EXERCISE IN JUDAISM

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OVER the last decade regular exercise has become a fundamental means of developing and maintaining an improved sense of well-being in healthy and disease-affected populations. While the physiologic basis for improved physical work capacity and increased maximal cardiac output has been clarified, improvement in longevity and decrease in mortality have not been conclusively demonstrated. A recent longitudinal study suggested a protection relationship for physical activity on the mortality rates from all causes of a cohort of college alumni. In an earlier review of this population, a strong inverse association was observed between exercise and death from cardiovascular diseases; a weaker relationship was found between exercise and death from cancer. Other studies have generally corroborated a decreased cardiovascular mortality and event rate in large populations.

Nonetheless, evidence that regular exercise promotes increased survival after myocardial infarction is more problematic, perhaps because of difficulties with sample size. Trends toward improved survival have been noted although in these relatively small trials statistical significance could not be achieved. Mood and anxiety levels following myocardial infarction generally improve with physical exercise programs.

While such scientific data have become available of late, the role of exercise in preserving life and, in fact, increasing longevity, concerned scholars of antiquity as well. Jewish culture has been stereotyped as basically scholarly and sedentary, but traditional Jewish sources of several eras portray involvement in a broad spectrum of exercise activities. In earliest times,
recreational activities derived directly from the serious and real needs of daily survival.

In 1926 Sussman Muntner published an article in German entitled "Physical exercise and the Jews from ancient to modern times." This article was recently reprinted in Hebrew in a Muntner memorial volume. The present essay was stimulated by Muntner's work and by the widespread popularity today of physical exercise in many forms as an important measure in the maintenance of physical and mental health.

BIBLICAL AND TALMUDIC SOURCES

Isometric and isotonic forms of exercise were commonly encountered in agricultural and military contexts in Biblical times and couched in religious or ritual language in the Talmudic era.

Jacob, the ostensibly sedentary dweller in tents (Genesis 25:27), wrestled with an angel and prevailed (Genesis 32:36). He also rolled a large stone from the mouth of the well and watered the flock of Laban (Genesis 29:10). Lifting or moving a huge stone was later recognized as a test of one's strength (Zechariah 12:3). In commenting on the stone of Zochelet (I Kings 1:9), the medieval commentator Rashi states that youths tested their strength by trying to move or drag it. After the conquest of Canaan, Jews of ancient times were farmers who tilled the soil and raised and bred cattle and other livestock. Physical activity was recognized as a good soporific as stated: the sleep of a laboring man is sweet (Ecclesiastes 5:11).

The strength of the heroes and mighty men of Judaism such as Joshua, Samson, Gideon, David, and others were praised as the glory of young men in their strength (Proverbs 20:29). Even God is characterized as strong and mighty (Psalms 24:8). Jewish youth served in the armed forces beginning at 20 years of age (Numbers 1:4) and, among other things, were taught archery (II Samuel 1:18). They became equally adept at shooting arrows using both the right and left hand (I Chronicles 12:2). Some also became experts at slinging stones at a hair-breadth and not missing (Judges 20:16). They shot arrows and great stones from towers (II Chronicles 26:15) proving their great strength. Shooting arrows at a specific target is described (I Samuel 20:20) as is the bending of the bow (Lamentations 3:12). Thrusting one's enemy through with a sword (II Samuel 2:15) and scaling a wall (Psalms 18:30) also required considerable strength and some practice.

In Talmudic times the Sages recommended to the Jews that physical perfection engendered spiritual fulfillment. Thus the Talmud says (Shabbat 92a and Nedarim 38a) "The Divine Presence rests only on a wise man, a strong
man, a wealthy man and a tall man.’ Further, God takes pride in men of high stature (Bechorot 45b). The Midrash states (Numbers Rabbah 20:24) that a man should be fierce as a leopard, swift as an eagle, fleet as a hart, and strong as a lion in the performance of God’s will. The same recommendation is found in the Talmud (Abot 5:23).

The Talmudic rabbis advised the people regarding appropriate exercise regimens, and their legal decisions reflect the prevalence of exercise practices. Rabbi Yochanan said: ‘do not sit too long for long sitting provokes hemorrhoids; do not stand too long because long standing is injurious to the heart; do not walk too much because excessive walking is harmful to the eyes. Rather, spend one-third of your time in sitting, one-third in standing and one-third in walking’ (Ketubot 111a).

