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"Making Champions for Tennis and Life"
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TENNIS LEARNING & TRAINING SYSTEM by MBTA

INSTRUCTION MANUAL - PART 1

Written by Dr. Martin G. Baroch (Dr.MGB)

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Home for Every Serious Lover of Tennis

Dedicated to my exceptional mentors Karel Čefelin and Vic Braden as well as to all selfless highly dedicated tennis teachers, coaches, educators, organizers and administrators around the world

“To help each person maximize performance and enjoyment in his/her chosen sport in the shortest period of time”

Vic Braden (1929-2014)

WHY DTBT AND WHY FOAM BALLS?

Dynamic Total Body Tennis (DTBT) was developed by Dr. Martin G. Baroch (Dr.MGB) in the mid 90's and saw (after partial presentation in Tokyo/JPN in November 1995) its initial big scale presentations during the USTA Tennis Teachers Conference in New York City/USA in August 1997 and DTB German Tennis Congress in Munich/GER in January 1998. Many of the essential DTBT principles were soon adopted into their training systems by some of the leading coaches/national tennis bodies, others followed later. DTBT is constantly updated to reflect the developments in professional tennis, for which it partly paved the way, and new research findings.

The main DTBT principle is using power from the large muscle groups as well as body weight (proper balance) for the maximum efficiency in every regular tennis stroke. This is achieved mainly through optimal body positioning and proper pretension build-up in the most powerful muscle groups (postural muscles) during the preparation phase of the stroke, which is a very natural and health-conscious way of developing power.

As a result of this full body action, the arm can stay calmer and its coordinative part of muscles (effector muscles) can be used instead of power generation for their main function, which is fine coordination. All of this then enables the players to develop desired culture of highly efficient and enjoyable as well as sustainable ©“3 Step Tennis Stroke Regulation”, which is based on the logics of regulation/adjustment mostly used, often unknowingly, by greatest tennis/sports champions and other top performers.

Players using the DTBT principles are generating more power and are also having a higher level of control in all of their strokes. DTBT, fully scalable to any age and ability level, is bringing a new philosophy into modern learning of the tennis strokes. There is practically no significant relearning in later stages of players' development involved.

Beginners of any age start with the health-/body-conscious full body engagement right from the beginning (similar way like this is happening in golf, skiing, karate, etc.), immediately gaining the understanding (primary imprint) for optimal body positioning in the space necessary for full body activity within sound/efficient tennis strokes. This ensures they are developing a foundation for practically unlimited further development/growth potential.

In contrary, as can be widely seen worldwide, most of today's tennis teaching systems using modern equipment are focused mainly at the eye-hand-ball coordination, where the main objective is often being put on the hand/arm activity and the focus on the full body involvement is rather limited in the beginning. This suboptimal primary imprint in the early stages of players' development often causes difficulties with their further progress, limiting both players' technical/performance growth as well as results in competition and is thus one of the reasons for frustrated players leaving the game at both junior and recreational adult level.

The DTBT Foam Ball (FB) equipment by MBTA is playing an essential role in the DTBT. The same way like the ITF's Red/Orange/Green balls from the “tennis10s” / “10&under” project, the FBs provide the players with lower and slower bounce, but because of their higher air resistance (and with 120FBs also higher weight), the FBs require full body engagement from the players in order to generate enough power to play them over the

distance/net. While appropriately using specific DTBT exercises with FBs, specially developed by MBTA, players are forced through clear instant internal feedback towards optimal stroke production with sound body engagement immediately and thus developing desired primary imprint.



Based on internal feedback playing such a significant role right from the beginning, we prefer to call DTBT a learning rather than a teaching system. Playing with the DTBT FBs is very helpful not only to tennis beginners of any age. They provide also an excellent stroke improvement tool as well as a warm-up possibility for players of any calibre/experience, all the way to professional tennis. The effect remains the same, getting full body engagement right from the beginning of the tennis session. Besides being an excellent tool for sound modern tennis technique development, the FBs with their longer time spent in the air (as flying slower), are also an optimal tool for the court coverage development. They also enable players of any age/level to start playing rallies as well as competitive games (in the service boxes) very early in their development (mostly as soon as during the 1st lesson already! Playing with FBs also brings high cardiac output (thus having high physical training effect) combined with very low impact shock, which makes it very body-friendly and health supportive. The quality and not the quantity is the primary FB objective.

