



## DEVELOPMENTAL TRENDS IN SPORTS FOR THE DISABLED. THE CASE OF SUMMER PARALYMPICS

Eugeniusz Prystupa\*, Tetyana Prystupa, Eugeniusz Bolach  
University School of Physical Education, Wrocław, Poland

### ABSTRACT

The paper presents the most important trends in sport for the disabled in the period between the 1<sup>st</sup> and the 12<sup>th</sup> Paralympic Games. Three stages in the development of the Paralympics can be distinguished. The parameters of the distinction are the quantity and distribution of sports and events, types of competition, and types of disabilities. The most recent stage of Paralympics development witnessed the emergence of functional classification, which helped to define the level of physical and psychological disabilities with reference to different sports and medical groups. This innovation helped to reduce the quantity of swimming and athletic Paralympic events. The stability of the Paralympics program is the main feature of the most recent stage. New preparation methodologies, increasing capacities, non-training activities and better sports equipment have had a great impact on setting new world and Paralympic records. The increasing number of disabled athletes from many countries is an important indicator of the growing popularity of sports for the disabled and Paralympics in the world. Countries such as Ukraine, China, Iraq and Egypt have become new leaders of the Paralympics movement. The prognostic data allow us to expect that the main developmental trends in sports for the disabled during the 2008 Paralympics in Beijing will continue, owing to modern production technologies of sports equipment and new training techniques.

**Key words:** Paralympics, sports disciplines and competitions, stages of Paralympic movement

### Introduction

Three main directions can be distinguished in the development of the modern sports for the disabled: sport for all, record-seeking sport and professional sport [1–5]. Each of these, regardless of the common forms and methodologies, features an individual approach, as well as a hierarchy of objectives.

The main objectives of amateur sports for the disabled include guided application of sports forms and methods to improve an athlete's health condition, assurance of sensible leisure pursuits, as well as compensation for social, mental and somatic consequences of physical disabilities.

An important characteristic of record-seeking sports for the disabled is the motivation to achieve the best sports results. It is related to the increasing social and political significance of sports victory at the Paralympic Games, Deaflympics, Special Olympics, European and world championships and others.

Researchers have noted a gradual emergence of professional associations of sports for the disabled, e.g. the

Italian Wheelchair Basketball Professional League or the American Professional Disabled Tennis League. For the professional athletes, the objective becomes earning money at the cost of a high level of sports training. However, professional sports for the disabled still remain in their early stages of development [5–7].

Record-seeking sports for the disabled are relatively new phenomena from the social, cultural and pedagogical standpoint. Three kinds of record-seeking sports for the disabled can be distinguished: (1) Paralympic sports, in which the participating athletes are included in the following disability categories: athletes with vision impairments, amputee athletes, paraplegics and athletes with spinal cord injuries, athletes with cerebral palsy (the events being called Paralympics); (2) sports for the deaf (the Deaflympics); and (3) sports for people with mental retardation (Special Olympics).

It must be stressed that disabled sports follow the same principles as sports for the able-bodied, although certain adjustments are present (adaptation of competition rules, equipment and facilities for disabled athletes, classification of athletes into classes on the basis of kinds and levels of disabilities, etc.) [3, 8, 9].

All three kinds of disabled sports have recently gained momentum. The growing number of international disabled sports organizations and sports events, popularization

\* Corresponding author.

of sports for the disabled and general humanization of the modern society are reflected in more intensive processes of integration of the disabled within different social structures.

### The aim of the paper

The aim of the paper was to assess the prospects of Paralympic sports development. The data come from the International Paralympic Committee [10], as well as from different studies on disabled sports.

### Results and discussion

On the basis of the developmental patterns of sports events for the disabled, as well as the relations between the individual sports, the development of the Paralympic Games can be divided into several stages. Various researchers [3, 8, 9, 11–13] distinguish three stages in the history of the Paralympics, based on the analysis and correlations of sports events and the inclusion of various disability groups into the Paralympic program.

During the first stage (1<sup>st</sup>–4<sup>th</sup> Paralympics) the number of Paralympic sports increased from eight at the 1<sup>st</sup> Paralympics in Rome to ten at the 4<sup>th</sup> Paralympics in Heidelberg; the number of sports competitions increased from 111 to 188, respectively. The increase was possible owing to the inclusion of two highly medal-ranking cyclic events: track-and-field and swimming in 1964. During that time the only participating athletes were those with spinal cord injuries [4–7, 14].

