

History of Medicine

DUMMIES*

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'suck, and be satisfied'

Isaiah 66:11

A dummy, the dictionary tells us, is a counterfeit object. So what is the genuine article? If a bottle and teat is a dummy wet-nurse,¹ what corresponds to the counterfeit object stuffed into a baby's mouth?

The Americans have supplied a hint by calling dummies pacifiers, comforters, soothers; and what is a pacifier and comforter? Food, and, within the context of primitive life, specifically breast milk, and the object from which the food issues, the nipple. A dummy is a counterfeit nipple, but a wet nipple, and a sweet one, for breast milk is distinctly sweet.

Babies enjoy chewing and tugging at a nipple while psychologists enjoy puzzling over why this should be so. Babies also enjoy mouthing a dummy and a thumb and doctors may wonder why the thumb is so often preferred to the dummy. In the context of a substitute moist nipple, the dummy has had a tortuous history and it is difficult to conceive of future developments considering that there has been virtually no change in the evolution of the dummy since the turn of the century.

In the medical literature the first mention of dummies was *ca.* 1500 in Germany; in fact, almost everything written on dummies before 1900 is in German. Dummies are recorded '*in der medizinischen Literatur zum ersten Male bei Metlinger im Jahre 1473 und bei Rosslin im Jahre 1513*'.² The first representation of a dummy is in a painting of Madonna and Child by Albrecht Dürer at the beginning of the 16th century (Fig. 1).

But dummies certainly have a far more venerable lineage, and we can guess, with some certainty, that sweetened dummies were used thousands of years ago to sweeten the temper of fractious infants. Ancient records concerning milk and honey refer more to pacification and comforting of babies than to a formula of cow's milk. Excavations of ancient infant burials have uncovered clay dummies analogous to the 'dinky feeders' available today.

Small clay animals—horses, frogs—have been excavated from graves in Italy and Cyprus. These 2 000- or 3 000-year-old specimens possessed handles and were evidently meant to be hung around the neck. A single large opening permitted the insertion of some viscous material—perhaps honey—while small orifices at the animal's mouth permitted the infant to suck out the honey. Such feeding dummies were made in Europe until the Middle Ages.

The physicians Soranus (2nd century) and Oribasius (4th century) mention the use of honey during the newborn period. Not only was it sweet but it was credited with all sorts of healing virtues, a view still common today among the thousands of mothers who prefer to add honey rather than sugar to the baby's bottle of milk.

RAG BAGS

Perhaps these feeding dummies—dinky feeders—were not true dummies if we can define the primary function



Fig. 1. Madonna and Child: Albrecht Dürer, 1506. Courtesy Staatliche Museen Berlin Dahlem. Notwithstanding its large size, the rag bag is a dummy. There is, of course, no diaper, this being a product of the 19th century. It is very obvious that the infant Jesus is not circumcised (there is a long tradition in Germany of attempts at Aryanization of Jesus).

of a dummy as supplying sucking comfort, and sweet moisture or liquid as but a secondary phenomenon. True dummies can never be turned up by the spade of the archaeologist for they must have been made of linen and it is these linen bags which feature in the comments of Metlinger and Rosslin and the painting of Dürer.

A strip of rag or cloth could be knotted, this knot being dipped in honey and placed within an infant's mouth. It thus acted as an effective dummy, in some situations more effective than the modern rubber equivalent. Anyone who has observed an infant crying during a ritual circumcision can readily gauge that in this situation a rubber dummy could never be as comforting as a piece of knotted gauze dipped in sugared water. The infant sucks frantically on the gauze dummy which remains sweet and moist for perhaps half-a-minute whereas the moisture on the surface of a rubber dummy would be sucked off within a second or two.

The strips of rag were usually knotted to enclose various foodstuffs within the bag and these rag bags contained pieces of bread, grain, meat or fish. Such were known to have been used throughout Europe and in

*Date received: 22 October 1970.

Russia where, some sources claimed, they were employed only during the neonatal period, an unlikely end-point. Among the Finns and Lapps the rag bags contained pieces of fat. The various foodstuffs were moistened by means of the infant's saliva but other liquids were also used including honeyed milk, brandy and laudanum, or else poppy seeds. In this context the term pacifier is especially appropriate. A piece of sponge within the bag might have been used, better to retain liquid. There were occasional observations that babies became intoxicated from sucking on dummies. These rag bags were tied to the crib or blanket rather than to the baby's clothing, as is more usual today.