STANDARD TRAINING SYSTEM UNDER THE DTBT GUIDELINES by MBTA

Described below is the standard basic training system under the DTBT guidelines, which should serve as a backbone for the practices. The MBTA in principle adheres to this practice set-up logic, but there are many partial varieties of the practices based on the ability/competence level, stated practice plan reflecting current needs of the players and given training setting.

As standard, players arriving for private/semi-private practice sessions are being requested to individually work on general warm-up for at least 10 minutes before the session (various footwork varieties, rope-jumping, dynamic stretching, etc.). In larger group/team practice settings, the warm-up (coordination running, dynamic stretching, frequency footwork) is mostly part of the session program as this is being run by the MBTA coach.

For optimal stroke-like warm-up with full body engagement in the private/semi-private practices, MBTA uses the 210mm diameter White Coated Foam Ball=210FBC (ca. 325 grams / 160mm White Coated FB=160FBC of ca. 170 grams for small children) with full



body engagement – for both-sided pretension based rotation throwing with the use of both hands (as seen below). This initial warm-up with optimal dislocation between upper and lower body goes on in the service boxes (coach together with the player in the private practice/lesson setting, players together in the semi-private session) and the distance from the net is given by the strength of the particular player. MBTA suggests a court positioning with close to the longest possible throwing distance for each of the players to encourage full body engagement with each throw. From technical point of view the open-stance with the throw being initiated by pushing-off the ground by the outside foot is requested on both sides. Shoulders rotate around 180° in the process of the throw, the balance of the body goes from the outside to the inside and both hands should remain on the ball until its release in front of the body. The outside palm should point at the target after the throw. Running to the ball and creation of an ideal space for each throw are being increasingly accentuated with the ongoing skill improvement.



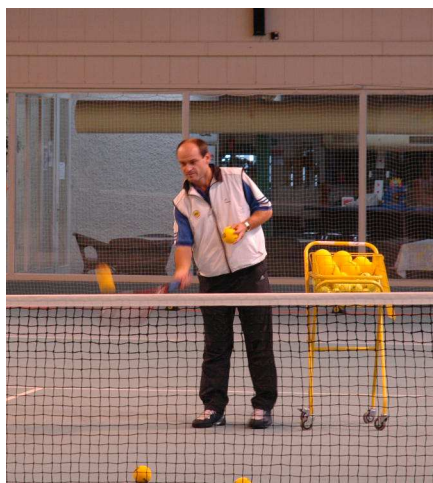
Competitive games in the service boxes (with two-handed overhead serve) are very intense and a highly enjoyable warm-up form (after some initial warm-up throws). The basic rules are that before every throw the ball (caught after maximum of one bounce) has to be taken with both hands back behind the body, players can take maximum of one step (preferably with outside leg) with the ball in their hands and two-handed throws must be low to high only. Smaller children and physically weaker/beginning players use 1 box each; physically stronger players have to cover 2 boxes each.

Playing with the use of a tennis racket then mostly starts with 1/the 90mm diameter Yellow Foam Balls=90FBs (ca. 22 grams) and goes over 2/the 120mm diameter FBs=120FBs (ca. 52 grams) to 3/the standard yellow tennis balls=YTBs (ca. 54 grams).



With children and beginners, the entire practice could be run with the 90FBs or with both the 90/120FBs only. The exact steps being taken depend on the objectives being fulfilled by the players as observed by well-educated/skilled coach.

With both the 90/120FBs the court used are the service boxes (or “ITF’s Red” court when using portable nets to create multiple courts on the standard-sized tennis court). With the 90FBs the optimal standard setting is with the players playing majority of the strokes over the close to longest distance possible, from which the ball can still be played over the net and coach feeding/returning the balls by volley from position relatively close to the net (as shown below). Space adjustment/running to the ball plays an ever increasing role as the stroke technique is developing! As early as certain automation of the in the beginning rather isolated skills/strokes (forehand, backhand, topspin-volley, slice-volley, slice-forehand/-backhand, overhead, serve) is reached, stroke combinations and patterns will be also increasingly practiced, with ever growing coordination and specific conditioning demands.



