

Method of development of flexibility and co-ordination between muscles

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Flexibility, it is an absolute range of motion in a joint or row of joints, attainable in instantaneous effort. A man is not identically flexible in all of joints. The level of flexibility is higher somewhere, somewhere below. Also the level of development of flexibility differentiates in different directions in one joint. Easy implementation of longitudinal, not index of easy implementation of transversal strings. The basic task of exercises on a stretch consists of that, to increase length of muscles and copulas to the degree, proper normal anatomic mobility in joints. Flexibility must be in optimum correlation with muscular (muscle) force. Insufficient development of muscles, circumferential a joint, can result in excessive mobility them and to the change of statics of human body. From the anatomic and practical point of view large mobility is expedient in thurls at bending forward and less at unbending back. Efficiency of exercises on tension will be greater at the protracted influence, but in relation to small intensity. It is well-proven researches, that exercises on a stretch with regularity of progress, it is expedient to execute two times in a day. For the maintainance of flexibility it is possible to execute them rarer. Combination of power exercises with exercises on a stretch is instrumental in harmonious development of flexibility: the indexes of active and passive flexibility are improved, in the progress diminishing of difference between them. Exactly this office hours can be recommended the dancers of all of specializations for the increase of active flexibility, showing up in the special, technical exercises. Executing only power exercises, the capacity of muscles diminishes for a stretch, and the permanent stretch of muscles (at the exception of powerful reductions) weakens them. Therefore during employment it is necessary to prefer frequent alternation of exercises on flexibility with power exercises. Such method provides the simultaneous increase of force and flexibility in-process not only with professional but also with beginners.

Forms of display of flexibility

On a level

General flexibility characterizes mobility in all of joints of body and allows to execute various motions with large amplitude.

The special flexibility is maximum mobility in separate joints, determining efficiency

of professional activity. The special flexibility is acquired in the process of implementation of certain exercises on tension of muscularly-ligamentary vehicle.

In grain motions

- active, characterized in size amplitudes of motions at independent implementation of exercises due to the efforts;
- passive, characterized maximal in size amplitudes of motions, arrived at at the action of external forces (by a partner or burdening).

In passive exercises on flexibility the greater is arrived at, than in active exercises, amplitude of motions. A difference between the indexes of active and passive flexibility is named reserve tensility or supply of flexibility. On employments it is necessary to apply both methods in an equal measure.

On the method of displays flexibility is subdivided

Dynamic flexibility shows up in motions (jumps, motions of hands, inclinations et cetera);

Develop flexibility by exercises on the stretch of muscles and copulas. In a general view they can be classified not only on an active, passive orientation but also in grain works of muscles:

- dynamic;
- static;
- stato-dynamic exercises on a stretch.

Types of stretch

A ballistic stretch is supposed by the use of impulse of moving organ for the compulsion of muscle to stretch (sharp, springy, stroke motions). This type of stretching is most dangerous, and fraught traumas, as a muscle does not have time to adjust to new length fibres constantly consist, and there is not a phase of weakening, enabling gradually to stretch.

A dynamic stretch is the slow guided transferring of parts of body to maximally possible position.

Active stretch - there is acceptance of necessary position and withholding of him through workings muscles. This kind is supposed by not only development of flexibility but also force. As a rule, such position holds out no more than 10-15 seconds.

A passive stretch is acceptance of the necessary stretched position and withholding of him through hands, partner or equipment.

Static stretch - takes a place at a necessity initial position, weakened, and partner slowly, fluently "finishes" pressing out you in more stretched position.

An isometric stretch is a type of static stretch which resistance of groups of the stretched muscles is added at, abbreviating them. For example, resisting a leg in a wall to move it, motion of wall does not take a place, but a muscle is strained. This type of stretch is more effective for development of passive flexibility and force. It can execute him through a partner, equipment, own hands, utilize a wall, half, supports. Isometric method of stretch, it is an actively-power method of development of flexibility, the phenomenon of A.A.Ukhtomskogo is fixed in basis of which. It is the spontaneous taking of direct hand after the 30-60-second isometric tension of muscles. For example, a hand is involuntarily taken aside after an attempt to execute this motion, upright close sideways to the wall. The analogical phenomenon is observed at implementation of equilibrium and stretch of rubber shock absorber a free leg. To usually in this case executing it is not succeeded to heave up a leg on an usual for him height. After the removal of shock absorber a leg involuntarily rises considerably higher than level, ordinary for this performer. At the actively-power method of development of flexibility force of muscles in the area of "active insufficiency" and amplitude of motions is increased. (It is not recommended to utilize this type of exercises children as, a bone yet is not enough strong and to the elderly people which bones can be very fragile at. Loading on a bone, at such stretch, is ever-higher).