Apparently oil rubs or embrocations were commonly employed in bathhouses. After the embrocation, the person did physical exercise to tire himself (Kallah Rabbati 9:54d): in some cases the oil rubbing routine itself caused considerable exertion (Yerushalmi Shebiith 38b). Scales were present in the bathhouse to note changes in body weight due to perspiration, a clinical problem countered by the bather drinking hot water (Genesis Rabbah 4:4).

The Talmud (Shabbat 147a) states that one may oil and lightly massage the body on the Sabbath but not massage it strongly or scrape it to invigorate or to stimulate the circulation because that constitutes healing on the Sabbath, a prohibited act unless essential to preserve life or limb. The 11th century commentator Rabbenu Chananel explains this Talmudic passage as follows: ‘one bent and stretched the arms forwards and backwards as well as the legs on the haunches so that one became warm and perspired,’ apparently describing deep knee bends. Rabbi Joseph used to cure the shivers by working at the mill, Rabbi Sheshet by carrying heavy beams. He said: ‘work is a splendid thing to make one warm’ (Gittin 67b).

RUNNING

In Biblical times runners were cultivated mainly for their military value, and there are numerous biblical references to runners as guards (I Samuel 22:17; II Chronicles 12:11, II Kings 11:13, II Kings 10:25; I Kings 14:27). Swift runners were valued as important military assets; men of the tribe of Gad were said to be mighty men of valor... and as swift as the roes upon the mountain (I Chronicles 12:8). They were a means of military communication. A man from the tribe of Benjamin ran from Aphek to Shiloh, a considerable distance, arriving the same day to notify the High Priest that the ark of the Covenant was taken (I Samuel 1:12). According to Rabbinic tradition, the
man was Saul, later to become king of Israel. Later, Saul and his son Jonathan are said to be swifter than eagles and stronger than lions (II Samuel 1:23). Asahel, one of King David’s warriors, was as light of foot (i.e., swift) as one of the roes in the field (II Samuel 2:18).

When Absalom, the rebellious son of King David, was slain by David’s general, Joab (II Samuel 18:14), Achimaaz, son of Zadok, volunteered to run to inform David that the Lord hath avenged him of his enemies (II Samuel 18:19). Apparently Achimaaz, an experienced long distance runner, was able to overtake and pass a Cushite runner dispatched by Joab. His running style was recognized in that the watchman was able to identify him at a distance. Perhaps King David is praising such swift runners as Asahel and Achimaaz when he compared the sun to a bridegroom coming out of his chamber and rejoicing like a strong man to run his course (Psalms 19:6).

Other biblical runners include the 50 runners who ran before the chariots and horses of Absalom and Adonijah, the sons of David (I Kings 1:5) and the runners employed by King Solomon as his palace guards. Golden shields were made for them by Solomon; in a later generation Rehoboam prepared brass shields so that his runner-guards would not be defenseless (I Kings 14:27), and housed them in a chamber of the runners (I Kings 14:28).

In Talmudic times running was recognized as a form of exercise as well as for mundane purposes. Running as a form of exercise on the Sabbath is ordinarily not permitted (Tosefta Shabbat 17:16), but runners may run on the Sabbath (Shabbat 147a) for such other purposes as to deliver an important message. The Talmud (Sanhedrin 96a) interprets the Biblical phrase “If thou hast run with the footmen and they have wearied thee, how canst thou contend with horses?” (Jeremiah 12:5) with a parable: a man once boasted that he could run three parasangs [about twelve miles] in front of horses on marshy land. When he met a pedestrian, he ran three mils [less than one parasang] and was exhausted. Thereupon the pedestrian said to the man: “if you are thus before a pedestrian, how much more so before horses; and if three mils have tired you, how much more so three parasangs; and if it is thus on dry land, how much more so in marshy swamps!”

Elsewhere (Niddah 24b), the Talmud speaks of a man running three para-sangs while pursuing a deer but not reaching it.

DANCING

Among the earliest recorded physical exercises were dancing and rhythmic gymnastics. The Israelites danced before the golden calf (Exodus 32:19). King David called to the people to praise God in dance (Psalms 149:3). At a
circumcision, after the Rabbis had eaten and drank, some recited songs, or alphabetical acrostics and some danced (Ecclesiastes Rabbah 7:18). It was common to dance before a bride (Ketubot 16b). The Midrash states that the righteous will one day dance before God with zest (Song of Songs Rabbah 1:3). Elsewhere (Leviticus Rabbah 12:5), the Midrash cites the eighty kinds of dances which Pharaoh's daughter danced in one night. Dancing is described in the Babylonian (Gittin 57a) and Jerusalem (Betzah 5:2) Talmuds.