At MBTA we usually start with few moments of hitting with the softer **90FB Red** (having lower and slower/shorter bounce) giving seemingly plenty of reaction time to the players on one side, but requesting lowering of the center of gravity and fast advancing against the ball on the other side (is otherwise also ideal for small children) and then spend more significant amount of time hitting with the slightly harder **90FB Green** (having higher and faster/longer bounce). Here, as in general, the exact time blocks spent with particular FBs/balls depend on the ability/skill level of the players and objectives pursued by the coach. Changes of the different FBs/balls within the practice support the development of coordination skills and mental flexibility/adaptability.

Regarding technique in general, the first steps in the DTBT system go by standard over the open-stance on both forehand and backhand sides (also with one-handed backhand). The key elements are: 1) Space adjustment, 2) Pretension build-up, 3) Initiation by pushing-off the ground, 4) Early impact, 5) Full shoulder motion with long follow through and pronation (supination with one-handed backhand) towards target and 6) Weight-transfer/balance from outside to inside. MBTA doesn't see the open stances as the only stroke variety, but sees it as essential for the players to have the primary imprint regarding reaction to an incoming ball being connected with the activation of the outside leg/foot combined with dominant body side turning back (pretension build-up). MBTA believes that in the time of ever increasing speed of the game, this is the best possible automatic reaction, which plays also an important role in the development of an



efficient return as well as in building of the capacity to sustain in body/balance control while under time and positioning pressure.



In later stages of the development, players learn hitting also from other stances as well as to develop certain stroke versatility making them able to react quickly and efficiently at different playing situations. The key to success is not in the exact positioning of the feet, but in building of the capacity to create a position in space where power from the body and body weight can add significant energy and stability to the racket travelling towards the impact as often as possible.

In semi-private practices with two players, either players hitting with the coach are switching the positions after 1-3 minutes (based on intensity), whereas the player having the break is collecting the balls or players hit together, while the coach is feeding the initial balls and directing the way of playing as well as giving feedback (in a positive way) to the stroke production by the players. For this purpose, players are playing in the service boxes and different varieties can be chosen – 1 box cross court/down the line each, 2 boxes on each side, 1 box against 2 boxes, etc. We see it as essential that hitting into reasonable target zones (controlling the ball) belongs to every ball/stroke being hit at any level.

Point play in the service boxes with full serve (1 serve per point only, players switch in serving after each two points played – one serve from the right side, one serve from the left side, mostly up to 10 points) is an excellent developmental tool with both a “fun factor” as well as a high level of physical intensity. There can be exercises organized with 3 or 4 players as well, but besides keeping 2 balls going with each 2 players, the amount of strokes by player and given time frame will be decreased in such settings. Doubles play with FBs in the service boxes is also very popular with most players and will introduce doubles play very early in their training/development.

In general, MBTA attempts to run the biggest possible portion of the practices in a competitive form (technical training combined with point games – example forehand only cross-court exercise for points), where the highly complex competencies of the players tend to be much better developed and which increasingly motivate the majority of the participants of any age and level.

With the 120FBs, the same exercises and point play like with the 90FBs can be organized. If coach is actively playing with the player, he/she will mostly play also strokes after the bounce from different positions behind the service line instead of



volleys as played with the 90FBs. High intensity play with 120FBs is highly physically demanding and besides greatly supporting technical development of the entire portfolio of sound strokes with excellent power potential, it serves also as an excellent conditioning tool developing mainly speed, dynamic power in the core muscles as well as stamina in these elements and in general. Prolonged point playing with 120FBs significantly increases both anaerobic as well as aerobic capacities in the way as needed for competitive tennis.