The second stage in the development of the Paralympics (5<sup>th</sup>–8<sup>th</sup> Paralympic Games) featured participation of athletes with vision impairments, amputee athletes and athletes with other physical disabilities. The 6<sup>th</sup> Paralympics (1980) saw the participation of athletes with cerebral palsy for the first time. The inclusion of these groups of disabled athletes affected the further development of the Paralympic Games. The number of sports and competitions adapted for the needs of the disabled increased significantly. At the 5<sup>th</sup> Paralympics (1976) the number of competitions in eight different sports reached 376, i.e. double the number of competitions as compared with the 4<sup>th</sup> Paralympics in 1972. This increase was mainly due to the inclusion of cyclic track-and-field and swimming events, but also goalball (1980), judo (1988), and boccia (1988), as well as due to subsequent growing social interest in the Paralympics. The lack of a structural order in the games and of coordination in the functioning of international organizations of disabled sports led to different classes of athletes competing in as many

as 958 events during the 7<sup>th</sup> Paralympics in 1984. The largest number of competitions were held in track-and-field (427) and swimming (346), which amounted to 80% of all sports competitions.

The third stage in the development of the Paralympic Games (9<sup>th</sup>–11<sup>th</sup> Paralympics) featured an introduction of the functional classification system, allowing athletes with specific disabilities (amputee athletes, athletes with limb paralysis, athletes with different movement impairments and with cerebral palsy consequences) to compete against each other if they had similar levels of dysfunction. The functional classification significantly reduced the number of sports events in track-and-field and swimming. For instance, the program of the 8<sup>th</sup> Paralympics in Seoul in 1988 included 792 competitions; after the introduction of the functional classification at the 9<sup>th</sup> Paralympic Games in Barcelona in 1992, the number of competitions was reduced to 490. Another tendency in the third stage was a significant reduction in the number of non-Olympic sports for the disabled. While at the first stage of development the non-Olympic sports constituted 25–30% of all sports in the program, during the 11<sup>th</sup> and 12<sup>th</sup> Paralympic Games their number was reduced to 15% [4, 5, 7]. This tendency was conducive to the integrative development of disabled sports and facilitated the Games' organization. It should be stressed that after a long break, since the 1988 Seoul Paralympics, all the subsequent Games have been organized at the same venues as the Olympic Games.

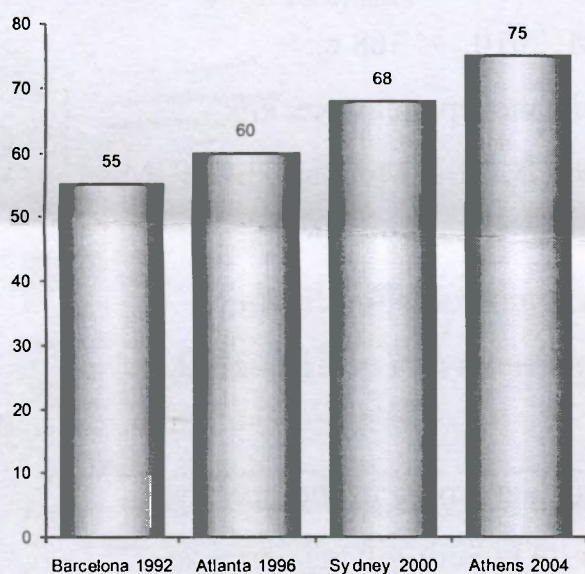
An important characteristic in the development of the Paralympic Games has been a relatively stable distribution of types of sports in all the stages, following the Olympic distribution. The cyclic sports amounted to 45–60%, strength sports to 20%, coordination sports to 5–8%, martial arts to 2–3%, team games to about 10% and multi-discipline sports to 1–3% of all Paralympic sports.

A comparison of the number of men's and women's events in the whole history of the Paralympic sports reveals a clear dominance of the former. For example, during the 9<sup>th</sup> Paralympics male athletes took part in 320 events, while female athletes only in 187; men and women together participated only in 43 sports events (Tab. 1). However, at the third stage of Paralympics development, a significant increase in women's events was observed. More women's events were included in the key Paralympic programs of judo, powerlifting competitions, swimming and others.