WALKING

Walking as exercise has been practiced by Jews for centuries. An average man was said to be able to walk 10 parasangs (forty mil) in a day (Pesachim 93b; Yerushalmi Berachot 1:1). Walking on the Sabbath is not only permissible but desirable (Tosefta Peah 4:10; Tosefta Shabbat 16:17), although one should not take long strides when walking because long strides diminish one's eyesight (Berachot 43b). Walking was felt to be beneficial to other organ systems; after meals one should perform some exercise; if one eats without walking four cubits after it, the food rots in the intestines and is not digested (Shabbat 41a).

Not all scholars agreed. Rabbi Judah, perhaps prescient of the risks of exercise, opined that people and beasts die in their prime, or at least age prematurely, in a town built on hills and valleys (Erubin 56a).

BALL PLAYING

Ball playing or tossing is described in the Bible (Isaiah 22:18). A Midrashic interpretation of a Biblical phrase (Ecclesiastes 12:11) compares the words of the sages to the playing ball of young maidens (Midrash Tanchuma—Behaloscho 15). A girl's ball (kaddur banot) is thrown from hand to hand without falling to the ground (Ecclesiastes Rabbah 12:11), a sport perhaps similar to modern volleyball. Playgrounds (Proverbs 8:31) and playstreets (Zechariah 8:5) are also cited.

A Talmudic commentary describes walking and ballplaying on the Sabbath and Jewish holidays (Tosafot, Betzah 12a s.v. hoko garsinon). The ball was thrown from hand to hand or against the wall (Yerushalmi Sukkah 5). According to some, playing ball on the Sabbath was a desecration of the day, meriting Divine punishment (Yerushalmi Taanit 4:5).

SWIMMING

Swimming across a river is described in the Bible (Ezekiel 47:5) as is the spreading of one's hands to swim (Isaiah 25:11). The Apocrypha state that
Jonathan and his men jumped into the Jordan and swam to the other side (I Maccabees 9:48). According to the Babylonian Talmud (Kiddushin 29a) a father is obligated, among other things, to teach his son a craft and to teach him to swim, the latter because his life may depend on it (Kiddushin 30b).

Moses Maimonides

Synthesis of earlier Jewish sources with secular scientific knowledge was a major achievement of Moses Maimonides, physician-rabbi to the Egyptian caliph in the 12th century. Maimonides recommends exercise both in his Code of Jewish Law known as the Mishneh Torah, and in his Medical Aphorisms, a work based mostly on Greek medical writings. In the 18th chapter of the Aphorisms, Maimonides ascribes great importance to the regulation and maintenance of physical and mental health. He stresses the harmful effects of excessively strenuous exercise, stating that “bodies that are extremely hot do not require physical exercise at all. For them walking, bathing and gentle massage with rubbing oil suffices. Bathing after meals is also of benefit to them.”

He discusses the need to continue exercise through and beyond middle age. Reflecting attitudes taken to be exclusively modern, he remarks: “elderly people require that their bodies move, because the constitution of their bodies needs warmth. No elderly person should rest and repose without having done some exercise. On the other hand, he does not need strenuous exercise, because exertional athletics cools [body] warmth that is weak, and extinguishes it.”

In his two treatises on the Regimen of Health, Maimonides recognized the importance of moderate or severe exercise and defined it in physiologic terms: “Long before us, Hippocrates stated that the maintenance of health lies in forsaking the disinclination to exertion. Nothing is to be found that can substitute for exercise in any way, because in exercise the natural heat flames up and all the superfluities are expelled, while at rest the flame of the natural heat subsides and superfluities are engendered in the body, even though the food is of the very best quality and is moderate in quantity. And exercise will expel the harm done by most of the bad regimens that most men follow. Not all motion is exercise to the physicians. What is termed exercise is powerful or rapid motion or a combination of both, that is, vigorous motion with which the respiration alters, and one begins to heave sighs. Whatever exceeds that is exertion, that is to say that very strong exercise is called exertion. Although not everyone can endure exertion, or needs it, it is nonetheless better in the conservation of health than the omission of exercise.”
Prescribing an appropriate regimen, he describes "warm-up" and "cool-down" phases:11 "It is proper to precede physical exercise by running and massaging the body. After this one exercises slowly and increases it until one reaches an optimum level of exercise. . . . After the completion of the physical exercise, one should rub the body with oil, and massage it moderately. . . ." The last recommendation may reflect a response to the vasodilation associated with vigorous exercise.