There are a few techniques of isometric stretch:

- initial position, as for a passive stretch, 7-15 seconds of isometric effort, 20 seconds rest and weakening.
- initial position, 7-15 seconds isometric effort, 2-3 seconds softening, through a partner, hands or equipment smooth leading to in more stretched position during 10-15 seconds. Then rest 20 seconds.
- initial position, 7-15 seconds isometric tension of protractile muscles, 7-15 seconds isometric tension of muscles-antagonists (muscles, executing an action, reverse to the first). For example, a biceps and triangularis is muscles-antagonists. A biceps bends a hand, triangularis - unbends.

It is recommended to do from 1 to 5 repetitions on every group of muscles. It is not necessary to execute an isometric stretch more frequent than once at 24 - 36 o'clock. The best of all to alternate in a day with a static and passive stretch.

Basic methods of training of flexibility

1. The method of frequent stretch is based on property of muscles to stretch considerably anymore at the frequent reiterations of exercise with the gradual increase of scope of motions. At the beginning sportsmen begin exercise with relatively small amplitude, increasing it to 8-12th a reiteration to the maximum. Highly skilled performers succeed continuously to execute motions with maximal or near to it amplitude to 40 times. The limit of optimum number of reiterations of exercise is beginning of diminishing of scope of motions by a body. The use of a few active dynamic exercises is most effective on a

stretch for 8-15 reiterations each of them. In the flow of employment can be a few such cerouss, executable in a contract with insignificant rest or with other, including power, by exercises. It is thus necessary to watch, that muscles did not “cool” off. Active dynamic exercises can join in all of parts of training employment. In preparatory part these exercises are component part of general and special limbering-up. In basic part of employment it is necessary to execute such exercises a few series, alternating them with work of basic orientation. If development of flexibility is one of basic tasks of training employment, expediently exercises on a stretch to concentrate in the second half of basic part, selecting their independent “block”.

2. The method of static stretch is based on dependence of size of stretch on his duration. At first it is necessary to be weakened, and then to execute exercise, retaining eventual position from 10-15 seconds to a few minutes. To this purpose various exercises from yoga, passing centuries-old verification, are most acceptable. These exercises are usually executed separate series in preparatory and final parts of employment, or separate exercises are utilized in any part of employment. But a most effect is given by daily implementation of complex of such exercises as separate training employment. If the basic training is conducted in a morning clock, static exercises on a stretch it is necessary to execute in the second half of day or in the evening. Such training usually occupies to 30-50 minutes. If basic training employment conducted in the evening, complex of static exercises on a stretch it is possible to execute and in morning time. These exercises must be utilized and in preparatory part of employment, since them limbering-up, dynamic specially-preparatory exercises are whereupon executed, with the gradual increase of their intensity. During such leadthrough of limbering-up, as a result of implementation of static exercises, muscles and copulas, limiting mobility in joints, stretch well. Then at implementation dynamic specially preparatory exercises warmed up and prepared to intensive work of muscle. Complexes of static exercises on a stretch it is possible to execute and with a partner, overcoming with his help the limits of flexibility, exceedings those which can be attained at independent implementation of exercises.

In every integral action it is necessary not only to abbreviate and to stretch separate muscular groups but also weaken. Such muscular office hours are most advantageous, at the system of processes of excitation and braking, that stipulates work of motive vehicle to diminishing of power expenses. It is possible only in case that during work in a state of active excitation will be only muscles which indeed must participate in implementation of this motion (poses). Other muscles at this time are weakened. By exercises on weakening it is possible will learn consciously and arbitrarily to weaken separate muscular groups and able rather to capture the technique of exercises. A braking process and weakening of muscles related to him play in the favour of flowing of restoration processes. Therefore exercises on weakening are utilized also for the improvement of circulation of blood in muscles or as distracting exercises, in particular case after strong tensions of static character. Able arbitrarily to weaken muscles, it is necessary to develop ability to perceive the changing state of muscle, I.e. different degree of weakening. For the decision of this task such exercises by which it is possible to learn are utilized:

1. Expressly to distinguish feelings of the tense and weakened state of muscles in relation to ordinary, strong and insignificant tension;
2. To weaken one groups of muscles at simultaneous tension other;
3. To support motion of the weakened part of body amain by the use of active motion of other parts of body;
4. Independently to determine in the loop motions of phase of rest and according to them maximally to weaken muscles.

