 82.9 ± 1,055.26, and EEActual (kcal/wk-1) = (%HRmax × 3.1) × Intensity × 3.51 × BM (kg)/200 ± Frequency × 4. A comparison of EACSM and EEActual for 3 BM and 3 aerobic fitness categories demonstrated an effect size classification that is equal or superior to "large" in 8 of 13 comparisons, suggesting that EACSM adjustment is inadequate at least 60% of the time. Despite the need to verify the adequacy of the linear model and perform future cross-sectional and longitudinal studies, the present proposal first provides criteria to adjust aerobic training variables consistent with subject capacity, thus diminishing the risk of the excessive aerobic prescription, self-harmful.

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Figure 4: SPOLIT export screen

*ditioning Research, Journal of Applied Biomechanics, or International Journal of Sports Medicine*). A list of the so-called “primary journals” (i.e., journals with full coverage) can be obtained by clicking the buttons **Sammelprofil** (collection profile) → **Zeitschriftenliste** (periodical list) → **Primärzeitschriften** (primary periodicals) in the menu on the left in the entry page to the SPOLIT database.

The main disadvantage for international users of the database is that the SPOLIT website is only in German and that a search using controlled terms is also possible only in German. However, the sheer volume of the material included in the SPOLIT database together with the fact that a large part of the database content can be accessed using English or other language terms in the title and abstract fields make SPOLIT an indispensable tool for athletics literature search.

Reviewed by Jürgen Schiffer