Also, a growing number of countries represented at the Games, as well as of participating disabled athletes

Table 1. Sports types in the program of the 11<sup>th</sup> Paralympic Games

Sports types	Number of competitions			
	Total	Men	Women	Men and women together
Cyclic	326	184	122	20
Speed-strength	116	79	37	–
Coordination	30	7	6	17
Martial arts	22	16	6	–
Team games	48	27	15	6
Multi-discipline sports	8	7	1	–
Total	550	320	187	43

Figure 1. Number of countries represented by the medalists of the 9<sup>th</sup>–12<sup>th</sup> Paralympics

in general was noted, which was an indication of the growing popularity of the Paralympics in the world. For instance, the 1<sup>st</sup> Paralympics in Rome saw participation of 400 athletes from 23 countries, whereas the number of participants at the 12<sup>th</sup> Paralympics in Athens reached 3969 representing 136 countries. Since the 9<sup>th</sup> Paralympics in Barcelona the organizers have implemented selection criteria to limit the number of participating athletes per country [15].

The third stage of development of the Paralympics featured a fairly stable competition schedule and reduction in the number of non-Olympic sports and of events (especially in track-and-field and swimming) owing to

the introduction of the functional classification. It should be stated that the overall usability of the functional classification has been seriously flawed by the lack of objective methods of assessing the athletes' levels of functional abilities. Currently, establishing a fully objective functional classification of disabled athletes still remains the primary goal of the Paralympic movement [3, 11, 16].

Numerous studies indicate an increasing level of competitiveness in Paralympic sports, especially at the third stage of development (Fig. 1). At the 9<sup>th</sup> Paralympics in Barcelona (1992), the medalists included representatives from 55 countries. The number of countries of Paralympic medalists has grown ever since. During the 12<sup>th</sup> Paralympic Games medals were won by athletes from 75 countries. Also the third stage witnessed a change in the Paralympic leadership in the world. During the earlier periods the athletes competing at the Paralympic Games came mainly from the United States, West Germany, Japan, Sweden, the United Kingdom, France, Canada and Australia. This could have been explained by far more developed sports rehabilitation programs in Western democratic countries. However, adopting methods and facilities from sports for able-bodied athletes, as well as changes in training parameters, competitive loads and efficiency methods led to a radical shift in the world leadership in the Paralympic Games. First of all, the US athletes lost their leading position (after having won the team standings at the 9<sup>th</sup> and 10<sup>th</sup> Paralympics, they failed to take top three places during the next Games). Secondly, the Chinese disabled athletic team has been constantly on the rise: 12<sup>th</sup> place at the 9<sup>th</sup> Paralympics, 9<sup>th</sup> place at the 10<sup>th</sup>, 6<sup>th</sup> place at the 11<sup>th</sup>, and the 1<sup>st</sup> place at the 12<sup>th</sup> Paralympic Games in Athens. The 2004 Paralympics team standings clearly point to the Chinese team as the world leader. The runner-up in the ranking – the UK team – won 35 gold medals as compared with 63 of the Chinese. In this context, also the achievements of the Ukrainian Paralympic team are truly remarkable: from the 44<sup>th</sup> place at the 10<sup>th</sup> Paralympics in 1996 in Atlanta (one gold medal) to the 6<sup>th</sup> place in team standings at the Athens Paralympics in 2004 (24 gold medals). Similar achievements are represented by the Paralympic teams from Mexico, Brazil, Belarus, Tunisia, Iran, Egypt and other countries which during the first period of Paralympic history ranked very low or did not participate at all.

In the opinion of numerous experts on disabled sports, at the beginning of the 12<sup>th</sup> Paralympic Games in Athens, sports in which results could be objectively measured (track-and-field, swimming, powerlifting, cycling, archery

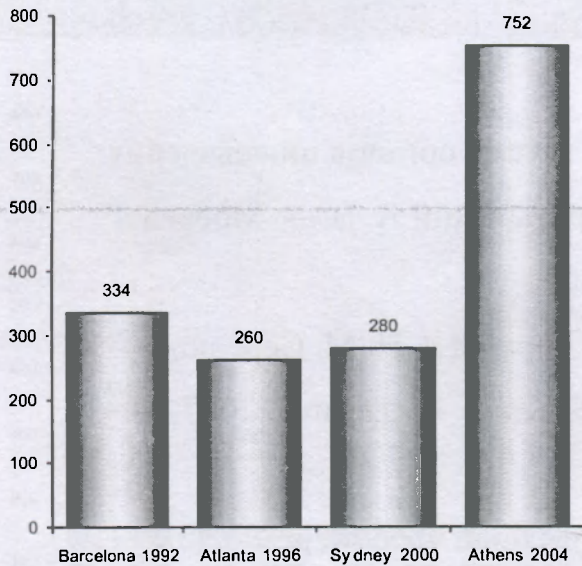


Figure 2. The dynamics of world and Paralympic records, 9<sup>th</sup>–12<sup>th</sup> Paralympics