During the 19th century Afrikaner mothers used a rag bag called a *poppie* or *poppetjie*. This consisted of a piece of sponge cake (*suikerbrood*) tied within a square of muslin, the knot being large enough to prevent the whole being swallowed. The long ends of the muslin were left dangling.

Medical comments on the sucking rags were generally highly critical, but these dummies must have been valuable and must have enjoyed widespread popularity in order to elicit the condemnation of the medically eminent during the 1800s. Some, like the Swedish physician Nils Rosen von Rosenstein, wrote (about 1764) that it was sufficient to use the honeyed sucking rag only for the first few days during which it was thought desirable to rid the infant's bowel of meconium by means of the honey.

About 1800 Christian August Struve wrote (translated from the German) 'One of the most revolting practices is the sucking rag with which one tries to feed or quieten the child. Many a poor mother makes a rag from an old shirt or cloth which was picked up somewhere, possibly in the street, and contained vermin or even the remains of venereal poisons. One dips this rag into lukewarm water, the child throws it on the ground, and it is put back in his mouth in an even dirtier condition. Many flies sit on it, when the child is not observed, flies which a little earlier had been sitting on some poisonous matter in the room.' He also mentioned the possibility of suffocation. So did Jacob Christian Gottlieb Shaffer (about 1800) who advised that the rag bag should be removed during sleep. Christoph Jakob Mellin (about 1800) claimed that the sucking rag produced a large mouth and thick lips. It was also objected that these dummies were moistened within the mouths of mothers and nurses and might thereby pass on venereal diseases.

GUM STICKS

Dummies were not only used as nipple substitutes but also functioned as comforters and pacifiers for teething infants. In earlier times teething was credited with causing far more disabilities than at present. London Bills of Mortality during the 1600s list teething as a leading cause of infantile deaths.³ As recently as 1905 the Returns of the Registrar-General in Britain listed more than 2 000 children as having died from teething.³ Teething as a cause of trouble might have been invoked—as it still is today—from the earliest months of life, so that a dummy had a dual function for earlier folk: to soothe a fractious infant, and to relieve the distress of teething.

We thus find a harder type of dummy also available, primarily for the gums to bite on rather than for the tongue to suck on. These dummies were called 'gum sticks' or 'gum rings' and were generally made of the bones and teeth of animals. A wolf's tooth mounted in a holder, or else a piece of ivory, or a string of vertebrae from a snake. During the 17th century a piece of red coral was popular. There was also a measure of magic attached to these gum sticks, coral in particular being a traditional amulet against witchcraft. Wax candles were also popular as gumsticks, and also sticks of liquorice dipped in honey.

In the late 18th century the English physicians George Armstrong and William Buchan urged the use of bread-crust as a teething dummy and such advice survives to this day in the form of the finger-biscuit often introduced when an infant is some 4-5 months old. Buchan derided 'hard metal or impenetrable coral . . . a crust of bread is the best gum stick'.⁴

RUBBER

During the mid-1800s we find gum rings also being made from elastic, and during the rest of this century rubber ousted coral, ivory, bone and bread-crusts as gum rings and gum sticks. The British company, Maws, has a catalogue from 1839 featuring elastic gum rings at 6d each. These sticks and rings gradually expanded into flat, broad devices for the baby to bite on and these, now called 'soothing pads', feature in the 1882 catalogue.⁵ Some of them already had rings and guards attached.

By this time rubber teats were ubiquitous and the flat soothing pads again contracted into teat-like structures sold as 'solid Indian rubber nipples' and made of hard, black, smelly rubber. Few had guards or rings attached. By 1900 the guard and ring were standard attachments and were fashioned from bone, ivory and aluminium as well as rubber. Sometimes small tinkling bells were attached. During World War I the usual price of a dummy was 6d.

As the rubber dummy took on the modern shape its earlier function as a gum stick or gum ring did not die out but proliferated into various other shapes and is now clearly designated as a 'teething ring' with a function quite distinct from that of a dummy. Teething rings are now generally made of rubber, hard plastic or soft plastic entrapping a few ml of cold fluid.

Also, as the rubber dummy took on the modern shape, the rag bag, which persisted until 1900, rapidly died out. From time to time minor modifications of dummy shape appear, but are of no great consequence; though admittedly there are babies who emphatically prefer one sort of dummy to another. One deficiency of rubber dummies has not been rectified: They cannot be impregnated so as to ooze a supply of pleasant liquid (I have made and used dummies cut from plastic sponge rubber but they are too soft and babies reject them). A dinky-feeder is a cross between a dummy and a bottle, a modern version of the ancient clay dummies, but these feeders are rapidly emptied, are ungainly and commonly fall out of the baby's mouth. If used when teeth are already present the sugary liquid produces rampant dental caries. The modern dummy is usually dipped in gripe water or a solution of

honey which is almost immediately sucked off and the infant must then be left to enjoy his own saliva. A rag bag still has its advantages.