At MBTA, we use 90FB and 120FB Green as standard for both technical exercises/rallies as well as point play. The time split between these two depends on actual performance capacity of the given players. The 120FB Green is in our opinion the most significant element of the DTBT FB program to be used at any level and is being used also by some of the leading coaches around the world as well as by some world-class players. As can be seen bellow, players using the 120FBs are developing a high degree of efficient dynamic body involvement in the strokes and long follow through, both very similar to the way of playing by top world-class players, which is otherwise (mainly with junior players growing up using today's modern tennis equipment) not typically being seen.



Using FBs for slice-volleys and slice-backhand/forehand is then creating a situation, where anything else as full body action in a way “step-hit-step” (contact of the racket with the ball occurs between two steps) is practically impossible in order to hit the ball over a distance/net.



MBTA uses the **120FB Blue** with its higher/faster bounce and more weight mainly in practices with players possessing already solidly established technical skills. This more “aggressive” FB helps mainly in building of the capacity to withstand (efficiently absorb for own use) pressure of aggressive “heavy” strokes from the opponents and additionally supports the further development of speed and overall time effectiveness of the players.

An added bonus of all DTBT FBs is that they can be used also for sound hitting against the tennis wall and while using a mobile tennis net, a playing field can be created almost anywhere, even on slightly uneven surfaces (we were even able to get with the 120FBs some play going on the surface pictures below). To prevent possible injuries, good care is always to be taken for safe surface as well as for safe surrounding with enough space (free of any dangerous objects) and appropriate protection/blockage for/from FBs getting out of control. FBs can be used also in settings with limited coach supervision (for example multiple small courts on one regular tennis court) as their above described parameters demand from the involved players proper full body action in order to get any kind of play/rally going.



Besides the above mentioned 90/120FBs, also **150/190FBs** are available. **MBTA explicitly warns that using the 150/190 FBs for playing with tennis rackets can be dangerous for the players!!!** MBTA sometimes uses 150FBs with skilled players capable using them (mainly as specific conditioning exercise – endurance under pressure) after clear warning being given that all strokes must have impacts far in front

of the body, have to be supported by the body action and wrist needs to be locked. MBTA sees the 190FBs mainly as conditioning/coordination tools (not for active hitting with a tennis racket).

Based on the DTBT curriculum, players should develop the capacity to play practically all tennis strokes with the 90/120FBs. Based on our experience of 15+ years in using FBs, players who learned to play all strokes of tennis with the 120FBs were able to easily transfer the skills into playing with regular yellow tennis ball (YTB). The technical stroke build-up process, which proceeds much faster with FBs than with YTBs, proceeds as follows using DTBT system:

- 1/ Open-stance forehand and backhand, and as soon as certain skill automation is established,
- 2/ Combinations of forehand and backhands (with proper grip change), soon to be followed by
- 3/ Topspin-volleys on both sides, and later, with topspin-volleys established,
- 4/ Standard/slice volleys (one-handed on both sides), and after gaining the understanding for the standard/slice volley being an action without any significant racket take-back (mainly on the forehand side), but with an active transfer of the body weight against the target,
- 5/ Combinations of topspin-volleys and slice-volley, and parallel with the slice-volleys established,
- 6/ Slice, which is then pursued mainly on the backhand side (but some forehand slice experience is also helpful). Parallel to above described process,
- 7/ Serve/overhead motion is introduced (starting with the first experience parallel to 1/ or 2/). With the serve/overhead, focus is mainly on proper pronation as function of the entire upper body (not forearm only).
- 8/Complex exercises/patterns, where many or all above mentioned strokes are being incorporated into rallies and player practicing with an experienced coach (educated in DTBT) is capable to randomly select and also execute any proper stroke variety as reaction to the ball coming from the coach, are the pinnacle of the entire process. Such complex exercises represent an ideal possibility for tennis specific coordination development and build-up of strategic patters.