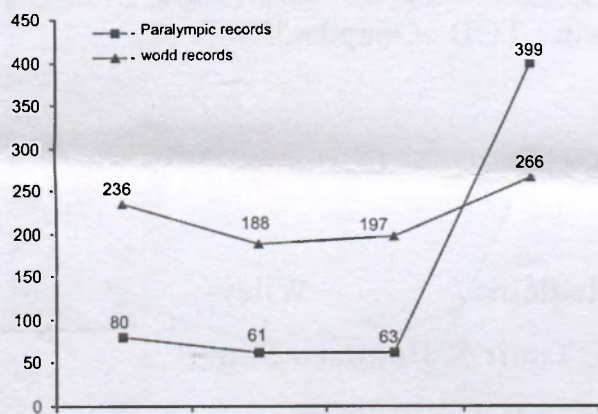


Figure 3. The dynamics of world and Paralympic records in track-and-field, swimming and powerlifting, 9<sup>th</sup>–12<sup>th</sup> Paralympics

and shooting) featured a stable development following the growing dynamics of medalists from earlier Paralympics [14, 17–19]. Some studies indicate that, for instance, the records in powerlifting competitions have increased 1.5–2 times for the last 20 years [5, 7, 19]. These studies put an emphasis on the influence of such factors as the kind and level of disability, training and competitive loads, and regeneration measures. The number of new Paralympic and world records set at the 12<sup>th</sup> Paralympic Games in Athens exceeded all expectations. Fig. 2 shows an increase in the number of records set from the 2000 Sydney Paralympics (280) to the Athens Paralympics (752).

An analysis of the distribution of world and Paralympic records between the 9<sup>th</sup> and 12<sup>th</sup> Paralympics shows that most records were set in track-and-field and swimming events. In other sports, such as cycling, powerlifting, archery and shooting, the quantity of records set was significantly lower, as reflected in the lower number of events in these sports.

Interesting conclusions can be drawn from the comparison of the number of world and Paralympic records set at the 9<sup>th</sup>–12<sup>th</sup> Paralympics. As shown in Fig. 3, the number of world records set in the most medal-winning sports (track-and-field, swimming and powerlifting) exceeded the number of Paralympic records set during these Games. The 12<sup>th</sup> Paralympics brought a change in this tendency: the number of Paralympic records (399) was significantly greater than the number of world records (266).

The dynamics of correlation between the number of world and Paralympic records in track-and-field, powerlifting, cycling, shooting, archery and other record-setting sports pointed to the clear dominance of track-and-field and swimming events at the 9<sup>th</sup>–12<sup>th</sup> Paralympics (Fig. 4–7). During these Paralympics, 37–50% of all world records were set in track-and-field and 32–48% in swimming. What is interesting, 96% of all world records set at the 9<sup>th</sup> Paralympics in Barcelona (1992) were track-and-field and swimming records. During the following Paralympics the percentage of track-and-field and swimming records gradually declined: 10<sup>th</sup> Paralympics – 93%, 11<sup>th</sup> – 85% and 12<sup>th</sup> – 79%, which can be explained by the reduced number of track-and-field and swimming events, by the athletes’ higher level of training in other record-seeking sports and competitions, as well as by the inclusion (since the 11<sup>th</sup> Paralympics) of ten women’s powerlifting events.

The Paralympic experience and literature show that the observable rapid increase in the number of world and Paralympic records at the 12<sup>th</sup> Paralympic Games in Athens (2004) was caused by many factors.

Over the recent years, a significant increase has also been noted in training and competitive loads in all Paralympic sports [3, 8, 20]. Studies show that initially the growth in training and competitive loads was based on their amount, whereas at present, Paralympic training conditions are much closer to competitive conditions in terms of their intensity. It should be stressed that our and other authors’ studies show that the amount of training loads in different Paralympic sports varies depending on the individual sport, the athletes’ disability class, the preparation level and other factors [6, 17, 20].