DUMMIES: MODERN OPINIONS

It is hard to know what modern paediatricians think of dummies because they do not write about the subject. Dummies are not even mentioned in large textbooks such as those edited by Brennemann, Nelson, Holt, Gaisford and Lightwood and others. Even in earlier decades they are barely mentioned, and the 8-volume *Abr's Pediatrics* (1923) has almost nothing on dummies.

Dentists also have little to say on the subject though there are views that long teats (and presumably dummies) tend to produce tongue thrust and anterior open bite though the evidence for this is inconclusive.⁶ In any event dummy sucking usually ceases years before the permanent dentition begins to erupt.

In an extensive account (in German) of the history of dummies Mahler⁷ briefly considers possible orthodontic sequelae and draws attention to the Freudian sexual theory of dummies. Spock, in his famous book⁸ grants dummies a psychological significance (sucking gratification), but other psychologists⁹ find no evidence that babies need sucking to gratify their psyches.

Where experts don't know the ignorant do, and mothers have determinedly continued to use dummies—and this against the advice of experts in earlier decades. It presents little difficulty to find 'baby books' published during the 1930s, 1940s and even more recently, which condemn dummies out of hand as dirty, a menace to health, a cause of mouth disfigurement, of thrush and sundry digestive disturbances. There is commonly advice that the best method of dealing with the dummy habit is simply to remove the dummy.

Feelings on dummies in earlier decades ran high. As recently as 1926 Professor Pinard, in France, succeeded in carrying a motion in the Chamber of Deputies prohibiting the sale of the *sucette*. Such vehement feelings still persist among some doctors, some nurses concerned with infant care and among the laity. Nevertheless most mothers have ignored the professors, nurses and politicians and continued to dummy their babies. The experience of the ignorant has routed the wisdom of the learned.

As a result, the learned have had to alter the nature of their wisdom—in the manner of the politician who declaimed 'and those, ladies and gentlemen, are my principles, and if you don't like them, I'm prepared to change them!' So we find that Spock,⁸ in the most recent edition of his book, adopts almost a benign attitude to dummies, or at least an attitude of positive neutrality. Perhaps an even warmer welcome awaits in the future.

CURRENT PRACTICE

An attempt was made to bring historical insights up to date by investigating current opinion and practices with regard to dummies. A detailed questionnaire was sent to mothers with 3 or more children and 108 replies were sufficiently clear to permit analysis. A total of 358 children were accounted for within the 108 families. These families were Whites, middle- or upper-middle-class, living in Johannesburg's northern suburbs.

Family Pattern in the Use of Dummies

There were 67 families in which a majority of children sucked dummies plus another 10 in which half the children (there being a total of 4 or 6 in these instances) sucked dummies. There were 11 families in which a majority of the children sucked their thumbs (occasionally 2 fingers or an arm preferred) and a further 6 in which half the children sucked their thumbs. In 20 families a majority of children (plus 4 in which half the children within the family) declined to suck either dummy or thumb.

Relationship between Breast-Feeding and Dummy Sucking

Nursing patterns were classified on the basis of lasting less than one month, 1-3 months and over 3 months. On this basis 64 mothers had roughly the same nursing experience for their 3 or more babies. Of the 44 mothers whose patterns altered, in 37 there was a progressive decrease ('failure') in the duration of nursing in subsequent babies while in 7 there was an improvement.

On an individual basis, babies with different nursing patterns were classified as shown in Table I.

TABLE I. NURSING PATTERNS

	<i>Dummy suckers</i>	<i>Thumb suckers</i>	<i>Neither</i>
Group 0—bottle-fed	69 (65%)	15 (13%)	24 (22%)
Group A—breast-fed <1 month	29 (63%)	6 (13%)	11 (24%)
Group B—breast-fed 1-3 months	57 (62%)	16 (18%)	17 (20%)
Group C—breast-fed >3 months	58 (51%)	25 (22%)	31 (27%)

The numbers are perhaps too small to draw significant conclusions but possibly one can point to a curious trend: the longer the baby is breast-fed, the more the likelihood that he will prefer his thumb. True enough, the great majority will still be sucking dummies but comparatively many will have discarded the dummy in favour of a thumb when nursing is successful and plentiful. This trend does not support Spock's opinion:⁸ 'I have the impression that a breast-fed baby is less apt to be a thumb sucker.'