After playing with the 120FBs, players are coming (in both, given session as experienced players or on the developmental pathway as beginners) over to the yellow tennis balls - YTB (mainly for small children, adding the “ITF Green Ball” to the pathway for a short amount of time is eventually also possible). The ideal outcome is that while quickly adjusting to the different bounce/timing, players stick with the skill as practiced with the 120FBs before. The curriculum listed above doesn’t mean that beginning players first have to get to point 8) before hitting with the YTB. After certain stroke control at stage 1) or latest 2) is achieved, the players will use in parts of the YTBs in parts of the sessions, trying to reach stroke quality close to the one with the FBs. In general, new skills will be learned with the FBs first and after initial automation of the skill was reached; the skill will be transferred into the playing with YTBs. For certain time, stroke quality achieved with the FBs will be higher than the quality of strokes reached with the YTBs. After certain time, players will be capable of practically the same stroke quality with both the FBs and YTBs. The FBs will then remain as an optimal tennis-specific full body warm-up tool keeping player on the track of full body engagement in every stroke. Players, who learned the tennis strokes through the play with the FBs or use them in the warm-up on regular basis, develop high level of efficient stroke dynamic

(aggressiveness), mostly unparalleled to players developed by using ITF's "Red, Orange, Green" and YTB only.

From technical point of view, certain basic parameters are building DTBT guidelines for each specific tennis stroke. The DTBT Basic Technical Parameters as pursued by MBTA are the following:

Forehand – 1) Semi-Western grip, 2) Initiation with the outside (dominant-side) leg, 3) Turning upper body back with the non-dominant hand on the racket, 4) Palm of the hitting arm is constantly facing away from the body during the backswing (actually upper-body back-turn), 5) Pointing at the ball with the non-dominant hand, 6) Forward body/racket motion against the ball initiated by pushing-off the ground, 7) Impact far in front of the body, 8) Long follow through with pronation against the target

The photos below show the most important DTBT Basic Technical Parameters mentioned above in the action of the MBTA players; age doesn't play any significant role:



The photos below show the most important DTBT Basic Technical Parameters in the action of the top professional players. Their eye focus at the impact zone is excellent.



PRACTICAL REMARKS

The information as presented in this DTBT Instruction Manual covers the most important elements to be considered for an efficient and sustainable technical development of the tennis players based on the author's point of view. It can't address all involved details and varieties, which are often specific to a given player. One of the essential elements of DTBT is its versatility. The same equipment set, same exercises



and same principles/parameters are being used as a base for all players from small children and juniors over hobby/amateur players all the way to professional Tour players. DTBT doesn't set any age limits for certain steps. The practice forms, steps and speed of the players' development have to be constantly adjusted based on the current (already achieved) state of their physical, technical, mental and emotional capacities. The most appropriate person to decide the steps to be taken is an educated coach with experience who works with the players on regular basis. As with any intense sports activity, proper active (mainly compensation exercises) as well as passive regeneration should be part of any training plan. Based on the way tennis is being played today, besides other important exercises to be consulted with physical trainer, strengthening of the external shoulder rotators should be a firm part of any training plan, on daily basis!

DISCLAIMER

As sports, besides their positive effect on the well-being, carry also certain risks and can be hazardous, please carefully analyze, if tennis and DTBT are the safe choice for you and/or your clients/students. Before starting, every player should be tested by medical professional for his/her physical ability to play tennis and accept its high physical load, which can occur mainly at the high intensity of playing. As there are many ways, how to achieve success and top performance, we can't guarantee that DTBT is the best development pathway for everybody. We (Dr. Martin G. Baroch, MBTA and all of their associates) decline any responsibility, direct or implied.

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ADDITIONAL EDUCATIONAL POSSIBILITIES

MBTA offers complex DTBT Educational Seminars and DTBT Training Clinics presented by Dr. Martin G. Baroch as well as ©DTBT Coach Certification and comprehensive tennis consulting to interested parties worldwide. Please ask about the details of our ©DTBT World Tour.

The current main seminar topics are:

- 1/ "Decisive Technical & Mental Aspects in Development of World-Class Tennis Players" – complex overview presentation, which can be enhanced by in-depth seminars to partial topics
- 2/ © "3 Step Tennis Stroke Regulation" – break-through seminar explaining the logics of regulation as practiced, often unknowingly, by many great tennis/sports champions.