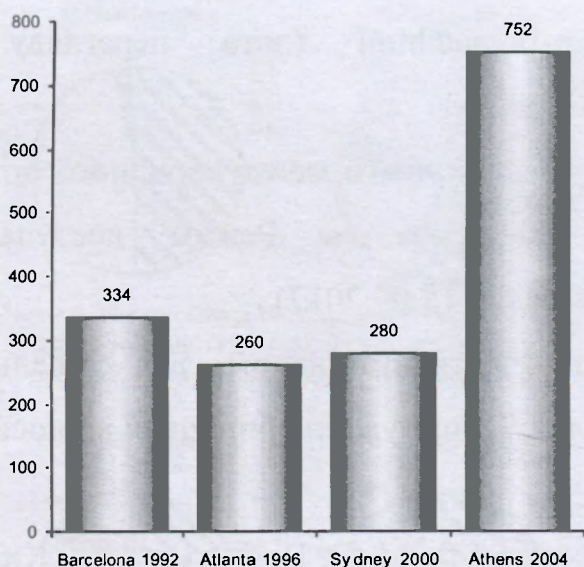


Figure 2. The dynamics of world and Paralympic records, 9<sup>th</sup>–12<sup>th</sup> Paralympics

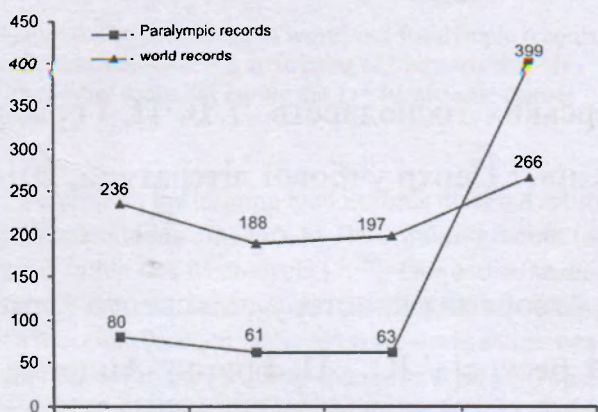


Figure 3. The dynamics of world and Paralympic records in track-and-field, swimming and powerlifting, 9<sup>th</sup>–12<sup>th</sup> Paralympics

and shooting) featured a stable development following the growing dynamics of medalists from earlier Paralympics [14, 17–19]. Some studies indicate that, for instance, the records in powerlifting competitions have increased 1.5–2 times for the last 20 years [5, 7, 19]. These studies put an emphasis on the influence of such factors as the kind and level of disability, training and competitive loads, and regeneration measures. The number of new Paralympic and world records set at the 12<sup>th</sup> Paralympic Games in Athens exceeded all expectations. Fig. 2 shows an increase in the number of records set from the 2000 Sydney Paralympics (280) to the Athens Paralympics (752).

An analysis of the distribution of world and Paralympic records between the 9<sup>th</sup> and 12<sup>th</sup> Paralympics shows that most records were set in track-and-field and swimming events. In other sports, such as cycling, powerlifting, archery and shooting, the quantity of records set was significantly lower, as reflected in the lower number of events in these sports.

Interesting conclusions can be drawn from the comparison of the number of world and Paralympic records set at the 9<sup>th</sup>–12<sup>th</sup> Paralympics. As shown in Fig. 3, the number of world records set in the most medal-winning sports (track-and-field, swimming and powerlifting) exceeded the number of Paralympic records set during these Games. The 12<sup>th</sup> Paralympics brought a change in this tendency: the number of Paralympic records (399) was significantly greater than the number of world records (266).

The dynamics of correlation between the number of world and Paralympic records in track-and-field, powerlifting, cycling, shooting, archery and other record-setting sports pointed to the clear dominance of track-and-field and swimming events at the 9<sup>th</sup>–12<sup>th</sup> Paralympics (Fig. 4–7). During these Paralympics, 37–50% of all world records were set in track-and-field and 32–48% in swimming. What is interesting, 96% of all world records set at the 9<sup>th</sup> Paralympics in Barcelona (1992) were track-and-field and swimming records. During the following Paralympics the percentage of track-and-field and swimming records gradually declined: 10<sup>th</sup> Paralympics – 93%, 11<sup>th</sup> – 85% and 12<sup>th</sup> – 79%, which can be explained by the reduced number of track-and-field and swimming events, by the athletes’ higher level of training in other record-seeking sports and competitions, as well as by the inclusion (since the 11<sup>th</sup> Paralympics) of ten women’s powerlifting events.