Conversely, babies on the bottle will prefer the same rubber as on the teat. Comparatively fewer enjoy the thumb.

Parenthetically, it should be noted that nearly one-third of babies are completely bottle-fed, and if to this group is added those who are nursed for less than a month, then nearly half of all babies get little or no breast-feeding. About one-third of babies are breast-fed for more than 3 months.

It does not follow that one-third of mothers do not even try to nurse. Many of the failures are isolated instances in families where other siblings were breast-fed for a period. Of the 108 mothers in the study, 15 made no attempt to nurse any of their children while a further 5 made a perfunctory attempt (group A) in one instance.

Effect of Extended Breast-Feeding on Use of Dummies or Thumbs

This is unknown, because extended breast-feeding does not occur. There were very few mothers nursing after

7-8 months, while dummy and thumb sucking are most established in the second year of life.

Factors Responsible for Final Cessation of Dummy Sucking

Dummy sucking ceases at any time from the age of a few weeks to 6-7 years but is mostly ended by 3-4 years. Thumb sucking can continue much longer and one participant father, a one-time contender for the 'Mr South Africa' body-building title, is a thumb sucker, at the age of 33 years!

In general terms, if the dummy is discarded within the first year of life it will be because the baby spat it out rather than because the mother took it away. With increasing age the cessation of dummy use is more likely to be related to maternal compulsion, perhaps compounded by maternal suggestions that a big boy (girl) no longer needs such a baby thing.

During the first 2 years twice as many children voluntarily gave up their dummies as compared with dummy loss by coercion. At the age of 3 years, the same applied: 18 children gave up the habit on their own and 7 were compelled to do so. But at 4 years the picture changes, with 8 giving up the dummy voluntarily while 11 were compelled to do so.

Materials Used for Moistening the Dummy

Gripe water is the massive favourite. Honey comes a poor second while water, Vidaylin and Virol get occasional mention. One mother wondered whether honey on the dummy rots the teeth.

What Mothers Think of Dummies

A great majority of mothers (88) were in favour of dummies; 8 were opposed to their use, while 12 were uncertain, equivocal or gave no opinion.

Among those favouring the use of dummies, opinions varied from mild approval to comments like 'the most wonderful invention in the world', 'worth their weight in gold', 'the man who invented the dummy should be knighted', 'long live the dummy' and 'I *couldn't* have survived without dummies'.

Most mothers drew attention to the value of dummies as comforters, soothers, pacifiers and useful for establishing routines, e.g. time to sleep. Two mothers thought the dummy good for teething and one for colic and bedwetting.

Virtually no mothers worried about dummies deforming the jaws and teeth. Two commented that their dentists

had said that dummies make the teeth protrude but that they did not believe this. On the other hand, many considered thumb sucking to be a cause of protruding jaws and teeth and many attempted to give the dummy—often unsuccessfully—in the hope of preventing thumb sucking. It was mentioned several times that one can throw away a dummy but cannot throw away a thumb.

Of the 88 in favour, 16 expressed mild reservations and these related to possible orthodontic troubles (doubted), to dummies being unhygienic, to their being a nuisance if forgotten when out visiting and especially to the need for getting up at night to replace the dummy. One mentioned that the discs on the dummies were too small and the whole thing could easily get inside a baby's mouth.

A few children demanded a large supply of dummies for sucking, tickling the nose and playing. Four babies were only satisfied with the relatively expensive Nuk dummy.

Surprisingly few mothers (only 8) were opposed to their use, and 4 of these gave no good reasons, complaining about 'dirty filthy habit', 'ugly', 'the whole idea displeasing', 'they become too dependent on it'. Two complained that the need to get up at night to replace the dummy vitiated any beneficial effects and two said it deformed the teeth. Curiously, one of these was a mother whose 3 children did not use dummy or thumb but 2 of them are having orthodontic treatment!

SUMMARY

Dummies have a venerable history although mentioned for the first time in medical literature only during the sixteenth century. Until the advent of rubber in the last century, cloth bags enclosing a sweet food served as dummies.

Dummies also evolved into teething sticks and rings.

Medical and nursing opinion has generally been opposed to the use of dummies but mothers have persevered nevertheless, and in an investigation among Whites in Johannesburg more than 80% of mothers found them useful.

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