Basic recommendations at training of flexibility

1. Largely, promote efficiency and reduce possibility of traumas.
2. Before the beginning of implementation of exercises on flexibility a limbering-up is needed for the warming-up of organism and improvement of bloody supply of muscles. Stretching, usually, is included in warm-up and final parts of employments, but it is necessarily conducted after warming up exercises.
3. Beginning a stretch is recommended the passive and static stretching, whereupon to pass to dynamic, active or isometric, and to conclude in a reverse sequence.
4. Exercises on a stretch join in the tail-piece of training. On duration it makes 10-20 minutes and besides the improvement of flexibility, diminishes tension in muscles and delivers from the accumulation of suckling acid, and, consequently, diminishes the pain feelings after loading.
5. At employments by power exercises, it is also necessary to stretch, as it reduces a sickliness from the accumulation of suckling acid in muscles. At implementation of power exercises there are microscopic traumas in muscular fibres, during 1-2 days fabric heals and grown. Consequently, without stretching, it will heal in the shortened kind.
6. At the construction of employment on development of flexibility it is necessary to think over order of implementation of exercises. As in implementation of the basic synthesized exercise, as a rule, it is CPLD with participation many groups of muscles, therefore, preliminary, it is needed to analyse execution of him in more detailed and successive elements.
7. Muscles, accepting the less participating in implementation of basic exercise, from the unpreparedness will mix basic. That also can result in a trauma.
8. Duration of implementation of exercises on stretching hesitates from 10 seconds to 1 minute (more frequent than all, about 20 seconds, and for children and teenagers - less than).

9. The correct breathing helps to weaken muscles, increase the influx of blood and delete suckling acid. Breathing must be quiet, increasing a stretch is necessary on exhalation. you breathe through a mouth and nose.
10. Vipolnyaya of exercise on a stretch an enormous value has control and self-control:
 - control is carried out by sight;
 - self-control is carried out a performer and is based on the internal feelings. For implementation of some exercises the help of partner can be required. These exercises can be very effective, but remember, if teacher - experimental, which can trusted, a partner does not possess certain experience and that is felt by you does not feel, therefore can not at once react on your sense of discomfort. A man which you trust must will be your partner, necessarily agreeing with him about a signal which able to give in the case of necessity to halt stretching.
11. You remember that as though you did not want quick to increase the flexibility, during implementation of exercise, PAIN FEELINGS BEING does not MUST. you will learn to distinguish sense of pull of muscles from the pain feelings, anchorwomen to the trauma.

Exercise on development of flexibility to every group of tests

Necessary rules at implementation of exercises (base) on flexibility:

- before the beginning of employments there is a good warming-up, to sweating, (sweat secretion; perspiration) ;
- all of motions are executed softly, fluently without jerks, slowly and evenly;
- to execute exercise to appearance of feeling of easy sickliness, which serves as a signal to stopping of work;
- to observe the necessary condition of increase of level of flexibility - regularity of employments.

Base (base - French; from greek is basis), foundation, support.

1. Humeral joints

A humeral belt takes part in respiratory motions, high mobility of his joints influences on the size of inhalation and exhalation. Also for the maintainance of correct carriage.

2. Elbow joint

Natural mobility as a rule suffices and does not require the special training. Strongly developed musculature quite often the complete unbending is impossible in an elbow joint, that is related to the increase of tone of muscles - flexor of forearm. With the poorly developed musculature it is possible to look after a hyperextension even, there is greater part of traumas of elbow joint exactly on their stake.

3. Radiocarpal joint

Overhead extremities consist of three departments - shoulder, forearm and brush.

4. Spine

Flexibility of total-body is largely determined mobility of joints of spine. As N.M.Amosov considers, the unique reliable mean of prophylaxis of changes mobility of joints of spine are exercises, resulted below. For a deloading on intervertebral disks most exercises executed in position lying or sitting.

5. Thurl

The greatest in a human tel. He is the mestome of attachment of large, well developed muscles. These muscles provide possibility of implementation of various motions - at run, jumps and other Mobility of thurl is important for making of correct position of pelvis, and, and carriages.

6. Knee-joint

Mobility usually is satisfactory. There is not unbending and hyperextension. In last case a joint becomes especially vulnerable for traumas at sharp tension, unsuccessful landing after jumps. Deviations from a norm in the structure of knee-joints tells also on the form of feet of O-obraznoy. A correction of these defects is most effectively in early age.

Special exercises. In some measure instrumental in shortening of weak, stretched muscles and weakening shortened, therefore at a persistence it is possible to decrease easy curvature.