The Paralympic experience and literature show that the observable rapid increase in the number of world and Paralympic records at the 12<sup>th</sup> Paralympic Games in Athens (2004) was caused by many factors.

Over the recent years, a significant increase has also been noted in training and competitive loads in all Paralympic sports [3, 8, 20]. Studies show that initially the growth in training and competitive loads was based on their amount, whereas at present, Paralympic training conditions are much closer to competitive conditions in terms of their intensity. It should be stressed that our and other authors’ studies show that the amount of training loads in different Paralympic sports varies depending on the individual sport, the athletes’ disability class, the preparation level and other factors [6, 17, 20].

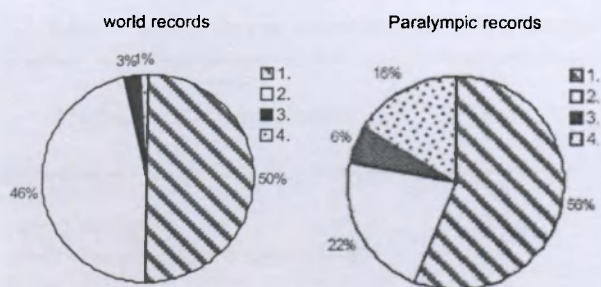


Figure 4. The percentage of world and Paralympic records in track-and-field (1), swimming (2), powerlifting (3) and other sports (4) during the 9<sup>th</sup> Paralympic Games

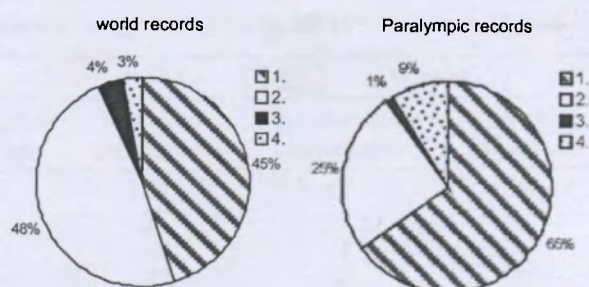


Figure 5. The percentage of world and Paralympic records in track-and-field (1), swimming (2), powerlifting (3) and other sports (4) during the 10<sup>th</sup> Paralympic Games

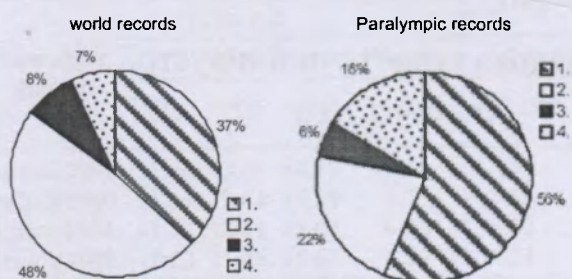


Figure 6. The percentage of world and Paralympic records in track-and-field (1), swimming (2), powerlifting (3) and other sports (4) during the 11<sup>th</sup> Paralympic Games

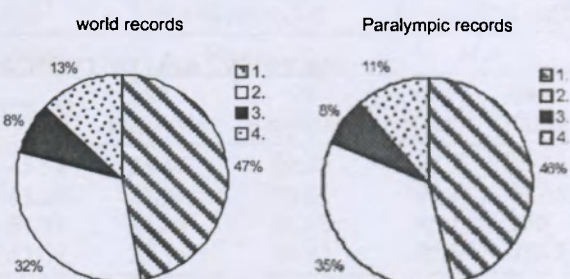


Figure 7. The percentage of world and Paralympic records in track-and-field (1), swimming (2), powerlifting (3) and other sports (4) during the 12<sup>th</sup> Paralympic Games

At present, the training load in some disabled sports and competitions amounts to 1000 training hours (or more) within one macrocycle [5, 7]. Our earlier studies [19, 20] showed, for example, the intensity of training of a four-time Paralympic, seven-time world and eleven-time European powerlifting champion Ryszard Tomaszewski (Poland) that amounted to 25–30 tons during one training session. Next to intensity, also the number of pre-competition training sessions has increased, e.g. the number of training matches in the Italian Professional Wheelchair Basketball League increased to 40–50 within one macrocycle [11, 15].