In discussing the conditions under which exercise should be performed, he states: "It is not advisable to exercise except upon an empty stomach and after expulsion of the superfluities, that is, the urine and the feces. Nor should one exercise in the intense heat or in the intense cold. The best time for exercise is at the beginning of the day, upon awakening from sleep, and after the expulsion of the superfluities, as we have mentioned."12 "The rule in this matter is that one should exert one's body and fatigue it every day in the morning until one's body begins to warm. Then one rests a little until one's soul has settled, and then one may eat. If one washes with warm water after the exercise, so much the better. After this, one should wait a little and then eat. . . . Anyone who lives a sedentary life and does not exercise or he who postpones his excretions or he whose intestines are constipated, even if he eats good foods and takes care of himself according to proper principles—all his days will be painful ones and his strength will wane."9

Nonetheless, Maimonides upheld the ruling that vigorous exercise on the Sabbath was a desecration of the day, but this is precisely because of its salubrious nature. As certain forms of therapy are prohibited on the Sabbath in the absence of threat to life, Maimonides rules as follows: "The abdomen may be anointed and massaged on the Sabbath, provided that both actions are performed simultaneously so as to constitute a departure from the normal weekday procedure. Vigorous exercise, however, is forbidden on the Sabbath. By vigorous exercise is meant having someone pummel one's body with force until one grows tired and perspires, or walking until one likewise grows tired and perspires. For one may not make oneself tired enough to perspire on the Sabbath, seeing that this has a curative value. Similarly, one may not stand in the bed of the spring of Diomsit, in the Land of Israel, on the Sabbath, since this requires vigorous exercise and is of curative value."13

LATER CODES OF JEWISH LAW

The famous Code of Joseph Karo known as Shulchan Aruch rules that "one is not allowed to exercise on the Sabbath, that is to say to forcibly
exercise the body to tire oneself and to perspire’ (Orach Chayim 328:42). A recent writer (Mishneh Berurah 328:42) interprets ‘forcibly’ to mean to stretch out and wave the arms in front and behind so that they become warm and perspire. The implication is that exercise on a weekday is not only permissible but desirable. Karo further rules (Orach Chayim 301:2) that young men who enjoy jumping and running on the Sabbath are permitted to do so. The gloss of Moshe Isserles, known as Ramoh, adds: ‘similarly, to take a walk on the Sabbath is also permitted.’ However, Karo cautions (Orach Chayim 301:1) that ordinarily one should not run on the Sabbath except to fulfill a commandment or perform a meritorious deed because one runs and rushes on weekdays and the Sabbath should be different. Karo prohibits ball playing on the Sabbath (Orach Chayim 309:45) but Isserles adds that ‘some rabbis permit it and we are accustomed to be lenient in this regard.’ On Jewish holy days, based on the Talmudic commentary of Tosafot (Betzah 12a s.v. hocho garsinon), Isserles rules (Orach Chayim 518:1) that ‘it is permitted to play ball in a public domain.’ Others such as Shlomo Luria, known as Maharashal, limit this permissibility to children (cited by Magen Avraham, Orach Chayim 581:1).

The practical code of Jewish law by Neuwirth rules that one should not ordinarily perform physical exercises on the Sabbath or Yom Tov with or without the use of machines or instruments specifically designed for strengthening muscles, such as a chest expander. Likewise, one should not engage in occupational therapy on the Sabbath. It is, however, permitted to do single light exercises with one’s hands. Running and jumping games such as tag, hide and seek, and rope skipping are also permitted as is strolling or walking on the Sabbath. Dancing is permitted if it is for a valid purpose such as dancing with the Torah on Simchat Torah.

In a brief survey of laws regarding healing on the Sabbath, Cohen points out that the general prohibition of healing on the Sabbath, except for danger to life, extends to a wide sphere of human activity. Does strengthening the body or enlivening it by physical exercise fall under the prohibition? From the discussion above in the Codes of Jewish Law, based on the earlier-cited Talmudic and Biblical references, it seems that strenuous exercise for health reasons is forbidden. On the other hand, mild to moderate exercise for pleasure such as walking and ball playing is permitted. So, too, youths who enjoy jumping on the Sabbath may do so. Running or dancing to perform a mitzvah (commandment or meritorious deed) is also permitted. Cohen even cites a source (Shaar Hazion, letter tes) permitting running to build up an appetite.
CONCLUSION

The benefits of exercise as described in recent medical and lay literatures were already known in Biblical times. Ancient and medieval Jewish writings continue to be a rich source for the "rediscovery" of seemingly modern medical concepts.

REFERENCES