3/ © “180° Racket Turn Makes the Difference in the Modern Game” – seminar explaining the main technical factors of today’s modern tennis; includes also legendary 2003 seminar by Dr.MGB - © “Last 20% Decide It All”

USPTA online-shop – www.usprotennisshop.com carries DVDs with recordings from the seminars as presented by Dr. MGB at the USPTA World Conferences, among them “Dynamic Total Body Tennis – future of the game” & “Hip and shoulder activity determine stroke effectiveness and injury probability”

ABOUT THE AUTHOR



Dr. Martin G. Baroch (Dr.MGB) is the owner of the Martin Baroch Tennis Academy & Human Performance Center (MBTA & HPC) based in Zurich area of Switzerland since 2002. After the coaching and educational career (from 1986 on) in his native Czech Republic’s capital Prague (former Czechoslovakia), Baroch spent almost 10 years in the Swiss Olympic Training Center in Leukerbad/VS in the Swiss Alps. He has provided coaching and consulting services at professional tournaments and ITF/TE junior events since 1991. Among others he worked with Petr Korda, 5 players, who reached top 100 positions on WTA ranking, top tennis juniors as well as with world-class Alpine skiers. Baroch, founder of the Czech Professional Tennis Association (CPTA in 1992) and its Education Director, was a long-time USPTA International Head Tester and member of the USPTA National Education Committee; he holds Master Degree in Tennis Coaching from Charles University in Prague and is also certified professional with the Swiss Professional Tennis Association (SPTA) and PTR Professional 5A. Baroch, a medical doctor by education, developed and constantly updates his own fully scalable tennis teaching system ©“Dynamic Total Body Tennis” (DTBT), runs his own educational tennis social network MyTennisWorld.net (since 2007) and produced a worldwide distributed (Europe-wide broadcasted) tennis documentary “A Tennis Champion is Born” (1995). In 2003 he explained to the tennis world in the ©“Last 20% Decide It All” the importance and also the associated challenges (mainly mental) of the full body engagement in all tennis strokes. Here he showed weaknesses in the official methodologies of many national and international tennis associations. This information and his other seminars presented worldwide over the past two decades caused sustainable change and corrections in the tennis teaching and coaching by the world’s leading tennis coaches as well as international and national tennis organizations and subsequently influenced the stroke production in professional and top junior tennis. His DVDs released by USPTA: “Technical, tactical and developmental aspects of serves and volleys”, “Hip and shoulder activity determine stroke effectiveness and injury probability” and “Dynamic Total Body Tennis – future of the game” are building certain cornerstone of modern tennis training. In his early years, Baroch while acting as a conditioning coach for Czech Petr Korda developed “Medicine Ball Stroke-like Throwing” warm-up and trainings form, which is widely used worldwide today. “Dr.MGB” also calls his own a 150.000+ photo database documenting strokes of practically all leading tennis players of the past 15+ years. This database builds one of the foundations of his research and small parts of it can be seen on www.MyTennisWorld.net.

DTBT TESTING SET - SPECIAL OFFERS

The DTBT Foam Ball (FB) testing set as seen bellow (**1 x 90FB Red, 2 x 90FB Green, 1 x 120FB Green & 1 x 120FB Blue**) is packed in a new eco-friendly reusable TASCHKA® net bag (available in red/black/olive green) great for carrying any kind of tennis balls, and is available for just:

1/ US\$ 69.95 (per PayPal) for one testing set (5 FBs) including registered priority shipping and handling to an address anywhere in the world (regular list price of this order inclusive priority shipping would be US\$ 103.00 in Europe / US\$ 118.00 anywhere outside of Europe).

2/ US\$ 129.90 (per PayPal) for two testing sets (10 FBs) including registered priority shipping (regular list price of this order inclusive priority shipping would be US\$ 166.00 (Europe) / US\$ 181.00 (outside of Europe). Maximum 2 testing sets per address over a 12 month period!

Simply forward a PayPal payment to drmgb11@gmail.com together with the shipping address. **That's all you need to do!!** The box with the FBs will arrive within 5 (Europe) / 10 (outside of Europe) working days after the PayPal confirmation at your door anywhere in the world!

This offer can't be combined with any other promotion/special offer. No substitutions are possible. The currently valid full DTBT FB Catalogue will be sent on request to all interested parties.