Another explanation of the rapid growth in setting the world and Paralympic records during the Athens Games of 2004 is the narrowing of sports specialization of disabled athletes, with the exception of swimmers. Between 1970 and 1980, disabled athletes usually took part in 5–7 different competitions, often in different sports. Today, such versatility is extremely rare [5, 7, 12, 13, 16].

The next factor affecting disabled sports competitions in the present period of Paralympic development is utilizing the means and methods of better sports efficiency. Along the increase in training and competitive

loads, as well as using some extra-training factors, the new training means and methods enhance the adaptability of the body, as well as allow reaching an optimally high sports level, and, ultimately, setting a world record. The optimal combination of training and competitive loads with regeneration and rehabilitation of disabled athletes increases the quality of the athletes' sports results and extends the time of their participation in Paralympic sports. For instance, Trisha Zorn, a US swimmer with vision impairment, won 42 medals during five consecutive Paralympic Games. An outstanding Polish powerlifter Ryszard Tomaszewski took part in five Paralympics, winning one silver and four gold medals.

The quality of sports equipment and facilities also exert an influence on achieving high results in disabled sports. The leading world R&D companies have developed sports equipment of high quality, such as multipurpose prostheses or light titanium wheelchairs [3, 5, 7, 9, 14]. Tab. 2 shows the technological progress significance for the application of titanium wheelchairs and multipurpose prostheses in sports for the disabled.

As can be seen, men competed in 57 and women in 29 wheelchair events during the 12<sup>th</sup> Paralympic Games. Researchers show that sports results in wheelchair com-

Table 2. The number of wheelchair and non-wheelchair track-and-field competitions during the 11<sup>th</sup> Paralympic Games

Track-and-field competitions	Total	Men		Women	
		Non-wheelchair competitions	Wheelchair competitions	Non-wheelchair competitions	Wheelchair competitions
Cyclic	130	61	28	22	19
Speed-strength	77	27	27	13	10
Multi-discipline sports (pentathlon)	8	5	2	1	
Total	215	93	57	36	29

Table 3. Winners' results at the 10<sup>th</sup>–12<sup>th</sup> Paralympics in selected track-and-field, swimming, and powerlifting events, and result forecasts in these events for the 12<sup>th</sup> Paralympic Games

Paralympic Games	100m run			Long jump		Throws (m)		50m swimming (s)		Powerlifting (kg)	
	Men			Women	Men	Women	Men	Men		Men	
	T11	T12	T53	T36–38	T42–46	T56–58	T36–38	S8 Free style	S5 Backstroke	Under 56 kg	Over 100 kg
Atlanta 1996	11.66	13.65	14.45	5.74	5.70	26.84	45.54	28.84	39.95	177.5	237.5
Sydney 2000	11.69	12.61	15.59	5.73	5.55	31.58	43.84	27.96	39.20	192.2	237.5
Athens 2004	11.37	12.51	15.04	6.06	5.02	31.73	51.31	26.84	36.75	185	250
Beijing 2008	11.22	11.85	15.63	6.16	4.74	34.78	52.62	25.88	35.43	192.5	254.2

T – track-and-field athletics, S – swimming

petitions or within the classes of amputee athletes with artificial limbs depend as much on the level of sports preparation as on the quality of the equipment. Applying the mathematical equation of regression in forecasting sports results has also been an interesting development in Paralympic sports. Despite the relatively high statistical inaccuracy, the projected results might serve as certain patterns to be attained by disabled athletes.

Tab. 3 shows a projected increase in the results in selected track-and-field, swimming and powerlifting events. Also, a decrease in the results in wheelchair events and women's long jump is seen. A similar observation can be made with reference to other events with measurable results, which is indicative of the constantly growing competitiveness in Paralympic sports.

**Conclusions**

1. The historical development of Paralympic Games is divided into three stages, featuring different distributions of sports and events, as well as different classifications of the participating disabled athletes. The most recent period is characterized by a stability in the Paralympic program and application of the functional classification, which allows athletes from different disability groups to participate in different competitions.

2. The present period of the Paralympic Games development features increased competitiveness. This is confirmed by the growing number of countries whose athletes won Paralympic medals in various competitions. The traditional leaders in Paralympic sports were replaced by athletes from China, Ukraine, Iraq, Egypt and other countries without any previous Paralympic experience.

3. New sports preparation methodology, increased training and competitive loads, as well as better sports equipment and using extra-training factors have significantly affected the number of world and Paralympic sports records set at the 12<sup>th</sup> Paralympic Games in Athens in 2004 (three times more than at the 11<sup>th</sup> Paralympic Games in Sydney).

4. The projections indicate that the major developmental trends of the Paralympic sport will be maintained at the 13<sup>th</sup> Paralympic Games in Beijing in 2008. New technologies and effective methodology in disabled sports training will continue to have a great impact on the Paralympic Games further development.

**References**

1. Anokhina T.A., Kuznecov D.V., Problems of the development of the Paralympics movement [in Ukrainian]. The current problems of physical culture. Conference materials. Rostov-na-Donu, 1995, 113–115.

2. Bashkirova M.M., Physical activity and sports among the disabled: reality and perspectives [in Ukrainian]. *Sports for All*, 1999, 1, 2, 26–28.
3. Briskin Y.A., Perederiy A.V., Stokatov V.V., Paralympic sports [in Ukrainian]. School guide. Lviv-Aral, 2001, 141.
4. Prystupa Y., Bolach E., Sports disciplines and creation of the Paralympics program [in Ukrainian]. Education, psychology, medical and biological problems of physical education and sports. Charkiv HDADM (XXIII), 2002, 72–79.
5. Prystupa E., The tendency of development of Paralympic sport [in Ukrainian]. *Adv Clin Exp Med*, 2002, 1, 59–63.
6. Orzech J., Sobiecka J., Sports for the disabled [in Polish]. AWF, Krakow 1989, 255.
7. Prystupa E., Bolach E., Prystupa T., Sport disciplines and creation of the Paralympics program [in Ukrainian]. Physical activity of the disabled. Monograph. TWK, Wroclaw 2004, 117–131.
8. Shulga L., Drahunov L., The characteristics of physical preparation of athletes in Paralympic sports [in Ukrainian]. *Science in the Olympic Sport*. Special edition. 2002, 2, 63–66.
9. Steadwar R., Peterson C., Paralympics. Canada 1997, 260.
10. www.paralympic.org.
11. Prystupa Y., Characteristics of sport competition among the disabled [in Ukrainian]. *Science in the Olympic Sport*. Special edition. 2002, 2, 36–42.
12. Maniak M., Summer Paralympic Games – Atlanta 1996 [in Polish]. *Phys Culture*, 1996, 2, 8–12.
13. Wybraniec B., Paralympics in Sydney as the biggest event in sport for the disabled [in Polish]. *Sports for All*, 2000, 4, 6–17.
14. Briskin Y.A., Perederiy A.V., Blinova S., The creation and development of the Paralympics programs [in Ukrainian]. Health and sport work with the disabled: a digest of scientific articles about physical education, sports and rehabilitation of the disabled. Lviv: Achil, 2003, V, 1, 7–11.
15. Maniak M., Barcelona 92 – Paralympic Games [in Polish]. *Progress of the Rehabilitation*, 1993, V, 7, Z. 1, 90–97.
16. Rawicz-Mankowski G., Before Sydney 2000 classification in sport for the disabled [in Polish]. *Trening*, 1998, 2–3, 141–153.
17. Briskin Y.A., Perederiy A.V., The classification strategy of Paralympics sport [in Ukrainian]. Health and sport work with the disabled: Monograph. Lviv Vydavec', 2004, 22–29.
18. Olympic arena [in Ukrainian]. Special Edition devoted to the XI Paralympic Games in Sydney. Kyiv Olympic Arena, 2001, 41.
19. Prystupa Y., Myslakowski Y., The developmental trends in the sports for the disabled [in Ukrainian]. Young Sport Science of Ukraine. *Lviv Panorama*, 2002, V, 2, 481–483.
20. Prystupa Y., Myslakowski Y., Prystupa T., The dynamics of the capacity of the disabled during the pre-training mezocycle [in Ukrainian]. Young Sport Science of Ukraine. *Lviv Panorama*, 2002, V, 2, 483–490.

Paper received by the Editors: November 21, 2005.

Paper accepted for publication: February 21, 2006.

Address for correspondence

Eugeniusz Prystupa

Katedra Kultury Fizycznej Osob Niepełnosprawnych

Zakład Sportu Osob Niepełnosprawnych

Akademia Wychowania Fizycznego

ul. Witelona 25a

51-617 Wrocław, Poland

e-mail: tetyana@poczta.onet.pl